

AGENDA
PLANNING COMMISSION PUBLIC HEARING / REGULAR MEETING
CITY OF FARMINGTON HILLS,
MARCH 24, 2022, 7:30 P.M.
FARMINGTON HILLS CITY HALL – CITY COUNCIL CHAMBERS
31555 W. ELEVEN MILE ROAD, FARMINGTON HILLS MI 48336
Cable TV: Spectrum – Channel 203; AT&T – Channel 99
YouTube Channel: <https://www.youtube.com/user/FHChannel8>
www.fhgov.com
(248) 871-2540

- 1. Call Meeting to Order**
- 2. Roll Call**
- 3. Approval of Agenda**
- 4. Public Hearing**

A. [ZONING TEXT AMENDMENT 2, 2021](#)

CHAPTER OF CODE: 34, Zoning Ordinance

PROPOSED AMENDMENT: Amend the definition of “Family” and various sections of Chapter 34, Zoning to provide equal housing opportunities particularly suited to the needs of persons entitled to reasonable accommodation under state or federal law within One Family and Planned Residential zoning districts

ACTION REQUESTED: Recommend to City Council

SECTIONS: 34-2.2, 34-3.1.1 through 34-3.1.9, add new Section 34-4.60

B. [CAPITAL IMPROVEMENTS PLAN 2022/2023 THROUGH 2027/2028](#)

ACTION REQUESTED: Adoption of Plan

5. Regular Meeting

A. [SITE PLAN 68-12-2021](#)

LOCATION: PARCEL Parcel south of 34700 Grand River Ave.

I.D.: PROPOSAL: 23-21-376-021

ACTION REQUESTED: New commercial building for manufacturing in LI-1, Light Industrial District

APPLICANT: OWNER: Site Plan approval by Planning Commission

Jing-Jin Electric

6. Approval of minutes

Jing-Jin Electric

7. Public Comment

February 17, 2022

8. Commissioner’s Comments

9. Adjournment

Respectfully Submitted,

Marisa Varga
Planning Commission Secretary

Staff Contact
Erik Perdonik
Staff Planner, Planning and Community Development
248-871-2540
eperdoik@fhgov.com

NOTE: Anyone planning to attend the meeting who has need of special assistance under the Americans with Disabilities Act (ADA) is asked to contact the City Clerk's Office at 248-871-2410 at least two (2) business days prior to the meeting, wherein arrangements/accommodations will be made. Thank you.

ZONING TEXT AMENDMENT 2, 2021 (Definition of Family)

Recommended Approval:

I move to recommend approval to City Council of Zoning Text Amendment 2, 2021, which proposes to amend the Zoning Ordinance to amend the definition of Family; add new definitions for reasonable accommodation and special accommodation residences; add a new Section 34-4.60, standards, and regulations for Special Accommodation; and add special accommodation residences as a principal permitted use in the RA-1A, RA-1B, RA-2B, RA-1, RA-2, RA-3, RA-4, RP-1, and RP-2 zoning districts.

Recommended Denial:

I move that the Planning Commission does not recommend approval of Zoning Text Amendment 2, 2021 at this time in order to allow City Staff to address the following items and present a revised draft for consideration at a future meeting.

CITY OF FARMINGTON HILLS
OAKLAND COUNTY, MICHIGAN
ZONING TEXT AMENDATORY ORDINANCE
ORDINANCE NO. ____

An ordinance to amend the City Code, Chapter 34 Zoning Chapter, of the City of Farmington Hills, to amend the definition of family; add new definitions for reasonable accommodation and special accommodation residence; add a new Section 34-4.60, standards and regulations for Special Accommodation Use as hereinafter described:

THE CITY OF FARMINGTON HILLS, OAKLAND COUNTY, MICHIGAN, HEREBY ORDAINS:

Section 1.

Amend Section 34-2.2, Definitions to amend the definition of family to read as follows:

Family

1. An individual or group of two (2) or more persons related by consanguinity, marriage or adoption, together with foster children or servants of the principal occupants, with not more than one additional unrelated person, who are domiciled together as a single, domestic, housekeeping unit in a dwelling unit; or
2. A collective number of individuals domiciled together, up to six persons, in one (1) dwelling unit whose relationship is of a continuing non-transient domestic character and who are cooking and living as a single nonprofit housekeeping unit. This definition shall not include any society, club, fraternity, sorority, association, lodge, coterie, organization or group of students or other individuals whose domestic relationship is of a transitory or seasonal nature or for an anticipated limited duration of a school term or terms or other similar determinable period. This definition also does not include halfway houses for prisoner re-entry and similar facilities. It also does not include medication-assisted treatment for substance abuse patients, substance abuse disorder treatment facilities and similar facilities for those not recovered from substance abuse treatment.

Section 2.

Amend Section 34-2.2, Definitions to add two new definitions as follows:

Reasonable Accommodation means a change, modification, exception or adjustment to the ordinance that is needed for a person with a disability to use and enjoy a dwelling. A Reasonable Accommodation does not include an accommodation which would (1) impose an undue financial or administrative burden on the City; or (2) require a fundamental alteration to the nature of the City's land use and zoning ordinance or policies.

Special Accommodation Residence means a use that provides equal housing opportunities particularly suited to the needs of persons entitled to a reasonable accommodation under state or federal law, such

as but not limited to, the Federal Fair Housing Act, as amended, 42 USC § 3604(f)(1) et seq, the Americans with Disabilities Act, as amended, 42 USC §12131 et seq, and the Rehabilitation Act, as amended, 29 USC §794(a). The definition of Special Accommodation Residence shall be applicable to various types of transitional and permanent homes or living arrangements that occupy dwellings or other structures and may include, but not be limited to, adult foster care large group homes and sober living homes.

Section 3.

Amend Section 34-4.0, Use Standards to add a new Section 34-4.60 Special Accommodation Residence as follows:

Section 4.60 Special Accommodation Residence

A. Intent. This section is intended to authorize the grant of relief from the strict terms of this Ordinance in order to provide equal housing opportunities particularly suited to the needs of persons entitled to reasonable accommodation under state or federal law, such as but not limited to, the Federal Fair Housing Act, as amended, 42 USC § 3604(f)(1) et seq, the Americans with Disabilities Act, as amended, 42 USC §12131 et seq, and the Rehabilitation Act, as amended, 29 USC §794(a). This Section of the Ordinance responds to the prohibition of housing discrimination based on a disability which is defined as:

- (1) A physical or mental impairment which substantially limits one or more of such person's major life activities;
- (2) A record of having such an impairment; or
- (3) Being regarded as having such a physical or mental impairment that limits one or more of such person's major life activities.

This section is further intended to advance a legitimate governmental interest by regulating Special Accommodation Residences in a manner that ensures that the use of land is situated in appropriate locations and with proper relationships particularly to the surrounding land uses, limits inappropriate overcrowding of land or particular uses and/or congestion of population, and it ensures that public streets and facilities are not overburdened.

B. Applicability. The provisions of this section shall be applicable to various types and capacities of transitional and permanent homes and structures which occupy dwellings and may include, but not be limited to, adult foster care large and small group homes, other congregate living facilities, and sober living facilities. The City Manager or his/her designee may approve a Special Accommodation Residence, subject to and in accordance with this section.

C. Conditions of Approval. As a condition to approval of a Special Accommodation Residence, the applicant must comply with all the terms of this section, and must demonstrate all of the following:

- (1) The ultimate residential user or users of the property shall be persons for whom state or federal law mandates the City to make reasonable accommodations in connection with proposed uses of land under the existing circumstances;

- (2) Taking into consideration the needs, facts, and circumstances which exist throughout the City and the population to be served by the use, the proposed reasonable accommodation shall be necessary to afford such person equal opportunity to the proposed use and enjoyment within the City;
- (3) Approval of the proposed housing shall not require or will not likely result in a fundamental alteration in the nature of the Zoning District and neighborhood in which the property is situated, or result in an excess concentration of such proposed housing in a particular area, considering cumulative impact of one (1) or more other uses and activities in, or likely to be in, the area, and shall not impose undue financial and administrative burden. The interests of the City shall be balanced against the need for accommodation on a case-by-case basis; and
- (4) The public health, safety and welfare is maintained by providing adequate space for occupants as follows:
 - (a) There shall be not less than 35 square feet of indoor living space per occupant, exclusive of bathrooms, storage areas, hallways, kitchens, and sleeping areas.
 - (b) A single occupancy bedroom shall have not less than 80 square feet of usable floor space.
 - (c) A multioccupancy resident bedroom shall have not less than 65 square feet of usable floor space per bed.

For the purpose of this subsection (4), “usable floor space” means floor space that is under a ceiling which is not less than 6 feet, 6 inches in height, excluding closets and space that is under a portable wardrobe. When determining usable floor space, an alcove or any other part of the room that does not have at least a 7-foot horizontal dimension shall be excluded.

D. Application Provisions. The application for a Special Accommodation Residence within an existing or proposed structure shall include the following, in addition to all other applicable permits required by the City:

- (1) A sketch plan, drawn to scale, showing the proposed use and development. At a minimum, the sketch submittal shall include the following information:
 - a) Evidence of ownership; location and description of site; dimensions and areas;
 - b) Scale, north arrow, date of plan;
 - c) A recent aerial photograph from an available resource (City GIS portal at fhgov.com), Google Earth, or similar platform showing site and area within at least 100 feet of property boundaries;
 - d) Location, type and land area of each proposed land use and number of dwelling units in structure or structures to be occupied.
 - e) Sketch of floor plan showing layout and number of persons to occupy each bedroom or similar sleeping area.
 - f) General description of proposed water, sanitary and storm drainage systems;

- g) General location of proposed parking and number of spaces required and provided.

(2) A separate document that provides the following:

- a) A summary of the basis on which the applicant asserts entitlement to approval of a Special Accommodation Residence, covering each of the requirements of this ordinance.
- b) The number of residents served, resident services provided and the anticipated length of stay, and staffing and duties performed.

E. Standards and Regulations. In order to determine whether a Special Accommodation Residence should be granted, the need to provide a reasonable accommodation under state or federal law shall be considered and weighed by the City Manager in relationship to the following:

- (1) If the proposed housing does not constitute a permitted use in the zoning district in which the property is situated, the intensity of the use (e.g., number of residents in the residential facility) shall be the minimum required in order to achieve feasibility of the use; and
- (2) The use, and all improvements on the property shall be designed and constructed to meet the following standards and conditions:
 - a) Taking into consideration the size, location and character of the proposed use, the proposed use shall be established in such a manner to be compatible and harmonious, as determined by the application of generally accepted planning standards and/or principles, with:
 - i. The surrounding uses; and/or
 - ii. The orderly development of the surrounding neighborhood and/or vicinity.
 - b) The proposed use shall be designed to ensure that vehicular and pedestrian traffic shall be no more hazardous than is normal for the district involved, taking into consideration traffic volume, proximity and relationship to intersections, adequacy of sight distances, on-site parking, pedestrian traffic safety, and location and access of off-street parking;
 - c) The proposed use shall be such that the location and height of buildings or structures and location, nature and height of walls, fences and landscaping will not interfere with or discourage the appropriate development or use of adjacent land and buildings and will not have a detrimental effect upon their value;
 - d) The proposed use shall be designed, located, planned and operated in such a manner that the public health, safety and welfare will be protected; and
 - e) The proposed use shall be designed and operated so as not to cause substantial injury to the value of other property in the neighborhood in which it is to be located and will not be detrimental to existing and/or other permitted land uses in the zoning district.

F. Conditions. In connection with the approval of a Special Accommodation Residence, the City Manager may impose such conditions as are authorized by law. If a standard in this ordinance is reduced or modified to be less stringent, any condition imposed shall be proportional to mitigate the impact of the reduction or modification granted and shall be in keeping with protecting the health, safety and general welfare of the City.

G. Timeframe for Application Review. The City Manager or his/her designee will review the request for a special accommodation and approve or deny the application within fifteen (15) business days of submittal of a complete application.

H. Effect of Approval.

(1) Approval of a Special Accommodation Residence shall be solely for the benefit of the particular class of users who were the basis of requiring the City to make a reasonable accommodation under applicable state and/or federal law, and not for the benefit of any other persons. Accordingly, the effect of an approval under this section shall be for the exclusive benefit and occupancy of such class of persons. If a change in such use occurs such that it is occupied by others, the regulations applicable within the district in which the property is situated shall thereupon immediately and fully apply, unless application is made and approved for another Special Accommodation Residence based on the change.

(2) An approval under this section shall be effective for a period of one (1) year and shall thereafter be void unless there is an occurrence of actual occupancy by persons for whom the special accommodation has been made in granting approval.

I. A Special Accommodation Residence is a principal permitted use, subject to conditions, in the following districts: RA-1A, RA-1B, RA-2B, RA-1, RA-2, RA-3, RA-4, RP-1, and RP-2.

Section 5.

All Ordinances or parts of Ordinances in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 6.

The provisions of this Ordinance are hereby ordered to take effect on the date provided by applicable law following publication.

Section 7.

This Ordinance is hereby declared to have been duly adopted by the City Council of the City of Farmington Hills, at a duly called meeting held on the ___ day of _____, 2022 and ordered to give publication in the manner prescribed by law.

YEAS:

NAYS:

ABSTENTIONS:

ABSENT:

STATE OF MICHIGAN)
)ss
COUNTY OF OAKLAND)

I, the undersigned, the qualified and acting City Clerk of the City of Farmington Hills, Oakland County, Michigan, do certify that the foregoing is a true and complete copy of the ordinance adopted by the City Council of the City of Farmington Hills at a meeting held on the__ day of _____, 2022, the original of which is on file in my office.

PAMELA B. SMITH, City Clerk
City of Farmington Hills

ADOPTION OF CAPITAL IMPROVEMENTS PLAN 2022/2023 – 2027/2028

Recommend Approval:

Motion by _____, seconded by _____ : To adopt the proposed Capital Improvements Plan, 2022/2023 – 2027/2028 (CIP), with the following amendments, and recommend to the City Council that it budget funds consistent with the CIP:

1. Specifically allocate some or all of the ARPA grant funds to projects included in the CIP, other than funding for renovation projects in The Hawk or the Costick Center;
2. Allocate \$200,000 of the ARPA grant funds to the Grand River Corridor Improvement Authority, for projects that benefit properties within that Authority boundaries that are also in the City of Farmington Hills;
3. Begin a process for the planned closing of the Costick Center and sale of the property to be redeveloped in a manner consistent with the City's 2023/2024 Master Plan; and
4. Delete \$16,000,000 of proposed funding over five years at The Hawk (p. 5 and 28 of the CIP);



Capital Improvements Plan 2022/2023 – 2027/2028

The HAWK



ACKNOWLEDGEMENTS

Background information for formulation of this document has been provided by:

Gary Mekjian, City Manager

Joe Valentine, Assistant City Manager

Jeffery King, Chief of Police

Jon Unruh, Fire Chief

Jason Olszewski, Deputy Fire Chief

Jason Baloga, Fire Marshal

Kelly Monico, Director of Central Services

Pam Smith, City Clerk

Ellen Schnackel, Director of Special Services

Karen Mondora, Director of Public Services

James Cubera, City Engineer

Kevin McCarthy, Public Works Superintendent

Tammy Gushard, Senior Engineer

Thomas Skrobola, Director of Finance/Treasurer

Edward Gardiner, Director of Planning and Community Development

Special Thanks to the CIP document preparation team:

Jeri LaBelle

Barbara Smrtka

CITY OF FARMINGTON HILLS
CAPITAL IMPROVEMENTS PLAN

2022/2023 – 2027/2028

Planning Commission

Steven Stimson, Chair

Dale Countegan, Vice-Chair

John Trafelet, Sectary

Barry Brickner

Joseph Mantey

James Orr

Steven H. Schwartz

Robert Turner

Marisa Varga

City Council

Vicki Barnett, Mayor

Mary Newlin, Mayor Pro Tem

Jackie Boleware

Michael Bridges

Randy Bruce

Valerie Knol

Ken Massey

**Capital Improvements Plan
Schedule**

Planning Commission Study Session January 27, 2022

Planning Commission Public Hearing March 24, 2022

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CAPITAL IMPROVEMENTS PLAN

2022/2023 – 2027/2028

INTRODUCTION/LEGAL AUTHORITY

The Capital Improvements Plan (CIP) is an essential planning tool for the development of the social, physical, and economic wellbeing of the City of Farmington Hills. This plan is the first step in an organized effort to strengthen the quality of public facilities and services. This provides a framework for the realization of community goals and objectives as envisioned in the City's Master Plan for Future Land Use as adopted by the Planning Commission and City Council.

In a practical sense, the CIP process allows the City to identify, prioritize and implement capital projects over multiple years. Public improvements originating from the CIP process have served to improve the quality of life for all Farmington Hills residents. As the community matures, policy makers will look to the CIP for answers in addressing public needs. This year's plan continues in that tradition.

Legal authority for capital improvement planning is found in state law. Specifically, Act 33 of the Public Acts of 2008, the Michigan Planning Enabling Act provides:

"To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of the master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise. If the planning commission is exempted, the legislative body either shall prepare and adopt a capital improvements program, separate from or as a part of the annual budget, or shall delegate the preparation of the capital improvements program to the chief elected official or a non-elected administrative official, subject to final approval by the legislative body. The capital improvements program shall show those public structures and improvements, in the general order of their priority, that in the commission's judgment will be needed or desirable and can be undertaken within the ensuing six-year period. The capital improvements program shall be based upon the requirements of the local unit of government for all types of public structures and improvements. Consequently, each agency or department of the local unit of government with authority for public structures or improvements shall upon request furnish the planning commission with lists, plans and estimates of time and cost of those public structures and improvements."

Moreover, the City Charter, Sections 3.07 and 6.08, indicates that the City Manager shall have the responsibility of submitting a Capital Improvements Plan to the City Council.

CIP GOAL

To plan for and guide needed capital improvements and expenditures in a fiscally sound manner and to ensure that these improvements are consistent with the goals and policies of the City of Farmington Hills and the expectations of its residents.

DEFINITION: BUDGET VS. PLAN

The Capital Improvements Plan identifies all major capital projects with cost estimates anticipated in both capital and future operating costs over a six-year period. The program is intended to serve existing and

anticipated development in the City. All CIP projects are listed on a priority basis and reflected by fiscal year within the plan. The plan also includes an indication for providing the financial means for implementing the projects.

The representations contained in this plan reflect input from the City's administration as adopted by Planning Commission. The actual budgets, however, for the designated years are determined annually by the City Council in accordance with the City Charter and State law. The Council may add, delete, or otherwise change priorities as they deem necessary within the annual budget review and approval process.

Each year as a capital budget is implemented, the next five-year cycle is reevaluated, and an additional year is added to comprise a six-year plan. Capital improvements beyond the sixth year are occasionally identified in the future column for tracking purposes.

CAPITAL IMPROVEMENTS PLANNING - AN OVERVIEW

Capital improvements' planning involves, to varying degrees, the following steps:

- **Inventory** - an assessment and compilation of existing and future project needs.
- **Financial Analysis** - an analysis of all existing and potential fiscal resources.
- **Determining Priorities** - the task of comparing needs and desired projects against financial resources and other criteria.
- **Establishing Goals and Objectives** - Asking the Questions: What do we want to accomplish? How can we get there? And how do we pay for it?
- **Develop a Schedule** - look at a logical sequence, relating needs with financial resources.
- **Gain Approval** - from appropriate local officials, other funding or cooperating agencies and, most importantly, residents of the community.
- **Implement the Plan** - incorporate the first year of the capital plan into the next operating budget.
- **Review and Update** - each year review and update both the capital budget and six-year plan.

One of the more difficult tasks in developing a capital improvements plan is the establishment of priorities, i.e., selecting one project over another when financial resources are limited. The criteria used in establishing priorities include:

- Protecting life and property
- Maintaining public health and safety
- Maintaining public property
- Replacing obsolete facilities
- Providing public convenience and comfort
- Providing effective and efficient public services
- Reducing operating costs
- Enhancing recreational value
- Enhancing economic value
- Improving social, cultural and aesthetic value
- Making prudent use of limited financial resources

ADVANTAGES OF CAPITAL IMPROVEMENTS PLANNING

The Capital Improvements Plan provides numerous advantages. The following programming advantages are considered the most important:

- Planning calls attention to the unmet needs of the City and stimulates corrective action. Residents are able to provide public input and critical review of the City's long-range plans.
- Planning for future needs ensures that projects will benefit the entire community. Residents can see what they are getting for their tax dollars.
- Planning can help bring about a better balance to project funding among public agencies and departments.
- Planning can eliminate the possibility of duplication of effort involving time and money between various local public agencies and improve project scheduling.
- Planning enables the community to effectively take advantage of anticipated and unanticipated State and Federal grants.
- Planning can provide decision makers with sound justification for needed improvements based on the comprehensiveness of the process.
- Planning future needs allows the community to stabilize tax rates over a period of years by anticipating funding requirements.
- Planning provides the required lead-time for designing and engineering improvements in advance of actual needs.

ONGOING COSTS

Many capital improvements require ongoing operational and/or maintenance costs. The City's 1995 Management Audit identified the need for operational impact statements in the Capital Improvements Plan. Those statements are contained within the CIP tables of capital improvements. While referenced in the CIP, individual departments would assume these costs in their operating budgets.

CIP SCHEDULE

The following schedule serves as a guide for development, review and approval of the Capital Improvements Plan.

- In accordance with Section 6.08 of the City Charter, the City Manager shall submit to the Council a five-year projection in such detail as the Council may require and outline major capital expenditures or projects that are planned for the City.
- In November/December of each year the City Council may provide its input to the City Manager relative to capital needs, priorities, projects, and changes that it would like to see evaluated or reevaluated in preparation for the updating of the City's Capital Improvements Plan.
- Act 33 of the Public Acts of 2008 provides that the City Planning Commission shall annually prepare a six-year plan of public structures and improvements.

- In January and February of each year, the City Manager and Planning Commission shall jointly review the past year's capital budget and six-year projection of capital improvements. At this time preparation of an updated Capital Improvements Plan is initiated for the ensuing six-year period.
- In March of each year, the Planning Commission shall hold a public hearing to review the Capital Improvement Plan and gather public input prior to adoption of the plan.
- By the first meeting in April, the City Manager and Planning Commission shall submit to the City Council a Capital Improvements Plan. This may take the form of a single plan, joint plan, or separate plans, depending on the degree of consensus as to projects, priorities, and methods of financing.
- The City Council will consider the recommended Capital Improvements Plan as transmitted by the Planning Commission and City Manager and approve a capital improvement fund budget along with the general City operating budget no later than its first meeting in June.

CIP CRITERIA

The CIP is a planning tool and not a promise of funding. Significant capital projects are identified with cost estimates and prioritized. Lesser capital expenditures for such things as municipal vehicles and pavement repair are anticipated in the City's general budget.

The following criteria are used to include a capital project or expenditure within the CIP:

- The project must impact the City-at-large or address a major need within the City in some specific way.
- The project represents a public facility.
- The project represents a physical improvement.
- The project requires the expenditure of at least \$25,000. Some CIP projects under \$25,000 may be included if they are part of a larger network or system of improvements.

From year to year, CIP projects are subject to change in response to community needs and available funding. Cost estimates for projects contained herein are based on current dollars, adjusted for inflation in the out years.

FINANCING OVERVIEW

Government, like private industry, must generate adequate revenues to fund operations, capital improvements, and debt retirement. Revenues available to local government are fees, user charges, and state and federal revenue sharing including grants and taxation.

Capital improvements can be financed through internal financing, such as pay as you go or debt financing. The two approaches are explained below.

Internal Financing

Under this approach, capital projects are financed from monies dedicated specifically for capital improvements. Annual tax levies and fund balances can be used to implement capital projects. Funding may be derived from:

- Approved City Budget.

- Dedicated millage above the Charter limit approved by the voters.
- Existing capital improvement funds.
- Energy and Environmental Sustainability Fund
 - This revolving fund has been created to provide a source of funding specifically targeted towards energy and environmental projects that fall outside of normal capital replacement, maintenance or other related programs. This fund was originally capitalized through grant funding and utility rebates and is sustained through collecting a portion of the energy savings realized through the City's energy efficiency efforts.

Tax Increment Financing (TIF)

For projects located in the Grand River Corridor Improvement Authority (CIA), tax increment revenues can be used to fund projects outlined in the City Council approved CIA Development Plan or to support related debt financing.

Debt Financing

The following debt financing instruments are available:

Limited Tax General Obligation (LTGO) Bonds. The City, without voter approval, may pledge revenues from its remaining charter millage plus existing fund balance to provide for principal and interest payments on bonds issued. If, in the future, the unused charter millage and fund balance prove insufficient to meet debt service requirements, then the City's operating budget would be required to meet the debt service payments.

Unlimited Tax General Obligation (UTGO) Bonds.

With voter approval, the City can issue bonds, which pledge the City's unlimited taxing power to meet any debt service requirements of the bond issue.

Special Assessment Bonds. Bonds issued in anticipation of the payment of special assessments may be an obligation of a special assessment district, or districts, or may be both an obligation of a special assessment district, or districts, and a general obligation of the City.

Voter Approved Earmarked Millage. Voter approved millage can be utilized partially for projects on a pay-as-you-go basis. The remaining dedicated millage can be pledged to meet debt service payments on projects funded through debt issues.

Lease Purchase Agreements. This method involves a contractual agreement with a private developer/investor who finances the project and leases it back to the local unit of government until the debt is fully retired, at which time ownership reverts to the City.

Capital Lease/Installment Loans. Most commonly used for vehicles and equipment, like a lease purchase agreement, per Act 99, this method allows for a three-party agreement between the City, the vendor/contractor and financial/lending institution.

IMPACT OF LEGISLATION ON TAXING AUTHORITY

Property tax revenue is derived from tax rate and State Equalized Value (SEV) of all taxable properties in the City. An increase in combined SEV can be due to either actual new construction or inflation on existing real estate. During periods of inflation on real estate, communities were able to generate increased tax revenues while keeping tax rates stable. "Automatic" increases in revenues generated from taxes precipitated a constitutional amendment in 1978.

The Headlee Amendment was approved by the State's electorate in 1978 as a constitutional amendment to limit the automatic increase in tax revenue caused by ever-increasing property values. This limitation allows tax revenue to increase only as high as the Consumer Price Index (CPI) plus the value of new construction. This limitation applies to the current Farmington Hills authorized charter millage limit of 10 mills. Otherwise stated, if property values increase more than the CPI, the tax rate must be rolled back so the resulting revenue does not exceed the increase in CPI. Debt existing prior to the passage of this constitutional amendment and voter approved debt issued since the legislation is exempt from this limitation.

In 1994, the State electorate approved a state constitutional amendment commonly known as "Proposal A." This amendment limited increases in the taxable value of existing real property on a per parcel basis to the lesser of 5% or the CPI. Once existing property was transferred or sold, property values for tax purposes could be raised to 50% of fair market value. This effectively limited increases in tax revenue for municipalities to the CPI, if it was less than 5%, and new construction values.

ACCOMPLISHMENTS

The following list identifies projects either completed or initiated this past year.

Public Facilities

- Each year the database created from the City-wide facilities condition assessment is used to evaluate assets at each of the City owned buildings. An analysis is performed by City staff to prioritize facility needs based upon asset usage, age, condition, predicted useful life and estimated replacement value. Projects completed as a part of this evaluation process included:
 - Pedestrian Concrete Sidewalk Replacement at Varied Locations
 - City Facilities
 - Security System CCTV Camera Replacement and New Installation at Multiple City Facilities
 - Interior Lighting Replacement/Upgrades at City Hall, Fire Station #5, and Police Station
- DPW Interior Garage Area Painting
- The DPW completed an upgrade of the fuel tank monitoring panels at the City's three fuel sites. These panel's report and monitor the quantity of fuel in each of the underground fuel tanks as well as verify deliveries. New technology is included with the upgrades.
- Reconstruction/rehabilitation of the parking lot between City Hall and the Police Station, as well as the sections immediately north of these buildings.
- Reconstruction/rehabilitation of the south parking lot between City Hall and the Fire Station.
- The Police Department's property contains emergency infrastructure and equipment critical to providing continuous emergency services. Open access to this area exposes this equipment and infrastructure to sabotage or vandalism, which would render these items and our department ineffective. In addition, the critical areas are currently prohibited for public access by signage only, for security and safety purposes. Access control improvements would be designed to decrease accessibility to these sensitive areas and improve employee safety and infrastructure security. The department is currently participating in a feasibility study to determine how best to design and implement this project.

- The Police Departments Live Scan finger printing machines, both in the Booking Room and in the Records Section had reached end of life. CLEMIS had advised that these machines are outdated and were required to be replaced by December 31, 2021, to be compatible with the County wide network. The department successfully completed this project with the purchase and installation of these new machines.
- During the 20/21 budget year, 78 of the 106-Police Department issued ballistic protective vests and their exterior carriers will reach their end of service life and their warranties will expire. The department established a committee of Officers and Command Officers to research and select the replacement ballistic vests, based on carrier appearance, vest comfort, and protection level. During the 2021/22 budget year the department successfully completed this project.
- The Police Departments recruitment efforts to diversify our current workforce have continued to show an increase in the number of women applicants interested in a career in law enforcement. The women's locker room had not increased in size since the original building construction in the 1980's, although the storage lockers which police officers secure their equipment has doubled in size. With recent hiring's, there were no vacant lockers remaining to assign to female officers. During the 2021/22 budget year the department worked with a vendor to determine the best and most cost-effective method of utilizing the existing locker rooms footprint yet provide additional lockers for staff. The department successfully completed this project by doubling the number of existing lockers without having to conduct major structural changes to the building. Any future expansion of the locker room will require extensive structural changes to the basement of the building.
- Fire Department is in process of having Station 2's insulation reconfigured as a solution to ice buildup.
- Fire Department is in process of having Station 2's exterior brick repaired.
- Current end of life fitness equipment continued replacement.
- ADA Funds were used increase accessibility to the Pickleball Courts at The Hawk.
- The multi-year Unified Communications & Networking project continued with projects as listed below:
 - The City replaced all analog CCTV recorders throughout City facilities and a portion of the analog cameras with new IP cameras. In addition
 - New IP cameras were installed in several locations to increase security for employees & residents.
 - The City completed an IT Disaster Recovery review and formulated a plan to ensure continuity of communications infrastructure, applications and processes.
 - The City replaced network storage & computing hardware and software that was at its "end of life."
 - The City completed implemented LTE backup for internet connectivity.
- Updates were made to the audio, video & streaming infrastructure in City Council Chambers & other Conference Rooms.
- The City updated the website & intranet site to improve communication to the residents.
- The multi-year Virtual Desktop implementation project continued with upgrades to City infrastructure and replacement of PC's with VDI hardware & software. This remote work capability has been identified by administration to be critical in delivering services while navigating around COVID related staffing challenges.

Parks and Recreation

- Baseball and soccer field improvements including infield materials, fence repairs, grading, soil and seeding at various baseball and soccer fields.
- Purchased ¾ ton 4 x 4 pickup truck with snowplow.
- Replaced River Bridge at Heritage Park
- Purchased 60” zero turn mower
- Purchased 48” walk behind mower
- Purchased FHGC Driving Range Mats
- Purchased FHGC Bunker Rake
- Purchased FHGC Fairway Aerifier
- Purchased new Zamboni for Ice Arena
- Resurfaced Trail near Nature Center at Heritage Park
- Increased accessibility to The Hawk’s Pickleball Courts
- Ice Arena: Replaced fire alarm panel, all wiring, pull station and strobe lights
- Purchased Kubota Utility Cart.
- Added/replaced signage at parks and facilities.

Equipment, Fire

- Fire Department awaits delivery of an Aerial Apparatus to replace Ladder 2
- Fire Department took delivery of an Engine for Ladder 4.
- Fire Department took delivery of Self-Contained Breathing Apparatus (SCBA).
- Fire Department awaits delivery of two (2) Stryker Stretcher systems.

Equipment, DPW

- Replace two tandem axle live bottom dump trucks.
- Replaced a 3-cubic yard dump truck.

Fleet & Motor Pool Vehicles

- Replaced one DPW and one Engineering heavy duty pick-up trucks with snowplows.
- Replaced one DPW Suburban.
- Replaced three fleet vehicles.

Drainage

- Construction of a 17'-foot by 10'-foot single span box culvert for the Minnow Pond Drain crossing of Quaker Valley Road west of Braebury Ridge.
- Construction of a 12' by 6' single span box culvert for a tributary of the Minnow Pond Drain on Quaker Valley Road east of Hunters Ridge.
- Constructed lateral storm sewer on Parkhill Road.
- Constructed lateral storm sewer in Heritage Hills Subdivision (construction Phase 1).
- Constructed lateral storm sewer in Stone Creek/Westlake Subdivisions (construction Phase 2).
- Preliminary assessment of the Upper Rouge River crossing Biddestone Lane.
- Construction of lateral Storm Sewer along Rockridge Street.

Sanitary Sewer

- Installed sanitary sewer on Salvador between Whitlock and Hugo.
- Phase 2 projects of the Evergreen-Farmington Sanitary Drainage District (EFSD) Corrective Action Plan (CAP) as required by the Administrative Consent Order issued by EGLE. The projects are being completed to manage sanitary sewer flows and include increased outflow capacity to the GLWA system as well as upgrades to 8 Mile SSO chamber, Lathrup Village Sanitary Retention Tank and Walnut Lake Pump Station No.1.

Water main

- Construction of new water main in Quaker Valley Subdivision.
- Construction of new water main in portions of Normandy Hills Subdivision.
- Construction of new water main on Salvador between Whitlock and Hugo.
- Installation of two (2) new pressure reducing valves (PRVs) to provide for automatic flow from the Northwest pressure district to the Central West and the Central East pressure district to the Southwest. These PRVs allow the City to supply water from meter FT-10 (14 Mile and Halsted) to all the other pressure districts throughout the City and also provide redundancy and reliability in the event of interruptions of service.
- Construction of water main replacement along Orchard Lake Road from Ludden to Hunter's Circle.

- Construction of three (3) fire hydrant extensions in the Pasadena Park Subdivision.

Sidewalks

- Installation of paved bike lane shoulders on portions of Eleven Mile Road from Middlebelt Road to Inkster Road.
- Installed sidewalk on the south side of Eleven Mile Road from Street to Inkster Road.
- Installed sidewalk on the south side of Fourteen Mile Road, from Pear Ridge to Club House Lane.

Transportation

- Reconstructed Fourteen Mile Road from Farmington Road to Orchard Lake Road.
- Reconstructed Orchard Lake Road from Fourteen Mile Road to Thirteen Mile Road.
- Installed Roundabout on Orchard Lake Road just south of Fourteen Mile Road.
- Reconstructed Shiawassee Road from Hawthorne to Nine Mile Road.
- Reconstructed Interchange Dr. and Interchange Ct.
- Design of reconstruction of Fourteen Mile from Drake Road to Farmington Road.
- Design of reconstruction of Farmington Road from Thirteen Mile Road to Twelve Mile Road.
- Design and reconstruction of Commerce Dr. (Farmington Freeway Industrial Park – Phase 1 of 3)
- Design of reconstruction of Farmington Freeway Industrial Park Road system (Phase 2 of 3)
- 2021-Local Road Reconstruction Projects.
 - Stone Creek and Westlake Estates (Phase 24)
 - Heritage Hills and Wedgewood Commons (Phase 1 of 4)
- 2021 Local Road Capital Preventative Maintenance Projects (Mill and Overlay Program)
 - Karen Court
 - Ruth Avenue
 - Indianbrook Subdivision
- 2021 Local Road Gravel to Pave Conversion.
 - Parkhill Street
- Designed 2022 Local Road Reconstruction Projects.
- Designed 2022 Local Road Gravel Conversion to Hard Surface Pavement project.

CIP SUMMARY TABLE

The below table summarizes the proposed capital improvement project expenditures by expenditure type as put forward by the various reporting City Departments. The projects included in each expenditure type are itemized by individual project(s), including project costs, in the corresponding charts contained within this document.

CIP SUMMARY TABLE, 2022/2023- 2027/2028

EXPENDITURE TYPE	TOTAL COST	CITY COST	MAINTENANCE COSTS	City cost figures shown are in thousands of dollars.						FUTURE	# OF PROJECTS
				2022/23	2023/24	2024/25	2025/26	2026/27	2027/28		Projects
Public Facilities	8,494,000	8,494,000	NC	1,767	2,477	1,075	1,075	1,075	1,025	0	8
Police	500,000	500,000	NC	500	0	0	0	0	0	0	7
Tech & Comm	9,750,000	9,750,000	275,000	2,550	1,250	1,250	1,250	1,250	950	1,250	4
Parks & Recreation	39,949,000	39,949,000	470,000	4,720	4,368	4,453	4,288	4,712	4,508	12,900	9
Fire Equipment	5,537,000	5,537,000	NC	1,215	1,230	1,086	986	1,020	0	0	5
DPW Equipment	5,968,000	5,968,000	NC	930	935	973	1,085	1,022	1,023	0	6
Fleet Motor Pool Vehicles	1,554,300	1,554,300	NC	234	244	253	264	274	285	0	6
Drainage	23,395,000	22,764,000	5,000	6,694	1,320	3,449	1,093	3,130	400	6,678	21
Sanitary Sewers	23,154,000	23,154,000	NC	2,000	3,216	5,310	4,852	5,276	2,500	0	6
Watermains	54,195,000	54,195,000	NC	11,478	5,653	8,875	12,133	7,170	5,510	3,376	21
Sidewalks	12,301,000	10,326,500	NC	443	1,086	427	231	362	443	7,384	30
Transportation	236,325,000	163,355,000	NC	20,775	17,990	18,315	18,415	18,765	12,745	55,350	28
Local Roads	139,365,000	139,365,000	NC	10,600	17,885	7,500	8,500	8,500	9,538	76,842	34
Industrial Commercial Roads	16,925,000	16,925,000	NC	4,600	5,200	2,100	1,675	950	800	1,600	7
Major Road Capital Preventative Maintenance	10,980,000	10,980,000	NC	0	1,675	600	825	1,500	830	5,550	10
TOTALS:	\$588,392,300	\$512,816,800	\$750,000	\$68,506	\$64,529	\$55,666	\$56,672	\$55,006	\$40,557	\$170,930	202

PUBLIC FACILITIES

Adequate building space is required to both maintain the City's existing services and to provide for critical new services. This portion of the CIP addresses the need for buildings and improvements in the following areas: Fire, Police, DPW, Special Services and City Hall. All involve improvements to existing facilities, the construction of new facilities and the purchase and maintenance of equipment, in an attempt to maintain and improve the current level of service.

PROPOSED PUBLIC FACILITY PROJECTS

1. City-Wide Facilities Improvements

In order to better plan for capital expenditures, a comprehensive facility's condition assessment was completed at 32 City buildings. Accruent was hired to objectively evaluate each building's assets based upon usage, age, condition, predicted useful life and estimated replacement value. This information was entered into a database which was used to analyze and report any major repairs, upgrades and replacements which are anticipated to occur within the next 5 years. A committee made up of City staff members from multiple departments reviewed the detailed report and helped create a list of specific requirements used to prioritize the list of projects. The prioritization was based up on several factors such as Facility Condition Index (FCI), type of system, reason for repair/replacement, impact on occupants, and contributions to water and energy savings. Based upon the prioritization, the following projects are proposed for FY 2022/2023:

- Pedestrian Concrete Sidewalk Replacement at Varied Locations
- Security System CCTV Camera Replacement and New Installation at Varied Locations
- Interior Lighting Fixture Replacement at Varied Locations
- Fire Alarm System Replacement at Varied Locations

2. Barrier Free (ADA) Improvements

The City conducted a survey of architectural barriers in its buildings, facilities, and parks in the spring and summer of 2008. The survey identified physical barriers in City buildings, facilities, and parks built prior to 1992 based on Michigan Barrier Free Design standards. Recognizing that the City has limited funds and cannot immediately make all buildings, facilities, and parks fully accessible, the City has prioritized barriers based on the level of impact on a person's ability to access City facilities and/or programs.

3. Fire Station Improvements

The Fire Department is currently working on plans for the Training space at the Hawk Community Center. Currently there are no immediate needs for Fire Station Improvements.

4. **City Hall / Police Department Underground Fuel Tank Replacement**

The current 2-10,000 gallon, double-walled, steel underground fuel storage tanks located west of the Police Department were installed in 1993. These have had contained leaks in the past. In 2012, these tanks were both opened, cleaned, repaired and their interiors recoated. Due to their age, ground conditions and their history; their replacement is necessary. The current estimated cost is \$331,000.

5. **West Parking Lot of City Hall Campus**

Reconstruction/rehabilitation of the far west parking lot of the City Hall campus, located west of the Police Department's parking lot.

6. **Courthouse Parking Lot**

Reconstruction/rehabilitation of the courthouse parking lots.

7. **Electric Vehicle (EV) Charging Stations**

Installation of electric vehicle (EV) charging stations at multiple City facilities.

8. **Citygate Signage on Orchard Lake Road Bridge Over I-696**

Installation of a Citygate sign on the Orchard Lake Road overpass over the I-696 expressway.

PUBLIC FACILITIES

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	City Wide Facilities Improvements	6,000,000	6,000,000	NC	100% City	1,000 CF	1,000 CF	1,000 CF	1,000 CF	1,000 CF	1,000 CF	
2	Barrier Free (ADA) Improvements	150,000	150,000	NC	100% City	25 CF	25 CF	25 CF	25 CF	25 CF	25 CF	
3	Fire Station Improvements	250,000	250,000	NC	100% City	50 CF	50 CF	50 CF	50 CF	50 CF		
4	City Hall/Police Department Underground Fuel Tank Replacement	331,000	331,000	NC	100% City	331 CF						
5	West Parking Lot of City Hall Campus	361,000	361,000	NC	100% City	361 CF						
6	Courthouse Parking Lot	366,000	366,000	NC	100% City		366 CF					
7	Electric Vehicle (EV) Charging Stations	36,000	36,000	NC	100% City		36 CF					
8	Citygate Signage on Orchard Lake Road Bridge Over I-696	1,000,000	1,000,000	NC	100% City		1,000 CF					
	TOTAL:	\$8,494,000	\$8,494,000	NC		1,767	2,477	1,075	1,075	1,075	1,025	0

CF: Capital Fund
NC: No Charge

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

POLICE

PROPOSED POLICE PROGRAMS AND EQUIPMENT

1. Replacement Body Armor

In budget year 2021/22 the police department replaced the body armor for 70 of the 106 sworn members. This body armor had reached the end of the manufacturer warranties and required replacement. It is expected that with the hiring of new officers and the warranty expiration of current officer's body armor that the department will need to purchase and additional 30 pieces of body armor. The estimated cost for this project is \$30,000

2. Fitness Equipment

The police departments fitness center is currently equipped with five pieces of exercise equipment which are used for cardiovascular fitness. These pieces of equipment are commercial grade quality and have been in use for several years. These pieces of equipment are currently out of warranty and are malfunctioning due to wear. The department benefits from its members using these pieces of equipment by helping maintain a healthy and strong work force. The department seeks to replace these five pieces of equipment with four new pieces of equipment, specifically three new treadmills and a Stairmaster machine. The estimated cost of this project is \$35,000.

3. Mobile Command Post

The Police Department's current Mobile Command Post Vehicle has been in service for 22-years and will need replacement in the near future. Mechanical and operational system failures are becoming more frequent. The Mobile Command Post Vehicle's technology has become outdated and current implementation of the Incident Command System requires more space for personnel than the existing vehicle can provide. A new Mobile Command Post Vehicle would offer mechanical reliability, updated technologies, and more space for personnel when Incident Command is utilized, increasing the effectiveness and versatility of the Mobile Command Post Vehicle. The estimated total for this project is \$300,000.00.

4. Forensic Investigation of Mobile Devices Program and Equipment

The prevalence of cell phones being used in the commission of crimes has revealed a need for the police department to be able to acquire, examine and analyze forensic data from these devices. This data can be used to establish motives, develop leads, identify suspects, identify evidence or exonerate subjects of an investigation. This data is critical to modern criminal investigations and the department must be prepared to pursue this investigative option fully. The department is seeking to train investigative staff and obtain computers, hardware and software which will allow for the retrieval of this important information. The estimated cost for this project is \$55,000.

5. Patrol Motorcycle

The police department currently has two BMW patrol motorcycles. These motorcycles were purchased in 2012. The vehicles are currently out of warranty and maintenance costs associated with their regular use are increasing. It is recommended that these motorcycles be replaced with two BMW patrol motorcycles and the existing motorcycles be either sold or used as a trade in at the time of purchase. The estimated cost of this project is \$50,000.

6. Vantage Robot

The police department is seeking to add this tactical robotic to enhance its ability to respond to emergency situations. This robot is remote controlled and equipped with three cameras which provide high-definition real time video to the users. The robot also is equipped with a FLIR camera which will allow for visibility in low light and identifying heat sources. The robot has two types of communication capabilities which would allow the operator to speak directly with individuals who may pose a danger to the public without exposing the officer. This robot is capable of climbing stairs and maneuver around or over obstacles. This piece of equipment would be extremely valuable in clearing building or confronting armed and barricaded individuals while providing a degree of safety to officers. The estimated cost of this project is \$30,000.

POLICE PROGRAMS AND EQUIPMENT

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.					
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28 FUTURE
1	Replacement Body Armor	30,000	30,000	NC	100% City	30 CF					
2	Fitness Equipment	35,000	35,000	NC	100% City	35 CF					
3	Mobile Command Post Vehicle	300,000	300,000	NC	100% City	300 CF					
4	Forensic Investigation of Mobile Devices Program and Equipments	55,000	55,000	NC	100% City	55 CF					
6	Patrol Motorcycle	50,000	50,000	NC	100% City	50 CF					
7	Vantage Robot	30,000	30,000	NC	100% City	30 CF					
	TOTAL:	\$500,000	\$500,000	NC		500	0	0	0	0	0

CF: Capital Fund
NC: No Change

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

TECHNOLOGY

Adequate building space is required to both maintain the City's existing services and to provide for critical new services. This portion of the CIP addresses the need for buildings and improvements in the following areas: Fire, Police, and City Hall. All involve improvements to existing facilities, the construction of new facilities and the purchase and maintenance of equipment, in an attempt to maintain and improve the current level of service.

PROPOSED TECHNOLOGY PROJECTS

1. City-Wide Technology

Information Technology provides technical support and maintenance of information systems, telecommunications systems, and Geographic Information Systems (GIS). Various enterprise-wide software applications have been installed including land file, geographical information systems, recreation registration, financial management, document imaging and the creation of a city website and employee intranet.

During Fiscal Year 2022/2023 the following projects are proposed

- PC & Notebook replacements for various departments.
- Continued Implementation of Virtual Desktop & VPN functionality for various departments.
- Infrastructure and software enhancements to support various departmental initiatives.
- Continued upgrades to the network security infrastructure.
- Implement Cloud based IT Disaster recovery solution.
- Implement Windows 11 upgrade.
- Replace the City's outdated Enterprise Resource and Planning software (General Ledger, Accounts Payable, Payroll, Human Resources, Purchasing, etc.) with a new software package that also includes enhanced functionality to replace current outmoded and manual processes, including:
 - Budgeting and Fiscal Planning
 - Financial Reporting
 - Business Intelligence/Analytics
 - Performance Management
 - Project Management
 - Human Resource Information System functionality to cover the "life cycle" of each employee of the City:
 - Recruitment
 - Applicant tracking
 - Selection
 - On-boarding
 - Training and development
 - Performance reviews
 - Employee profile management

All of the recommended upgrades in functionality are currently managed using outdated and manually intensive spreadsheets, Word documents, and paper.

2. Unified Communications & Smart Cities Projects

Unified communications (UC) are a framework for integrating various asynchronous and real-time communication tools, with the goal of enhancing business communication, collaboration and productivity. Unified communications do not represent a singular technology; rather, it describes an interconnected system of enterprise communication devices and applications that can be used in concert. In order to better address all of the City's needs appropriate systems will be planned & implemented as part of an integrated program.

A Smart City is a technologically modern area that uses different types of electronic methods, voice activation methods and sensors to collect specific data. Information gained from that data are used to manage assets, resources, and services efficiently; in return, that data is used to improve the operations across the City. The smart city concept integrates information and communication technology (ICT), and various physical devices connected to the IoT (Internet of things) network to optimize the efficiency of City operations and services and connect to citizens.

During Fiscal Year 2021/2022 the following projects are proposed

- **Video Surveillance Equipment**

The City of Farmington Hills faces the challenge of reassuring residents, visitors and employees that safety on City property is a priority. This is accomplished by preventing and minimizing potential threats. These include vandalism, burglary and all other forms of crime. Security in common areas like parks and City buildings has become of vital importance and video surveillance is a critical tool needed to secure City sites. When complete, will be designed to work in conjunction with other systems on a unified platform. In order to successfully implement this program capital investment of \$250,000 is requested for fiscal year 2022/23 and \$250,000 per year is requested for, 2024/25, 2025/26, 2026/27 & 2027/28.

- **Smart Cities Projects**

Potential projects are in the very early planning stage. Projects will include collecting data from devices, buildings and assets that will then be processed and analyzed to monitor and manage traffic and transportation systems, utilities, water supply networks, waste, crime detection, information systems and other community service. In order to successfully implement this program capital investment \$350,000 is requested for fiscal year 2022/23 and \$350,000 per year is requested for 2024/25, & 2025/26, 2026/27 & 2027/28.

3. Police and Fire Departments Complete Radio System Replacement

The police and fire radio system are reaching end-of-life and will be replaced by Oakland County. The County intends to develop financial plans to ensure funding availability; however, it is unclear if funding assistance will occur. Therefore, it is the responsibility of each Public Safety Answering Point (PSAP) to plan for funding responsibilities for the project. It is unclear at this time when actual replacement will occur. PSAPs are encouraged to plan for the project to begin 2021/2022.

4. ERP/Financial Software

- A new Core ERP system (GL, Budgeting, PR, AP, HR, Purchasing, Capital Assets; \$700k up front, \$100k annual maintenance)
- A new Financial Reporting, Performance Management, and Transparency software like OpenGov, Questica, Socrata.... (\$100k annual lease)
- A new Time and Labor Management software for timekeeping (\$100k annual lease)
- A new Applicant Tracking software for recruiting, hiring, etc. (\$100k annual lease)

TECHNOLOGY

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/2028	FUTURE
1	City-Wide Technology	2,500,000	2,500,000	60,000 AC	100% City	400 CF	350 CF	350 CF	350 CF	350 CF	350 CF	350 CF
2	Unified Communications & Smart Cities Projects	4,200,000	4,200,000	40,000 AC	100% City	600 CF	600 CF	600 CF	600 CF	600 CF	600 CF	600 CF
3	Police and Fire Departments Complete Radio System Replacement, beginning 2021/2022	250,000	250,000	NC	100% City	250 CF						
4	ERP/Financial Software	2,800,000	2,800,000	175,000 AC	100% City	1,300 CF	300 CF	300 CF	300 CF	300 CF		300 CF
	TOTAL:	\$9,750,000	\$9,750,000	\$275,000		2,550	1,250	1,250	1,250	1,250	950	1,250

CF: Capital Fund

AC: Annual Cost

NC: No Change

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1/27/2022

PARKS & RECREATION

The Parks and Recreation section of the CIP has been developed by extracting the action plan from the City's 2014 & 2019 Parks and Recreation Master Plans as well as adding the funding available in the Parks Millage approved by the voters in August 2018.

The Parks and Recreation Master Plan is required to be prepared in accordance with the Michigan Department of Natural Resources' guidelines. This plan includes a comprehensive review of existing recreation services and facilities, an assessment of city-wide recreation opportunities and deficiencies, and identification of long-term recreation goals.

PROPOSED PARKS AND RECREATION PROJECTS

1. The HAWK Updates - \$16,000,000 (over 5 years)

The Accruent Study performed for this facility indicated over \$16,000,000 in repairs/replacements over the next five (5) years with almost \$7,000,000 of those requirements on the 3rd floor. FHSS Staff have identified just under \$7,000,000 in priority improvements. Renovation of the athletics facilities and third floor for recreational use, community partnerships, general programs and special event use. Plan includes 145,000 square ft. third floor amenities with revenue return from partnerships. Also includes upgrades to remaining HVAC and renovation of the artificial turf fields and outbuildings which require updates to utilize without hazard.

- Additional HAWK items not in Accruent Study
 - Shade System for windows (\$20,000)
 - Sound System for Harrison Hall (\$30,000)
 - Sound Baffling for Harrison Hall (\$30,000)
 - Sound System for Blackbox Theater (\$30,000)
 - Gym divider Curtains (\$50,000)

2. 2022/2023 Vehicles, Equipment and Infrastructure (\$620,000)

Vehicles and Equipment

- Parks
 - Truck, ¾ Ton 4WD Pickup w/Plow (\$39,000).
 - Mower, Utility 60" ZTR (\$14,000).
 - Tractor, Utility 35-60 HP (\$35,000).
- Golf
 - Mower, Utility Rough (\$70,000)
 - Triplexes (2) (\$60,00)
 - Cart, Utility (2) (\$22,000)
 - Sprayer (\$60,000)

Infrastructure

- Trail and Wayfinding Signs (\$40,000)
- Longacre Wall Repair (\$100,000)
- Playground Equipment (\$25,000)
- Site Security and Life Safety in Parks- (\$40,000)
- Roof Replacements -Pioneer, Founders, Heritage (\$50,0000)
- Concrete replacement around shelters, concession stands (\$30,000)
- Master Plan per Department of Natural Resources (\$35,000)

3. 2023/2024 Vehicles, Equipment and Infrastructure (\$268,000)

Vehicles and Equipment

- Parks
 - Truck, Canyon (\$30,000)
 - Truck, ¾ Ton 4WD Pickup w/Plow (\$39,000).
 - Mower, Utility 60” ZTR (\$14,000).
 - Mower, Wide Area Jac 5111 (\$70,000).
- Golf
 - Mower, Utility Reel JD 2653 (\$50,000).

Infrastructure

- Parks
 - Trail and Wayfinding Signs (\$40,000).
 - Playground Equipment (\$25,000).

4. 2024/25 Vehicles, Equipment and Infrastructure (\$353,000)

Vehicles and Equipment

- Parks
 - Truck, ¾ Ton 4WD Pickup w/Plow (\$39,000).
 - Mower, Utility 60” ZTR (\$14,000).
 - Mower, Wide Area Jac 5111 (\$70,000).
- Golf
 - Carts for Turf Maintenance (\$20,000).
 - Golf Cart Fleet (\$210,000).

5. 2025/2026 Vehicles, Equipment and Infrastructure (\$188,000)

Vehicles and Equipment

- Parks
 - Truck, ¾ Ton 4WD Pickup w/Plow (\$39,000).
 - Mower, Utility 60” ZTR (\$14,000).
 - Sewer Repairs, P&G (\$30,000).
- Golf
 - Mower, Sidewinder Rotary (\$45,000).
 - Mower, Wide Area (\$60,000).

6. 2026/2027 Vehicles, Equipment and Infrastructure (\$612,000)

Vehicles and Equipment

- Parks
 - Truck, Canyon (2) (\$80,000)
 - Walk Behind 48" (\$7,000)
 - Cart, Utility (\$25,000)
 - Tractor, Utility 35-60 HP (\$35,000)
- Ice Arena
 - Rubber Flooring (\$100,000)
 - Refurbish lobby restrooms (\$50,000)

Infrastructure

- Trail updates at Heritage Park (\$50,000)
- Trail updates at Woodland Hills (\$10,000)
- Spicer House Renovations (\$125,000)
- Disc Golf Course tee pads (\$10,000)
- Riley Skate Park concrete repairs (\$20,000)
- Founders Sports Baseball Dugouts (\$100,000)

7. 2027/2028 Vehicles, Equipment and Infrastructure (\$408,000)

Vehicles and Equipment

- Parks
 - Truck, Canyon (\$30,000)
 - Truck, ¾ Ton 4WD Pickup w/Plow (\$39,000).
 - Mower (\$14,000).
 - Mower (\$70,000).
- Golf
 - Mower (\$50,000).

Infrastructure

- Parks
 - Site Security and Life Safety in Parks- (\$40,000)
 - Trails and Wayfinding (\$40,000).
 - Playground Equipment (\$125,000).

7. Acquisition of Park Land \$1,500,000

Various parcels of land could be purchased for parks and/or recreation opportunities, particularly in the northwest and southeast quadrants of the City.

8. Costick Center/Senior Center \$20,000,000

Future renovation of Costick Center to create Adults 50 & Better focused facility. The Accruent Study performed for this facility indicated over \$20,000,000 in repairs/replacements over the next five (5) years. FHSS Staff have identified just under \$9,000,000 in priority improvements.

PARKS & RECREATION

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/2028	FUTURE
1	The Hawk	16,000,000	16,000,000	315,000 AC	100% City	2,600 CF	2,600 CF	2,600 CF	2,600 CF	2,600 CF	2,600 CF	400 CF
2	2022/2023 Vehicles, Equipment and Infrastructure	620,000	620,000	NC	100% City	620 CF						
3	2023/2024 Vehicles, Equipment and Infrastructure	268,000	268,000	NC	100% City		268 CF					
4	2024/2025 Vehicles, Equipment and Infrastructure	353,000	353,000	NC	100% City			353 CF				
5	2025/2026 Vehicles, Equipment and Infrastructure	188,000	188,000	NC	100% City				188 CF			
6	2026/2027 Vehicles, Equipment and Infrastructure	612,000	612,000	NC	100% City					612 CF		
7	2027/2028 Vehicles, Equipment and Infrastructure	408,000	408,000	NC	100% City						408 CF	
8	Acquisition of Park Land	1,500,000	1,500,000	NC	100% City							1,500 CF
9	Costick Center	20,000,000	20,000,000	155,000 AC	100% City	1,500 CF	1,500 CF	1,500 CF	1,500 CF	1,500 CF	1,500 CF	11,000 CF
	TOTAL:	\$39,949,000	\$39,949,000	\$470,000		4,720	4,368	4,453	4,288	4,712	4,508	12,900

NC: No Change
CF: Capital Fund
AC: Annual Cost

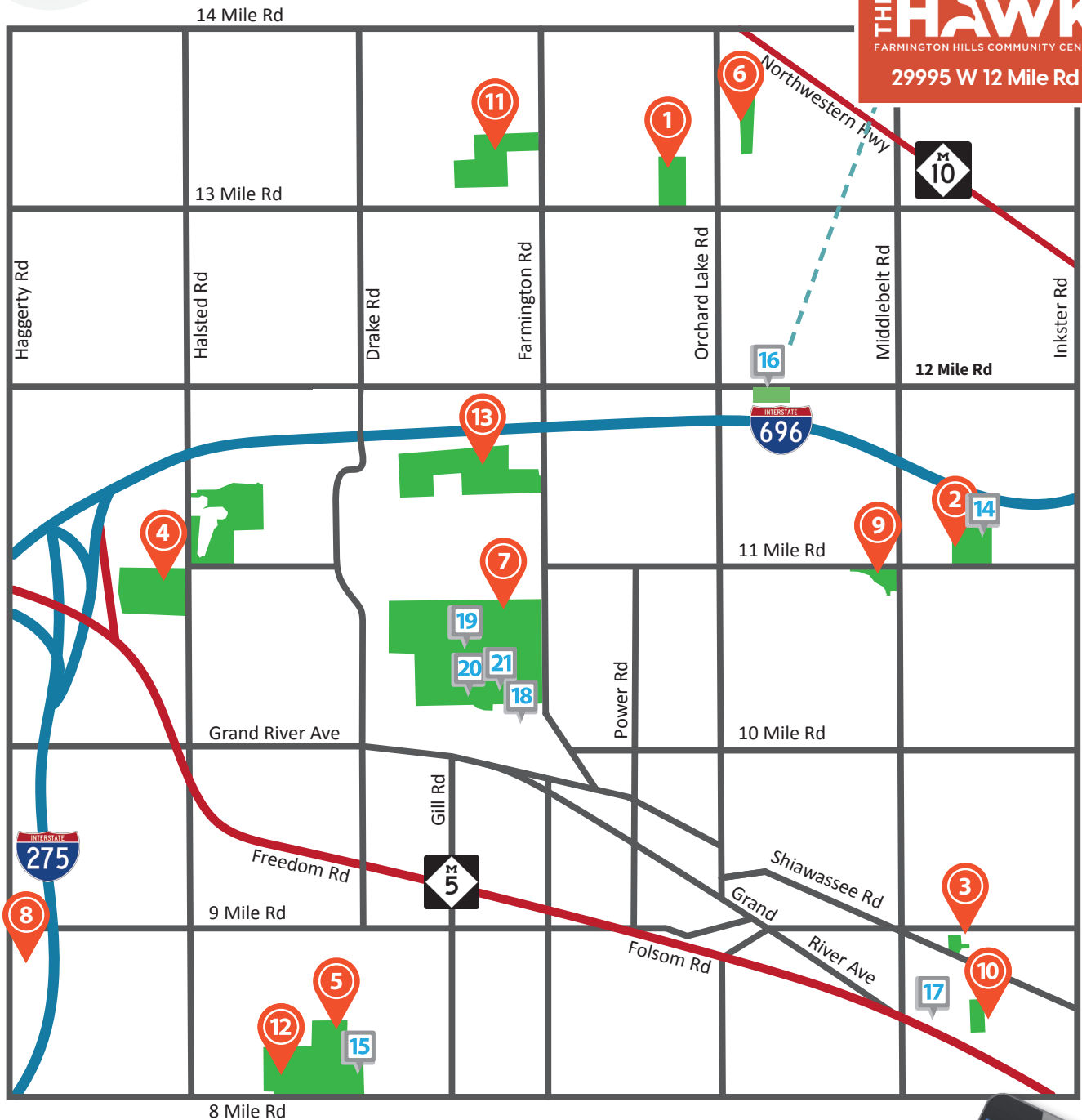
* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022



PARKS & FACILITIES

THE HAWK
FARMINGTON HILLS COMMUNITY CENTER
29995 W 12 Mile Rd



Scan me

**Take the virtual tour.
Your adventure awaits!**

fhgov.com/fhparks



PARKS

- 1 Bond Field**
31500 13 Mile Rd
1.7 acre park with two youth baseball fields
- 2 Costick Fields**
28600 W 11 Mile Rd
Large green space in front of Costick Activities Center with three soccer fields and a 0.5 mile walking path.
- 3 William Grace Dog Park**
29040 Shiawassee Rd
4-acre dog park divided into two areas - one for large dogs and one for smaller dogs up to 22 lbs. The dog park is open year-round, has benches and water for your dogs.
- 4 Farmington Hills Golf Club**
37777 11 Mile Court
175-acre, 18-hole golf course, open April through November, weather permitting. The driving range has 32 stations, tees and two practice greens. A full service pro shop and restaurant are open to the public.
- 5 Founders Sports Park**
35500 8 Mile Rd
101-acre park with six soccer fields, a nine hole disc golf course, eight baseball/softball fields, four sand volleyball courts, two half-court basketball courts, one bocce ball court, and a fishing pier. Also home to Farmington Hills Ice Arena and Riley Skate Park.
- 6 Harmon Oaks Park**
28000 Greening Rd
Small nature preserve with mature hardwoods and wildflowers.
- 7 Heritage Park**
24915 Farmington Rd
211-acre park with 4.5 miles of hiking trails. Amenities include picnic shelters, playground, sand volleyball courts, horseshoe pits, and grills. Also home to the Spicer House, Nature Center, Stables Art Studio, Amphitheater, History Center, Splash Pad, and Riley Archery Range. Shelters are available on a first-come basis, but may be reserved in advance.

- 8 Hills 275 Trailhead**
22100 Haggerty Rd
Bordering the I-275 Metro Trail, this is the first official trailhead off a Federal Highway in the State of Michigan. Hills 275 Trailhead provides dedicated parking that allows residents and guests to enjoy a safe, accessible entry point to the I-275 Metro Trail to bike and hike. The trailhead features green space, an informational kiosk, bike repair station, water bottle filler station, and work from local artists.
- 9 Memorial Park**
Located at 11 Mile & Middlebelt Rds
Memorial Park provides residents with a place to peacefully reflect and recognize friends and family members who have passed away.
- 10 Olde Town Park**
Corner of Independence & Waldron
3.7-acre neighborhood park featuring a shelter, in-line skating/ice hockey rink, two tennis courts, picnic tables, grills, and a playground.
- 11 Pioneer Park**
29885 Farmington Rd
Four athletic fields: In summer, two baseball and two soccer fields. In fall, four soccer fields. Comfort station and refreshment stand also available.
- 12 Riley Skate Park**
35500 W. 8 Mile Rd
Located in Founders Sports Park. This 29,000 square foot all-concrete park is the area's FREE premiere hotspot for skateboarders and in-line skaters.
- 13 Woodland Hills**
26655 Farmington Rd
74-acre nature park with 1.7 miles of hiking trails. Meadows, a hardwood forest, a pond, a river, and creek are all part of its natural wonders.

FACILITIES

- 14 Costick Activities Center**
28600 W 11 Mile Rd
67,000 square foot multipurpose facility on 28 acres. Home of the Center for Active Adults. Amenities include: swimming pool, gymnasium, stage, meeting and banquet rooms.

- 15 Farmington Hills Ice Arena**
35500 W. 8 Mile Rd
Located inside Founders Sports Park, the 70,000 square foot Ice Arena has two ice surfaces and a total seating capacity of 1,200 people. The facility hosts youth and adult hockey, public skating, Learn-to-Skate programs, and figure skating.
- 16 The Hawk - Farmington Hills Community Center**
29995 W 12 Mile Rd
Formerly Harrison High School, the new 245,000 square foot multipurpose community center and 42-acre park will provide a hub for residents and guests of all ages, interests and abilities to enjoy drama, music, visual and performing arts, aquatics, athletics, fitness and wellness, along with many other programs, classes, camps and events.
- 17 Jon Grant Community Center**
29260 Grand River Ave
Attached to Farmington Hills Fire Station #3. Facility hosts classes, programs, and rental space for parties and events.
- 18 Longacre House**
24705 Farmington Rd
www.longacrehouse.org
Historic event space for weddings, themed parties, receptions, business meetings, banquets and social gatherings. Also used by many Special Services programs.
- 19 Nature Center**
24915 Farmington Rd
Located in Heritage Park, this 2,325 square foot nature facility offers interpretive exhibits, including a life-sized tree and animal home exhibit, a bird viewing area, native fish aquariums, a library and a hands-on learning station for kids.
- 20 Riley Archery Range**
24915 Farmington Rd
This unique open air (indoor/outdoor) archery range offers eight shooting lanes with shooting distances of 10-30 yards, providing programs for people of all ages and abilities.
- 21 Stables Art Studio**
24915 Farmington Rd
Spacious art studio in historic setting hosts classes, camps & workshops.

EQUIPMENT

FIRE APPARATUS PURCHASES

The Fire Department utilizes a combination of full-time and call-back personnel to provide Advanced Life Support (ALS), rescue and fire suppression services out of five fire stations located strategically throughout the City.

The DPW maintenance staff continues to provide vital input on the replacement of our fleet vehicles based on their experience and maintenance records. This advice is reflected in the schedule given below for the replacement of those vehicles listed by year.

The fire department rotates its vehicles based on use. -Acquisition of new apparatus is assigned to a station based on usage and consultation with DPW. The older vehicle is rotated to one of the other stations. This has proven very beneficial to extend vehicle life.

PROPOSED FIRE APPARATUS PURCHASES

1. 2022/2023 Fire Equipment and Apparatus

- Purchase replacement for Squad #5 (\$275,000).
- Purchase replacement for Medic #3 (\$275,000).
- Purchase turnout gear for end of service life personal protective equipment (\$440,000).
- Purchase three (3) power stretchers with power load units (\$175,000)
- Purchase one (1) utility vehicle to replace fleet vehicle (\$50,000).

2. 2023/2024 Fire Equipment and Apparatus

- Purchase replacement Squad (\$294,000).
- Purchase replacement Engine (\$700,000).
- Purchase one (1) utility vehicle to replace fleet vehicle (\$51,000).
- Purchase three (3) power Stretchers with power load units (\$185,000)

3. 2024/2025 Fire Equipment and Apparatus

- Purchase Air Compressor (\$50,000).
- Purchase replacement Squad (\$285,000).
- Purchase replacement Engine (\$700,000).
- Purchase one (1) utility vehicle to replace fleet vehicle (\$51,000).

4. **2025/2026 Fire Equipment and Apparatus**

- Purchase replacement Squad (\$285,000).
- Purchase replacement Squad (\$285,000).
- Purchase replacement Squad (\$285,000).
- Purchase one (1) utility vehicle to replace fleet vehicle (\$51,000)
- Replacement Battalion Chief Vehicle (\$80,000).

5. **2026/2027 Fire Equipment and Apparatus**

- Purchase replacement Squad (\$285,000).
- Purchase replacement Engine (\$735,000).

FIRE EQUIPMENT

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	2022/2023 Fire Equipment and Apparatus	1,215,000	1,215,000	NC	100% City	1,215 CF						
2	2023/2024 Fire Equipment and Apparatus	1,230,000	1,230,000	NC	100% City		1,230 CF					
3	2024/2025 Fire Equipment and Apparatus	1,086,000	1,086,000	NC	100% City			1,086 CF				
4	2025/2026 Fire Equipment and Apparatus	986,000	986,000	NC	100% City				986 CF			
5	2026/2027 Fire Equipment and Apparatus	1,020,000	1,020,000	NC	100% City					1,020 CF		
	TOTAL:	\$5,537,000	\$5,537,000	NC		1,215	1,230	1,086	986	1,020	0	0

NC: No Change

CF: Capital Fund

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

DIVISION OF PUBLIC WORKS (DPW)

EQUIPMENT PURCHASES

At the end of the service life of heavy equipment there is a specific salvage value and a cost of replacement for that piece of equipment. Because of the expense of major equipment purchases for the DPW, a continuous provision must be made from year to year to replace worn out and unserviceable equipment. The items contained in this plan have an individual value of a minimum of \$25,000. This does not include any equipment purchases that are part of the normal operating budget.

PROPOSED DPW EQUIPMENT PURCHASES

1. 2022/2023 Equipment

- Forestry Truck – Replacement (\$270,000)
- Refurbish Existing Equipment (\$50,000)
- Rubber Tire Front Loader – Replacement (\$255,000)
- Two Forestry Chipper – Replacements (\$95,000 each, Total \$190,000)
- Two Riding Landscape Mowers – Replacements (\$20,000 each, Total \$40,000)
- Tool-Cat Utility Vehicle – Replacement (\$100,000)
- Enclosed Trailer for Mowers – Replacement (\$25,000)

2. 2023/2024 Equipment

- Two 5-Yard Swap Loader Dump Trucks (Chassis only)– Replacements (\$270,000 each, Total \$540,000)
- Refurbish Existing Equipment (\$50,000)
- Vacuum Street Sweeper-Replacement (\$345,000)

3. 2024/2025 Equipment

- 10-Yard Dump Truck – Replacement (\$340,000)
- Refurbish Existing Equipment (\$50,000)
- Rubber Tire Excavator – Replacement (\$583,000)

4. 2025/2026 Equipment

- 5-Yard Dump Truck – Replacement (\$325,000)
- 10-Yard Dump Truck – Replacement (\$355,000)
- Refurbish Existing Equipment (\$50,000)
- Roadside Mowing Tractor – Replacement (190,000)

5. 2026/2027 Equipment

- Refurbish Existing Equipment (\$50,000)
- Sign Installation Truck – Replacement (235,000)
- Rubber Tire Backhoe – Replacement (352,000)
- Road Grader – Replacement (390,000)

6. **2027/2028 Equipment**

- Mechanical Street Sweeper – Replacement (423,000)
- Refurbish Existing Equipment – (50,000)
- Sewer Vacuum Truck – Replacement (550,000)

DPW EQUIPMENT

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	2022/2023 DPW Equipment	930,000	930,000	NC	100% City	930 CF						
2	2023/2024 DPW Equipment	935,000	935,000	NC	100% City		935 CF					
3	2024/2025 DPW Equipment	973,000	973,000	NC	100% City			973 CF				
4	2025/2026 DPW Equipment	1,085,000	1,085,000	NC	100% City				1,085 CF			
5	2026/2027 DPW Equipment	1,022,000	1,022,000	NC	100% City					1,022 CF		
6	2027/2028 DPW Equipment	1,023,000	1,023,000	NC	100% City						1,023 CF	
	TOTAL:	\$5,968,000	\$5,968,000	NC		930	935	973	1,085	1,022	1,023	0

CF: Capital Fund
NC: No Change

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

FLEET & MOTOR POOL VEHICLES

The City maintains a vehicle fleet of over seventy-five (75) vehicles for use for cleanup snow plowing, construction and building inspections, everyday travels around the City and for travel to training, and meetings outside of the City. These vehicles are critical to the daily operations of the City. Some of these are assigned directly to departments and personnel, identified as Fleet Vehicles, and others from the Motor Pool for use by all staff not having an assigned fleet vehicle. This section of the CIP addresses the replacement of those vehicles based on the maintenance records and down time. The vehicles represented in this category do not include Fire Department, Police Department, and the Parks Division vehicles nor the heavy equipment and dump trucks in the Division of Public Works.

PROPOSED FLEET & MOTOR POOL VEHICLE PURCHASES

1. 2022/2023 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$92,000)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance. & Engineering.
(3 at \$47,400, Total \$142,200)

2. 2023/2024 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$95,700)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance. & Engineering.
(3 at \$49,300, Total \$147,900)

3. 2024/2025 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$99,500)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance & Engineering.
(3 at \$51,300, Total \$153,900)

4. 2025/2026 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$103,500)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance & Engineering.
(3 at \$53,400, Total \$160,200)

5. 2026/2027 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$107,600)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance. & Engineering.
(3 at \$55,500, Total \$166,500)

6. 2027/2028 Vehicles

- 3-Fleet and Pool Vehicles – Replacement (\$111,900)
- 3 Pickup Trucks and Plows – Pub Services, Road Maintenance. & Engineering
(3 at \$57,800, Total \$173,400)

FLEET & MOTOR POOL VEHICLES

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING &	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	2022/2023 Vehicles	234,200	234,200	NC	100% City	234 CF						
2	2023/2024 Vehicles	243,600	243,600	NC	100% City		244 CF					
3	2024/2025 Vehicles	253,400	253,400	NC	100% City			253 CF				
4	2025/2026 Vehicles	263,700	263,700	NC	100% City				264 CF			
5	2026/2027 Vehicles	274,100	274,100	NC	100% City					274 CF		
6	2027/2028 Vehicles	285,300	285,300	NC	100% City						285 CF	
	TOTAL:	\$1,554,300	\$1,554,300	NC		234	244	253	264	274	285	0

CF: Capital Fund
NC: No Change

Revised: 1-27-2022

DRAINAGE

In June of 1980, the City Council, commissioned the preparation of a Master Storm Drainage Plan. The plan treated the storm water as a resource rather than a liability. Utilization of existing open drainage systems and use of detention basins along major streams were considered. The plan suggested the design and use of pipes and streams that were much smaller and less expensive than those designed to just "pass through" as much storm water as was generated. The plan proposed to manage existing flows from streams thereby ensuring that the City's development would not cause flooding in downstream communities.

In October of 1981, a significant storm caused flooding throughout the City. Many inadequacies of the City's storm drainage system were revealed. The storm reinforced the importance of City Council's decision to develop a Master Storm Drainage Plan.

The City Council formally approved the Master Storm Drainage Plan in December of 1986. Many of the projects contained herein are consistent with that plan. Since the plan depends on detention basins for a number of the proposed improvements, acquiring the land as soon as possible is imperative. Without these detention sites many of the proposed improvements would be impossible and would require selection of next best, and more expensive options.

The projects contained herein reflect improvements to major and minor drainage courses outlined in the Master Storm Drainage Plan and are supplemented by storm water quality considerations required under the City's National Pollutant Discharge Elimination System (NPDES) storm water permit. As the City's rapid growth nears its end, emphasis is redirected from responding to new development to maintaining or improving the aging systems that are now in place. This involves actively participating in repairs and improvements of minor drainage courses that traverse both public and private property. In this way, a functional drainage system is ensured for all areas of the City. Priority criteria are:

- Integrating water quantity issues with water quality issues.
- Immediate flood peak reduction to solve the most significant flooding concerns.
- Integration with other improvements including water main, sanitary sewer, paving, and building construction.
- Ensuring the continued development and redevelopment of the City.
- Encouragement of riparian stewardship and maintenance.

Development of a Drainage Program

Prioritization of drainage improvements tends to be cyclical when viewed with other capital needs. This is due to the fact that most systems in the City function well during periods of normal rainfall. Usually, years pass between significant rain events. The result is to minimize required improvements during normal weather, especially in light of the high cost associated with many of the individual drainage projects. However, when a major rain event occurs the community demands accelerated improvements and the cycle begins again. The major rainstorms of 1981, 1989, 1993, 1997, 1998 and 2014 are evidence of this fact.

In order to safeguard against these significant rain events, a consistent, uniform, and aggressive program is necessary. This allows much of the major capital expense and effort to be distributed over the years. This ensures continued improvement, thereby saving millions of dollars in flood damage in the future and promoting an improved quality of life.

Maintenance

Calls for maintenance have increased over the years. Many of the City's subdivisions have open spaces and retention systems that need repair or improvement. Without ongoing inspection and maintenance, failures will occur. Once initiated, these maintenance programs will generate a number of projects for which capital funding will be required. The City will also consider, when appropriate, the possible mitigation of wetlands within the overall drainage system.

Asset Management

With the passage of the local road millage in 2018 and the accompanying changes to the Special Assessment District (SAD) policy, there has been an increase in the amount of drain related capital improvements. Each road project is evaluated during the design phase to determine if the existing underground storm drain infrastructure is sufficient or in need of repair and/or replacement. This integrated approach to asset management ensures that infrastructure is addressed in a cohesive manner at the most cost-effective time in the project lifecycle.

Federal Requirements

The City is required to install various improvements in accordance with the U. S. Clean Water Act. This Act requires the issuance of a National Pollutant Discharge Elimination System (NPDES) permit commonly called an MS4 Permit, for all communities over 10,000 in population. Farmington Hills has the required permit issued by the Michigan Department of Environment, Great Lakes, and Energy – EGLE (formerly MDEQ). The City continues to explore approaches that would establish the best management practices. This includes community outreach and education about Federal storm water requirements, and an illicit discharge detection and elimination program. The City is working with EGLE, Oakland County, Wayne County, and the Alliance of Rouge Communities to implement a program that is most beneficial to Farmington Hills and other communities in the Rouge River Watershed. Part of the program is a document called a Storm Water Management Plan (SWMP). This document is required under the City's NPDES permit and outlines specific improvements that must be done to meet Federal requirements.

In addition, Farmington Hills has an obligation to conduct an IDEP (Illicit Discharge and Elimination Program), which is an ongoing effort to prevent and eliminate illegal outlets into the City's drainage systems.

The City is also obligated to employ best management practices for good housekeeping techniques for public infrastructure. These practices include catch basin cleaning, street sweeping, detention pond basin maintenance, etc. Key to cooperation and watershed planning is the City's participation in the Alliance of Rouge Communities, a cooperative venture ensuring that all 40 communities and three counties contained in the Rouge River watershed continue to work together. All projects contained herein are consistent with the City's Federal permit.

PROPOSED DRAINAGE PROJECTS

1. **Storm Water NPDES Permit Program**

An NPDES permit was obtained from the EGLE. As a requirement of the permit, a watershed management plan is needed. A major component of this plan is the Storm Water Management Plan. The SWMP requires that certain projects and procedures be adopted that will ultimately lead to a cleaner Rouge River in accordance with the Federal Clean Water Act. Projects may include erosion controls in the open watercourses in Farmington Hills and siltation basins to remove suspended sediment from storm water.

Under the current NPDES storm water permit, the City has a continuous requirement to identify and remove illegal discharges into City owned drainage systems. This includes sanitary system corrections, drainage system sampling and monitoring, education programs, pollution investigative efforts, etc., that are related to the City owned drainage system.

2. **Miscellaneous Storm Sewer Repair, Maintenance and Improvement Program**

This involves:

- Construction and improvements of storage facilities, pipe and culvert enclosures and channel improvements throughout most of the drainage districts in the City. It also includes projects that are necessitated from inspection programs.
- Ninety percent of the City's drainage system is in open channels. Most of these major drainage courses have not been cleaned since their original construction. This program represents a continuous program for maintenance of these drainage courses.
- Emergency replacement and repair of major culverts in the public right-of-way.
- Throughout this City many subdivisions are being considered for local road reconstruction. In addition, several of the areas where the roads are not candidates for local reconstruction have storm sewers in need of rehabilitation. The storm sewer system in these areas as determined by the DPS will be televised and inspected. If deemed necessary an appropriate cleaning, repair, replacement, lining and rehabilitation program will be implemented at the time of, or prior to the road reconstruction.
- The Oakland County Water Resources Commission (WRC) has jurisdiction of a number of drains in the City that have been legally established under the Michigan Drain Code. The Drain Code provides a means of apportionment and assessment based on tributary area and runoff from these districts. Periodically, WRC will advise of maintenance needs and corresponding assessments, which the City is responsible for.

3. **City Owned Storm Water Basin Maintenance**

The City owns nine storm water detention and retention basins. These basins are required to be maintained in accordance with the Federal Clean Water Act to control urban pollutants and peak flow. This project provides improvement for all nine City owned basins. The improvements include select vegetation removal, sedimentation removal, and inlet/outlet pipe maintenance. In conjunction with the Capital Improvement Plan, the project is intended to provide annual maintenance and upkeep.

4. Quaker Valley Road Culvert Replacement – Phase II

This project includes the improvement of the two areas along Quaker Valley Road where the Minnow Pond Drain crosses. The existing 48" concrete culvert to the east of Quaker Valley Lane and the 14' by 7' metal arch culvert to the east of Hunter's Row. Both are reaching the end of their useful life due to joint separations and pipe deterioration.

5. Heritage Hills and Wedgewood Commons Storm Sewer

This project involves providing improved drainage by installing additional storm sewers laterals in Heritage Hills and Wedgewood Commons (construction of Phases 2 through 4) and connecting to the existing storm sewer system.

6.. Whitlock Street Storm Sewer

This project involves installing a storm sewer from the existing system along Eight Mile Road north 600 ft through the industrial section of Whitlock Street.

7. Woodcreek Hills Subdivision Drainage

The existing road culverts in the Woodcreek Hills Subdivision are reaching their design life and appear to be undersized. This project includes the replacement of five culverts along with the extension of their lengths in order to allow for an improved road crossing and the elimination of existing guardrail.

8. Farmington Freeway Industrial Park Storm Sewer

This project involves providing improved drainage by installing additional storm sewers in the Farmington Freeway Industrial Park 1-3 and connecting to the existing storm sewer system.

9. Commerce Drive Storm Sewer

This project involves providing improved drainage along Commerce Drive by installing additional storm sewers and connecting to the existing storm sewer system in the area.

10. Harwich Dr. Drainage Improvement

Currently storm water runoff from Harwich Drive travels across a residential side yard. The project would include the installation of a storm sewer from the right-of-way down to the Pebble Creek in order to minimize erosion.

11. Caddell Drain, Nine Mile at Drake

Replacement of the 4 elliptical culverts that cross underneath the intersection of Nine Mile Road south of Drake Road. These culverts are nearing the end of their useful life. This project will be coordinated by the Oakland County Water Resources Commission through the Michigan Drain Code.

12. Caddell Drain Improvements - Phase II

Phase II of the Caddell Drain Improvements includes improvements to the southern portions of the water course. This project will be coordinated by the Oakland County Water Resources Commission through the Michigan Drain Code.

13. Hearthstone Road Culvert Rehabilitation/Replacement

The Hearthstone culvert is under Hearthstone Road in the Kendallwood Subdivision west of Bonnet Hill Road. It is a 68" by 85" elliptical corrugated metal pipe culvert and is in the Minnow Pond drainage district. It needs to be rehabilitated and possibly replaced.

14. Biddestone Lane Culvert

The existing box culvert under Biddestone Lane needs to be upgraded and/or extended to accommodate a wider road width and address possible flow issues. This project involves a rehabilitation/replacement of the existing 69" high by 118" wide concrete box culvert underneath Biddestone Lane.

15. Robinson and Parker Culvert Rehabilitation south of Colfax

Replace and upgrade 34" x 53" culvert under Robinson Street and the 34" x 53" culvert under Parker Street.

16. Folsom Road Box Culvert Rehabilitation East of Randall

Rehabilitate the twin 10' x 4.3' box culvert and twin 10' x 8' box culverts of the Upper Rouge River under Folsom Road east of Randall.

17. Raleigh Roadside Yard Drainage

Twin 60" storm sewers run between the side yards of 29360 and 29336 Raleigh Road. These storm sewers have been shown to be deteriorating and resulting in sinkholes. These storm sewers will need to be rehabilitated and/or replaced.

18. Minnow Pond Drain, Mirlon north of Thirteen Mile Road

This project is for replacement of the culvert under Mirlon St. The existing culvert is experiencing erosion and is undersized. This project will be coordinated through the Oakland County Water Resources Commission.

19. Windwood Pointe Subdivision Drainage

The subdivision's storm sewer system is routed through three side yard properties and discharges to the Upper Rouge River. The existing pipe and structures between the roadway and the outlet are showing signs of deterioration and ultimately may need replacement.

20. Vacri Lane Rear Yard Drainage Improvements

Currently the rear yard of lots 24, 25, and 26 of Green Hill Woods experience large amounts of water during large rain event. The issue is enhanced by this location receiving off site

storm water runoff from the large adjacent property. The project proposes to provide improved grading of the existing lots and additional inlets to capture the large volume of runoff from heavy storms.

21. Tuck Road Bridge Rehab south of Folsom

Rehabilitate 24-foot-wide by 7.5-foot-high bridge crossing of the Upper Rouge River.

DRAINAGE

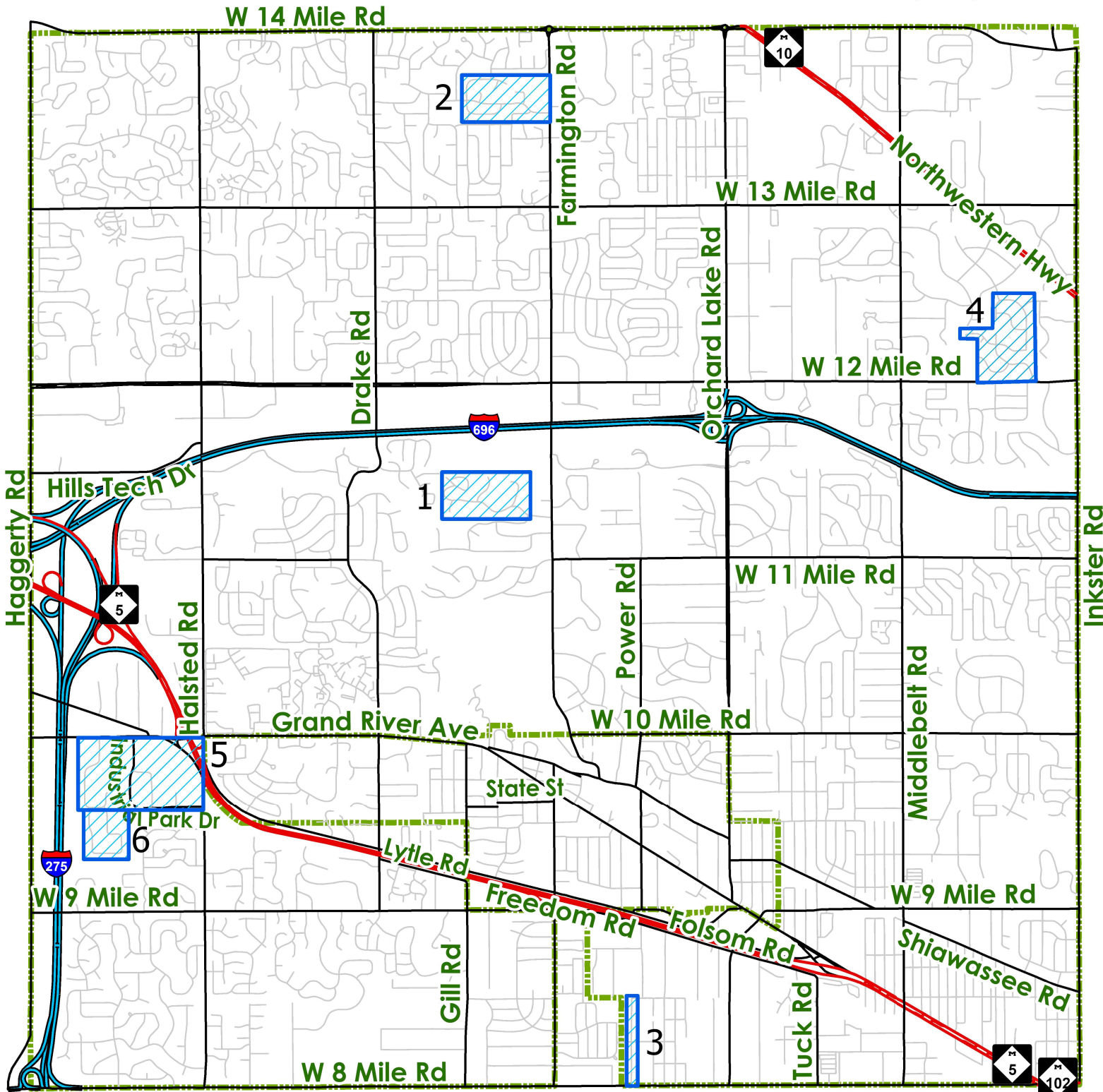
Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	Storm Water NPDES Permit Program	630,000	630,000	NC	100% City	105 CF	105 CF	105 CF	105 CF	105 CF	105 CF	
2	Miscellaneous Storm Sewer Repair, Maintenance and Improvement Program	1,620,000	1,620,000	NC	100% City	270 CF	270 CF	270 CF	270 CF	270 CF	270 CF	
3	City Owned Storm Water Basin Mainenance	150,000	150,000	NC	100% City	25 CF	25 CF	25 CF	25 CF	25 CF	25 CF	
4	Quaker Valley Road Culvert Replacement - Phase II	1,000,000	1,000,000	NC	100% City	1,000 CF						
5	Heritage Hills and Wedgewood Commons Storm Sewer	2,013,000	2,013,000	NC	100% City	671 CF	671 CF	671 CF				
6	Whitlock Street Storm Sewer	383,000	383,000	NC	100% City	383 CF						
7	Woodcreek Hills Subdivision Drainage	3,748,000	3,748,000	NC	100% City	3,748 CF						
8	Farmington Freeway Industrial Park Storm Sewer	393,000	393,000	NC	100% City	131 CF	131 CF	131 CF				
9	Commerce Drive Storm Sewer	361,000	361,000	NC	100% City	361 CF						
10	Harwich Dr. Drainage Improvement	118,000	118,000	NC	100% City		118 CF					
11	Caddell Drain, Nine Mile at Drake	2,247,000	2,247,000	NC	60% City 40% O			2,247 CF				
12	Caddell Drain Improvements - Phase II	1,155,000	693,000	NC	60% City 40% O				693 CF			
13	Hearthstone Road Culvert Rehab/Replacement	1,092,000	1,092,000	NC	100% City					1,092 CF		
14	Biddestone Lane Culvert	1,638,000	1,638,000	NC	100% City					1,638 CF		
15	Robinson and Parker Culvert Rehab south of Colfax	767,000	767,000	NC	100% City							767 CF
16	Folsom Road Box Culvert Rehab East of Randall	2,168,000	2,168,000	NC	100% City							2,168 CF
17	Raleigh Road Side Yard Drainage	546,000	546,000	NC	100% City							546 CF
18	Minnow Pond Drain, Mirion north of Thirteen Mile Road	287,000	276,000	NC	96% City 4% O							276 CF
19	Windwood Pointe Subdivision Drainage	317,000	159,000	NC	50% City 50% O							159 CF
20	Vacri Lane Rear Yard Drainage Improvements	87,000	87,000	5,000 AC	100% City							87 CF
21	Tuck Road Bridge Rehab south of Folsom	2,675,000	2,675,000	NC	100% City							2,675 CF
	SUB-TOTAL:	\$23,395,000	\$22,764,000	\$5,000		6,694	1,320	3,449	1,093	3,130	400	6,678

NC: No Change
O: Other
CF: Capital Fund
AC: Annual Cost

*This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

2022/2023 Drainage Projects



1. Quaker Valley Rd. Culvert Replacement - Phase II
2. Heritage Hills and Wedgewood Commons Storm Sewer - Phase II
3. Whitlock Street Storm Sewer
4. Woodcreek Hills Subdivision Drainage
5. Farmington Freeway Industrial Park Storm Sewer
6. Commerce Drive Storm Sewer

Note: This map is a planning document and is subject to change. The priority level of a project may move up or down based on funding.

SANITARY SEWERS

The major goal of the capital expenditures in this area is to provide adequate trunkline capability to serve both existing and future development. All trunk lines have been installed with the completion of the Ten Mile Rouge sewer in 1980, however, some areas of the City still do not have connecting sewer segments which are needed to provide access to public sanitary sewer. These segments are usually funded by a development or the City at large. The construction of the localized laterals is generally provided by the Charter provision requiring local benefiting properties to pay the associated cost (special assessment process). This results in the establishment of a special assessment district. In the future, Federal watershed requirements may mandate accelerated programs for local sanitary sewer construction. A portion of these anticipated costs may be financed by various sanitary sewer funds.

An exception to the special assessment financing is a payback that may be necessitated as a result of a paving, resurfacing or widening project where integrated asset management policy would recommend that the sanitary sewer lateral should be installed first. In these instances, a payback would be established in accordance with City ordinance to recover the cost at a future date when connections are made.

Any remaining work that would be done on sanitary sewers involves the rehabilitation of existing sewers with City sewer funds. Since this does not provide new service, there would be no application of the Charter provision. This type of work was begun in 1990 with the Evergreen Farmington Sewage Disposal System improvements where sewers were replaced and relief lines constructed.

In 2017, the City was awarded a Stormwater, Asset Management, and Wastewater (SAW) grant through the Michigan Department of Environment, Great Lakes, and Energy –EGLE (formerly the MDEQ) for the purposes of evaluating and inspecting sanitary sewer infrastructure, developing an asset management plan, assessing asset criticality and risk assessment; and providing life cycle cost analysis. The results of the SAW grant project will also provide a long-term capital improvement plan for the City's sanitary sewer system infrastructure.

In addition, the City is currently under an Administrative Consent Order (ACO), from the EGLE that may require additional improvements to be made in the future restricting the amount of outflow from the City of Farmington Hills into the sewer system.

The EGLE has also issued an Administrative Consent Order (ACO) for the entire Evergreen Farmington Sewage Disposal System (EFSDS). The EFSDS is a major sewer interceptor system that transports sewage from 15 Oakland County communities to the Great Lakes Water Authority for treatment. The ACO requires a series of Corrective Action Plan (CAP) improvements for the EFSDS. These improvements are intended to address system capacity shortfalls and compliance with the EGLE's sanitary sewer overflow policy. The CAP has been under review and negotiation by Oakland County and EGLE for several years. During this time, the City's CIP continues to be revised to reflect current ACO requirements. The City will be assessed a share of these project costs.

PROPOSED SANITARY SEWER PROJECTS

1. **Annual Renewal Program**

The City completed a wastewater asset management plan (AMP) in 2020 to identify investment needs and develop a long-range capital improvement program for the City's wastewater system. By starting an annual renewal program, the City will be able to systematically address sanitary sewer assets by performing proactive maintenance and completing rehabilitation/replacement of the assets on an annual basis using best practices.

2. **Biddestone Lane Sanitary Sewer (Southeast area)**

Provide public sanitary sewer on Biddestone Lane in the southeast portion of this subdivision where public sanitary sewer is not yet available.

3. **Rockshire Avenue and Edgemoor Street Sanitary Sewer**

Provide public sanitary sewer on Rockshire Avenue and Edgemoor Street

4. **Eleven Mile Road Sanitary Sewer, west of City Hall Campus to Pillsbury Street**

Provide public sanitary sewer on Eleven Mile Road from west of the City Hall Campus to Pillsbury Street.

5. **Goldsmith Street Area Sanitary Sewer**

Provide public sanitary sewer for Goldsmith north of Teal Court including neighboring stub streets.

6. **Muer Cove Subdivision Sanitary Sewer**

Provide public sanitary sewer to the portion of the Muer Cove Subdivision located north of the Minnow Pond Drain.

SANITARY SEWERS

Reference No.	SANITARY SEWER PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures are shown in thousands of dollars.						
						2022/23	2023/24	24/25	2025/26	2026/27	2027/28	FUTURE
1	Annual Renewal Program	14,500,000	14,500,000	NC	100% SF	2,000 SF	2,500 SF	2,500 SF	2,500 SF	2,500 SF	2,500 SF	
2	Biddestone Lane Sanitary Sewer (Southeast area)	716,100	716,100	NC	100% PB		716 PB					
3	Rockshire Avenue and Edgemoor Street Sanitary Sewer	359,000	359,000	NC	100% PB			359 PB				
4	Eleven Mile Road Sanitary Sewer, west of City Hall Campus to Pillsbury Street	2,451,000	2,451,000	NC	100% PB			2,451 PB				
5	Goldsmith Street Area Sanitary Sewer	2,352,000	2,352,000	NC	100% PB				2,352 PB			
6	Muer Cove Subdivision Sanitary Sewer	2,776,000	2,776,000	NC	100% PB					2,776 PB		
	TOTAL:	\$23,154,100	\$23,154,100	NC		2,000	3,216	5,310	4,852	5,276	2,500	0

SF: Sanitary Sewer System Fund

O: Other

NC: No Change

PB: Payback District

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

WATERMAINS

With the completion of the Northwest Water Pressure District transmission lines in 1976, potable water supply capability has been provided throughout the City. Although some minor transmission lines are still required in some areas, they now have the option of installing local services through the establishment of payback agreements and special assessment districts.

A significant portion of the City's water main infrastructure was built in the 1960s and is nearing the end of its useful life. A challenge exists in these older areas of the City due to the water mains requiring frequent and expensive maintenance due to main breaks. Repairs require digging up and replacing worn out facilities. The City has in place a replacement program for just this challenge. Projects are evaluated using an integrated asset management approach and includes a review of break history, risk, and criticality. As with other maintenance activities, this work does not require financing through a special assessment district. Funding is provided through the City's water fund.

The City worked with the Oakland County Water Resources Commissioner's Office (WRC) and determined that a storage facility is appropriate for the City of Farmington Hills. Construction is complete and the tank has been operational since June 2014. The master water main model has been systematically updated to include this facility and the plan has been revised to include necessary projects on a prioritized basis.

PROPOSED WATER MAIN PROJECTS

1. Fire Protection lines in subdivisions without Water Main

This project will provide fire protection in subdivisions without an existing water main system, such as Supervisor's Plat of West Franklin Estates.

2. Kimberley Subdivision, replace existing 6" and 8" with 8" & 12"

This is in the residential neighborhood west of Middlebelt Road and north of Eleven Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. Existing 6" and 8" water main on Middlebelt will be replaced with a 12" water main, connecting the existing 30" on Eleven Mile with an existing 12" on Middlebelt. The existing 6" and 8" water main would be replaced with 8" water main to improve system reliability and meet current design standards. This is a large project and may be constructed over several years.

3. Kendallwood/Kendallwood Subdivision No. 1, replace existing 6" & 8" with 8" & 12"

This is in the residential neighborhood located to the west of Farmington Road and north of Twelve Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6", 8", and 12" water main would be replaced with 8" and 12" water main to improve system reliability and meet current design standards.

4. **Booster Station at Farmington Hills DPW**

The installation of a booster station at the City's DPW site would allow for the City to fill the elevated storage tank as well as pump enough water to supply the average day demands of the northern pressure districts. The booster station will provide redundancy and reliability in the system in the event of major interruptions of GLWA service.

5. **Westbrooke Plaza, Replace/relocate existing 6" with 8"**

This commercial area is located on the south side of 13 Mile Road, between Orchard Lake Road and Lorkay Street. It is an area of older pipe built in the 1950's and when a break occurs, it affects multiple commercial properties. The existing 6" would be replaced, and possibly relocated, with an 8" (8" is the smallest size that can be installed under current standards) to improve system reliability and meet current design standards

6. **Westbrooke Manor Subdivision, Replace existing 6" & 8" with 8" & 12"**

This is in the residential neighborhood west of Orchard Lake Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6", 8" and 12" water main would be replaced with 8" and 12" water main to improve system reliability and meet current design standards.

7. **Kendallwood Subdivision No. 2, Replace existing 6" & 8" with 8" & 12"**

This is in the residential neighborhood east of Farmington Road and north of Twelve Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6", 8", and 12" water main would be replaced with 8" water main to improve system reliability-and meet current design standards.

8. **Westbrooke Manor Subdivision No. 1, Replace existing 4", 6" & 8" with 8" & 12"**

This is in the residential neighborhood west of Orchard Lake Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6", 8" and 12" water main would be replaced with 8" and 12" water main to improve system reliability and meet current design standards.

9. **Biddestone Lane, 8" loop/extension**

Install an 8" water main on Biddestone Lane from the existing Biddestone Lane water main around the Biddestone Lane loop and out to Farmington Road with a stub to the east for future looping.

10. **Kendallwood Subdivision No. 3, Replace existing 6" & 8" with 8" & 12"**

This is in the residential neighborhood east of Farmington Road and north of Twelve Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6" and 8" water main would be replaced with 8" water main and existing 12" water main would be replaced with 12" water main to improve system reliability and meet current design standards.

11. **Westbrooke Manor Subdivision No. 2, Replace existing 6" & 8" with 8" & 12"**

This is in the residential neighborhood east of Farmington Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6" and 8"

water main would be replaced with 8" water main and the existing 12" water main would be replaced with 12" water main to improve system reliability and meet current design standards.

12. Farmington Road, 30465 Farmington Road south to stub (8" loop)

This project would include the installation of water main from 30465 Farmington Road south to the existing stub. This extension would complete the looping of water main along Farmington Road.

13. Westbrooke Manor Subdivision No. 3, Replace existing 6" & 8"

This is in the residential neighborhood east of Farmington Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6" and 8" water main would be replaced with 8" water main to improve system reliability and meet current design standards.

14. Westbrooke Manor Subdivision No. 4, Replace existing 6" & 8"

This is in the residential neighborhood east of Farmington Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6" and 8" water main would be replaced with 8" water main to improve system reliability and meet current design standards.

15. Kendallwood Subdivision No. 4, Replace existing 6" & 8" with 8" & 12"

This is in the residential neighborhood east of Farmington Road and south of Thirteen Mile Road. It is an area of older pipe built in the 1950s with frequent water main breaks. The existing 6" and 8" water main would be replaced with 8" water main and the existing 12" water main would be replaced with 12" water main to improve system reliability and meet current design standards.

16. Muer Cove Subdivision, 8" and 12" Water Main Extension

Install 8" and 12" water main in the portion of the Muer Cove Subdivision that is located north of the Minnow Pond Drain. There is no public water main in this area.

17. Old Homestead Subdivision, replace existing 6" & 8" with 8" & 12"

This is in the residential neighborhood west of Drake Road and north of Eleven Mile Road. It is an area of older pipe built in the 1960s with frequent water main breaks. The existing 6", 8" and 12" water main would be replaced with 8" and 12" water main to improve system reliability and meet current design standards.

18. Rockshire Avenue, Edgemoor Street, and Bramwell Street, New 8"&12" Water Main extension

Install 8"-12" water main on Rockshire from Orchard Lake Road to the Beechview Elementary School property; on Edgemoor Street North of Rockshire and South of Rockshire to existing water main on Scenic View Circle; and on Bramwell Street North of Rockshire as well as possibly looping with the public water main on the Beechview Elementary School property.

19. Colwell Water Main, Shiawassee to Sedalia (8" loop)

This residential street currently does not have water main and there are many properties with long spaghetti connections which run across neighboring properties. The project will include installing a new 8" water main from the corner of Sedalia and Colwell and looping the water main north to the existing water main on Shiawassee.

20. Cora Water Main, north of Fink (8" loop)

This residential street currently does not have water main and there are several long spaghetti connections. The project will include installing a new 8" water main from the intersection of Cora and Fink and extending it approximately 400 feet north.

21. Fink Avenue Water Main, Orchard Lake to Cora (8" loop)

Install 8" water main on Fink Avenue from Orchard Lake Road to Cora Avenue.

WATER MAINS

Reference No.	WATER MAIN PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	Fire Protection lines in subdivisions without Water Main	3,000,000	3,000,000	GF	100% City	500 GF	500 GF	500 GF	500 GF	500 GF	500 GF	
2	Kimberley Subdivision, Replace existing 6" & 8" with 8" & 12"	7,024,000	7,024,000	NC	100% City	7,024 WS						
3	Kendallwood/Kendallwood Subdivision No. 1, Replace existing 6" & 8" with 8" & 12"	7,907,000	7,907,000	NC	100% City	3,954 WS	3,953 WS					
4	Booster Station at Farmington Hills DPW	1,200,000	1,200,000	NC	100% City		1,200 WS					
5	Westbrooke Plaza, replace/relocate existing 6" with 8"	560,000	560,000	NC	100% City			560 WS				
6	Westbrooke Manor Subdivision, Replace existing 6" & 8" with 8" & 12"	3,242,000	3,242,000	NC	100% City			3,242 WS				
7	Kendallwood Subdivision No. 2, Replace existing 6" & 8" with 8" & 12"	4,573,000	4,573,000	NC	100% City			4,573 WS				
8	Westbrooke Manor Subdivision No. 1, Replace existing 4", 6" & 8" with 12"	2,688,000	2,688,000	NC	100% City				2,688 WS			
9	Biddestone Lane, 8" loop/extension	1,059,000	1,059,000	NC	100% PB				1,059 PB			
10	Kendallwood Subdivision No. 3, Replace existing 6" & 8" with 8" & 12"	4,719,000	4,719,000	NC	100% City				4,719 WS			
11	Westbrooke Manor Subdivision No. 2, Replace existing 6" & 8" with 8" & 12"	3,167,000	3,167,000	NC	100% City				3,167 WS			
12	Farmington Road, 30465 Farmington Road south to stub (8" loop)	128,000	128,000	NC	100% City					128 WS		
13	Westbrooke Manor Subdivision No. 3, Replace existing 6" & 8" with 8" & 12"	1,371,000	1,371,000	NC	100% City					1,371 WS		
14	Westbrooke Manor Subdivision No. 4, Replace existing 6" & 8" with 8" & 12"	1,278,000	1,278,000	NC	100% City					1,278 WS		
15	Kendallwood Subdivision No. 4, Replace existing 6" & 8" with 8" & 12"	2,609,000	2,609,000	NC	100% City					2,609 WS		
16	Muer Cove Subdivision 8" & 12" Water Main Extension	1,284,000	1,284,000	NC	100% PB					1,284 PB		
17	Old Homestead Subdivision replace existing 6" & 8" with 8" & 12"	5,010,000	5,010,000	NC	100% City						5,010 WS	
18	Rockshire Avenue, Edgemoor Street, and Bramwell Street, New 8"-12" extension	1,524,000	1,524,000	NC	100% PB							1,524 PB

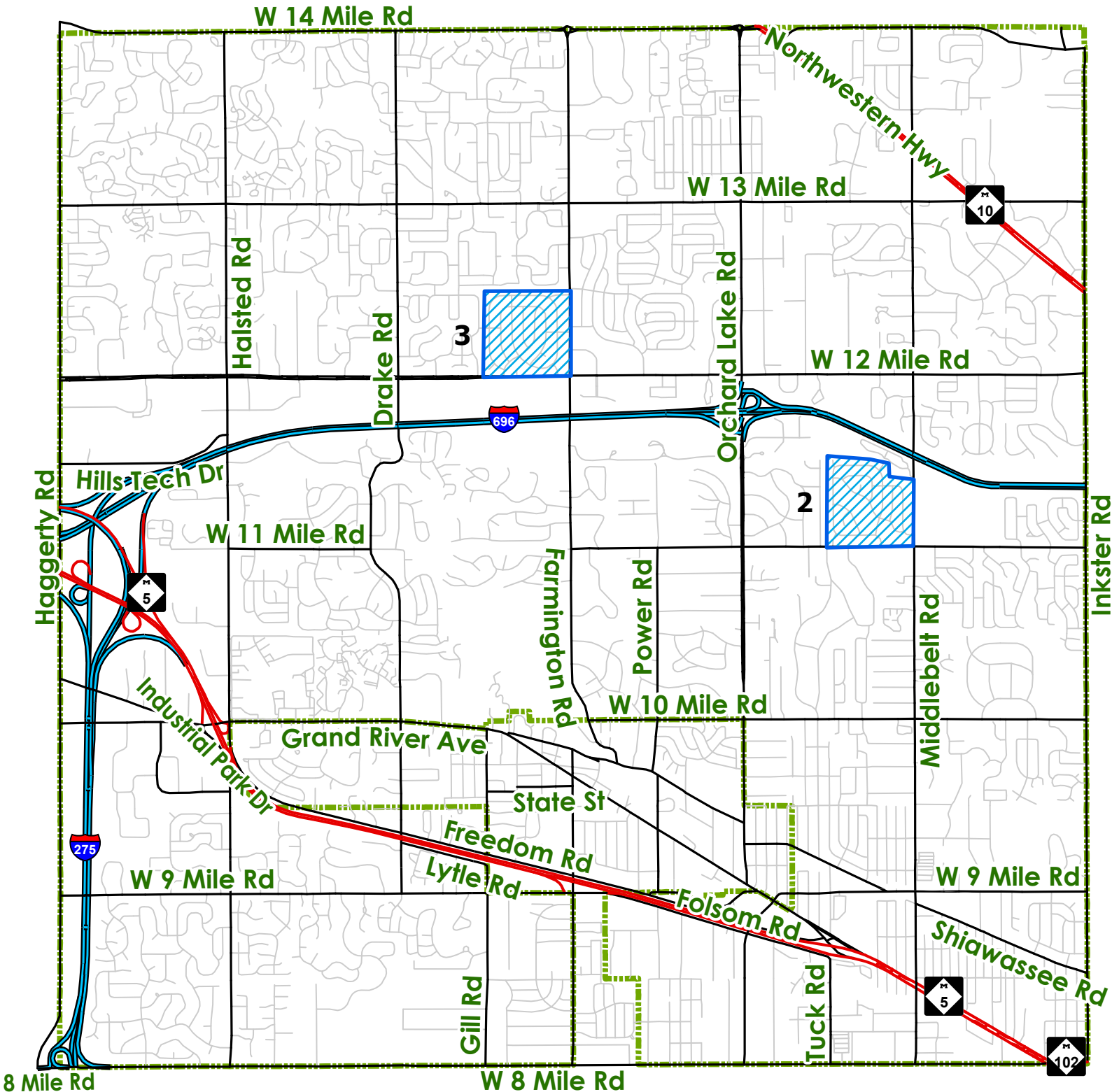
19	Colwell Water Main, Shiawassee to Sedalia (8" loop)	908,000	908,000	NC	100% City													908 WS
20	Cora Water Main, north of Fink (8" loop)	400,000	400,000	NC	100% PB													400 PB
21	Fink Avenue Water Main, Orchard Lake to Cora (8" loop)	544,000	544,000	NC	100% City													544 WS
	TOTAL:	\$54,195,000	\$54,195,000	NC		11,478	5,653	8,875	12,133	7,170	5,510							3,376

SAD: Special Assessment District
 WS: Water System Fund
 NC: No Charge
 PB: Payback District
 GF: General Fund

*This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

2022/2023 Water Main Projects



1. Fire Protection Lines in Subdivisions Without Water Main - To Be Determined
2. Kimberley Subdivision Water Main Replacement
3. Kendallwood/Kendallwood Subdivision No. 1 Water Main Replacement

Note: This map is a planning document and is subject to change. The priority level of a project may move up or down based on funding.

SIDEWALKS

The need to provide safe pedestrian travel along major traffic corridors has long been a priority of the City Council. Certain corridors generate considerable pedestrian traffic. Shopping centers, schools, recreation areas, and other major developments generate pedestrian traffic. To promote safe pedestrian travel, the City must identify those areas in need of sidewalks or extensions to existing pedestrian networks. The School Board has also indicated their support for sidewalks at various school locations. It remains Farmington Hills policy, however, to treat walkways across school frontages as a requirement of the school district.

Sidewalk aesthetics is also considered. The City has many designated Historic District sites located on major roads. The use of brick pavers is encouraged to enhance and highlight the historic character of these sites.

In recent years, with Federal Aid funded road improvements the City has been able to include and install large sections of sidewalk on select major thoroughfares with our pavement projects. Developers have also installed sidewalks as a requirement of development. In both cases, sidewalk "gaps" have resulted. The City is then faced with filling in these gaps. These sidewalk projects can provide the City with the opportunity to connect larger pedestrian networks, existing developments with one another and other traffic generators at relatively low cost. Annually, pedestrian traffic generators and sidewalk gaps are identified and continue to be a priority and are included in this plan.

In 2013, sidewalks included in the CIP were re-evaluated using a systematic approach. Essentially sidewalks are assigned point values based on several variables including, access to schools, connectivity to shopping, municipal facilities, etc. Also, we assigned values that considered items such as ease of construction, availability to right-of-way, funding sources, funding availability, connectivity, etc. Also included within this section is a proposal for a non-motorized Master Plan. This plan would provide recommendations for in-road facilities, sidewalks, trails, road crossings, priority considerations, funding for future implementations.

In addition to the sidewalks, a program is proposed to modify existing walks to provide for a minimum width of eight feet so they can be used for non-motorized pathways. This fulfills a requirement in the gas and weight tax legislation for the funding and maintenance of our road system (Act 51).

A high priority of the Grand River Corridor Improvement Authority is to better integrate the Rouge River into economic development projects along the corridor and to develop a shared-use pathway along the river that better connects corridor users. The conceptual vision for the pathway is a 6 – 8 feet wide path that traverses approximately 10,000 lineal feet of river frontage with markers placed every ¼ mile and an interpretive kiosk at each end of the trail.

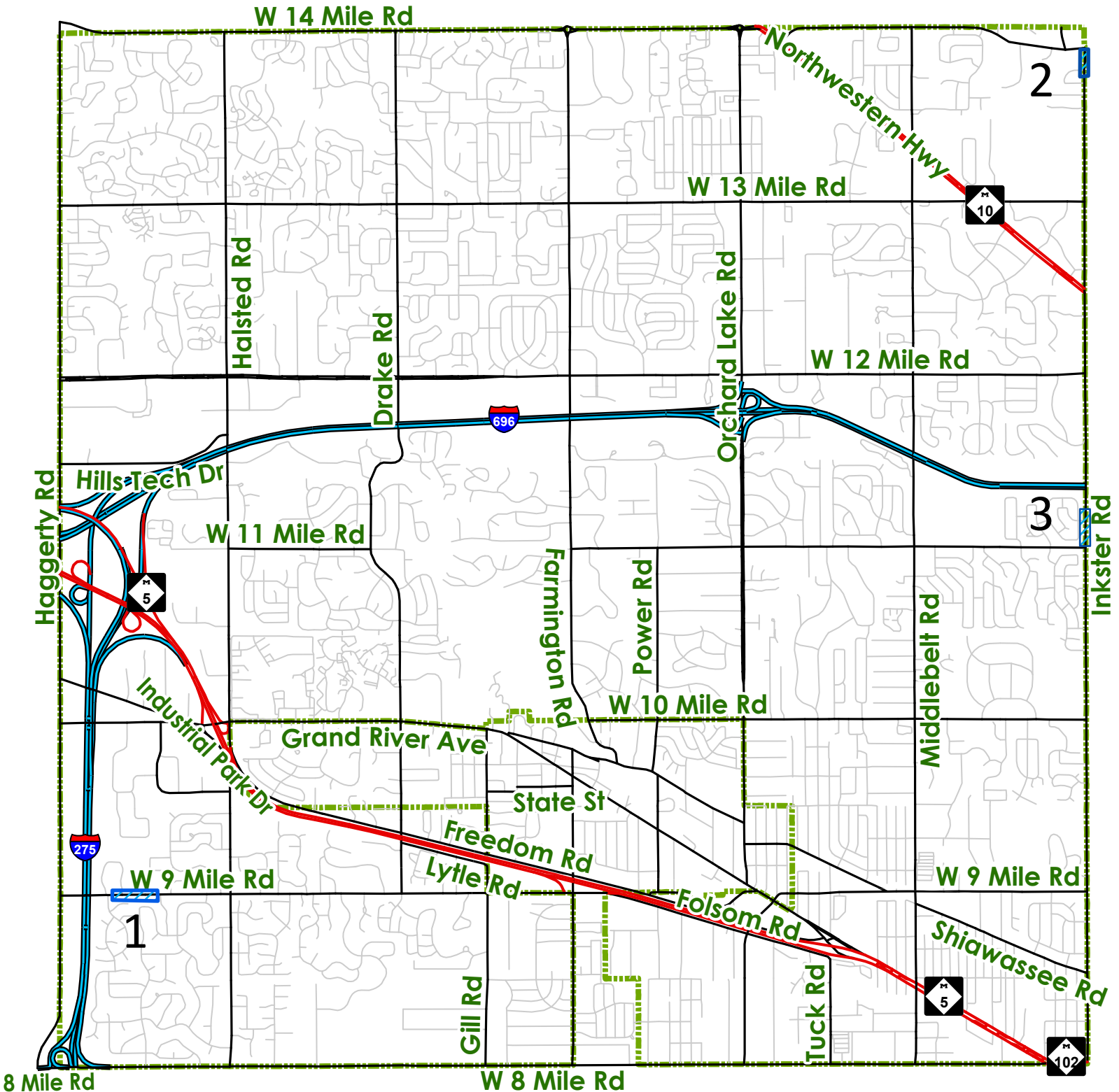
The following Bike Path System Map identifies all existing sidewalk infrastructure and includes a proposed bike path system for the City.

See the following table for proposed sidewalk/ pathway projects including locations and funding schedule.

SIDEWALKS

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	Sidewalk replacement along major roads including brick paver repair/replace	600,000	600,000	NC	100% City	100 CF	100 CF	100 CF	100 CF	100 CF	100 CF	
2	Neighborhood Sidewalk Replacement Program SAD	50,000	0	NC	100 SAD	0 CF						
3	Non-motorized Master Plan	125,000	125,000	NC	100% City		125 CF					
4	Nine Mile, south side, across 38505 frontage	102,000	102,000	NC	100% City	102 CF						
5	Inkster Road, Scottsdale North to 150' north	51,000	51,000	NC	100% City	51 CF						
6	Inkster Road from Eleven Mile to Hystone Dr.	140,000	140,000	NC	100% City	140 CF						
7	M-5 Pedestrian Bridge Connection Improvements	150,000	150,000	NC	100 City		150 CF					
8	Inkster road, west side, Hystone Dr. to the north end of the I-696 overpass (south property line of 27777 Inkster Road)	424,000	424,000	NC	100% City		424 CF					
9	Farmington Road, west side, Twelve Mile to Bayberry Street	287,000	287,000	NC	100% City		287 CF					
10	Pathway improvements, Rock Ridge Lane to Oak Crest Drive	100,000	100,000	NC	100% City			100 CF				
11	Ten Mile from 30265 to 30701 Ten Mile Road	227,000	227,000	NC	100% City			227 CF				
12	Ten Mile Road from S. Duncan to Creekside Dr.	131,000	131,000	NC	100% City				131 CF			
13	Eleven Mile Road, north side, Old Homestead to Drake Road	262,000	262,000	NC	100% City					262 CF		
14	Farmington, east side, Glenmuir to Fourteen Mile	343,000	343,000	NC	100% City						343 CF	
15	Nine Mile, south side, Drake to Farmington	535,000	267,500	NC	50% City 50% CDBG							267 CF
16	Eleven Mile, north side, Old Homestead to Farmington Hills, Golf Club	187,000	187,000	NC	100% City							187 CF
17	Inkster Road, west side, Nine Mile to Eleven Mile Road	1,432,000	1,432,000	NC	100% City							1,432 CF

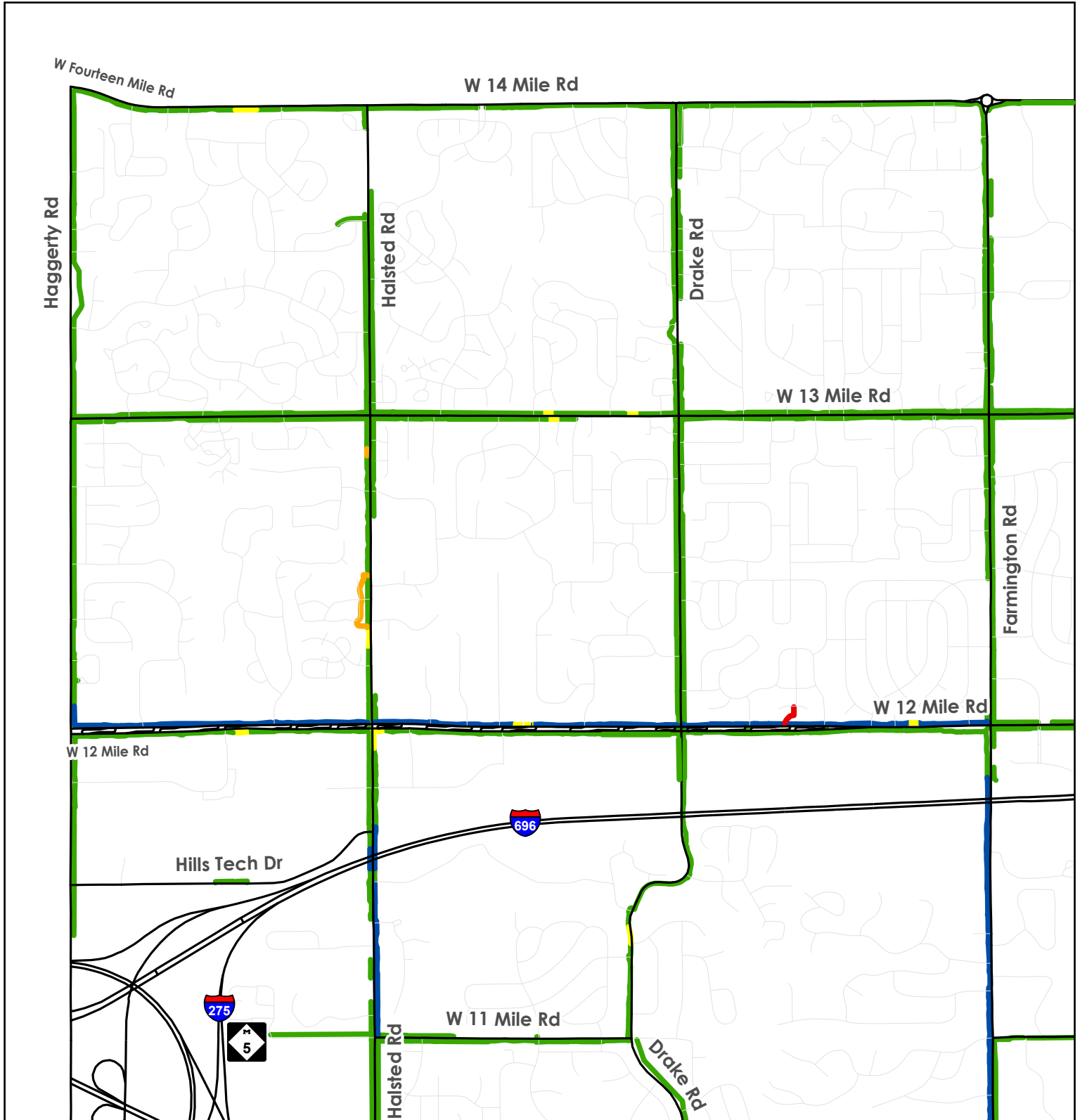
2022/2023 Sidewalk Projects



1. Nine Mile, Southside, Across 38505 frontage
2. Inkster Road, Scottsdale Road to 150' North
3. Inkster Road, Eleven Mile to Hystone Drive

Note: This map is a planning document and is subject to change. The priority level of a project may move up or down based on funding and how fast the pavement is deteriorating.

Sidewalk Locations



Legend

Sidewalks

	8' concrete		5' concrete
	8' brick		5' brick
	8' asphalt		5' asphalt



0 0.28 0.55
Mile

DISCLAIMER: Although the information provided by this map is believed to be reliable, its accuracy is not warranted in any way. The City of Farmington Hills assumes no liability for any claims arising from the use of this map.

Sidewalk Locations



Legend

Sidewalks

— 8' concrete

— 5' concrete

8' brick

— 5' brick

— 8' asphalt

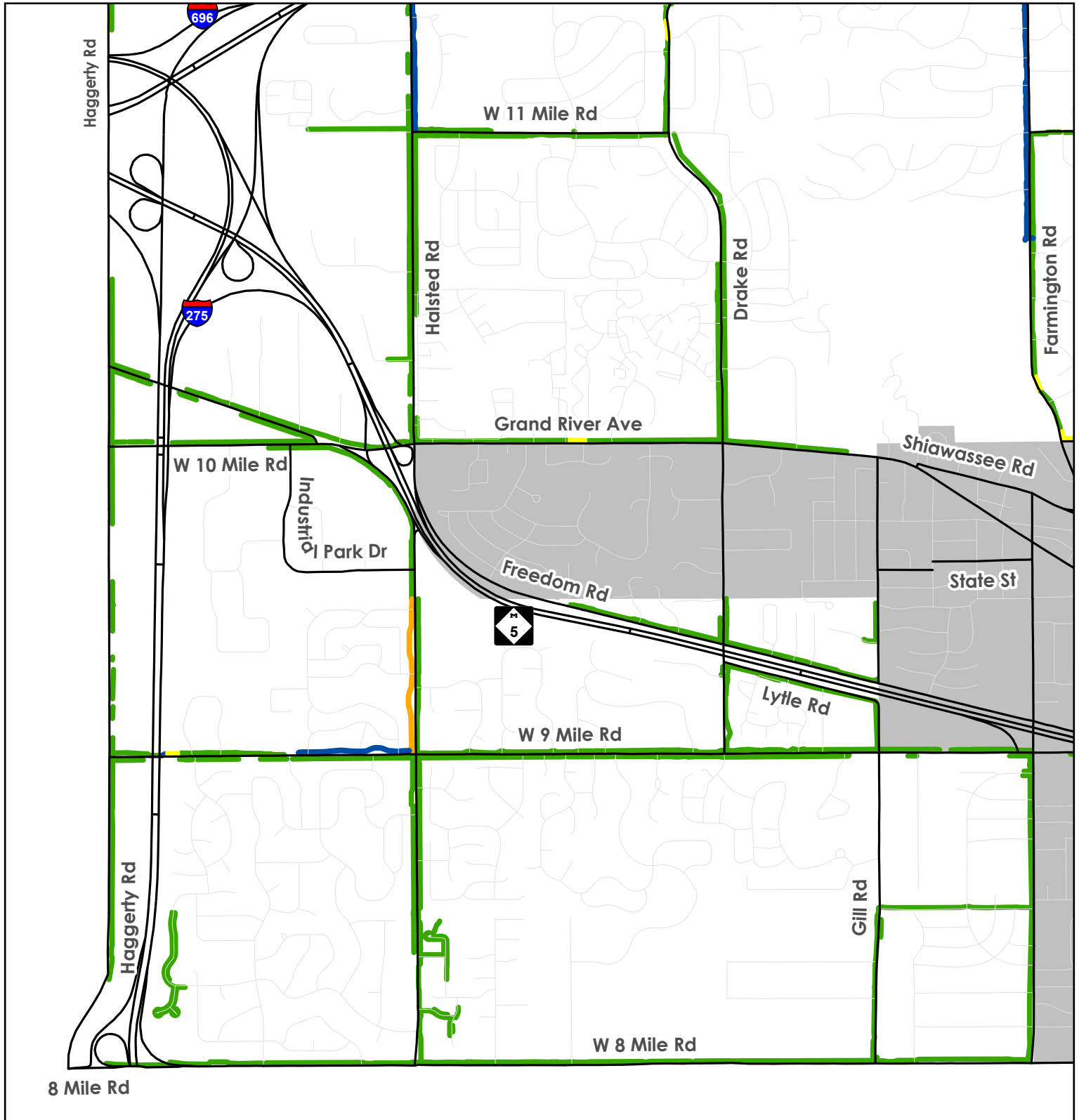
— 5' asphalt



A horizontal scale bar with tick marks at 0, 0.28, and 0.55. The word "Mile" is written at the right end of the bar.


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Sidewalk Locations



Legend

Sidewalks

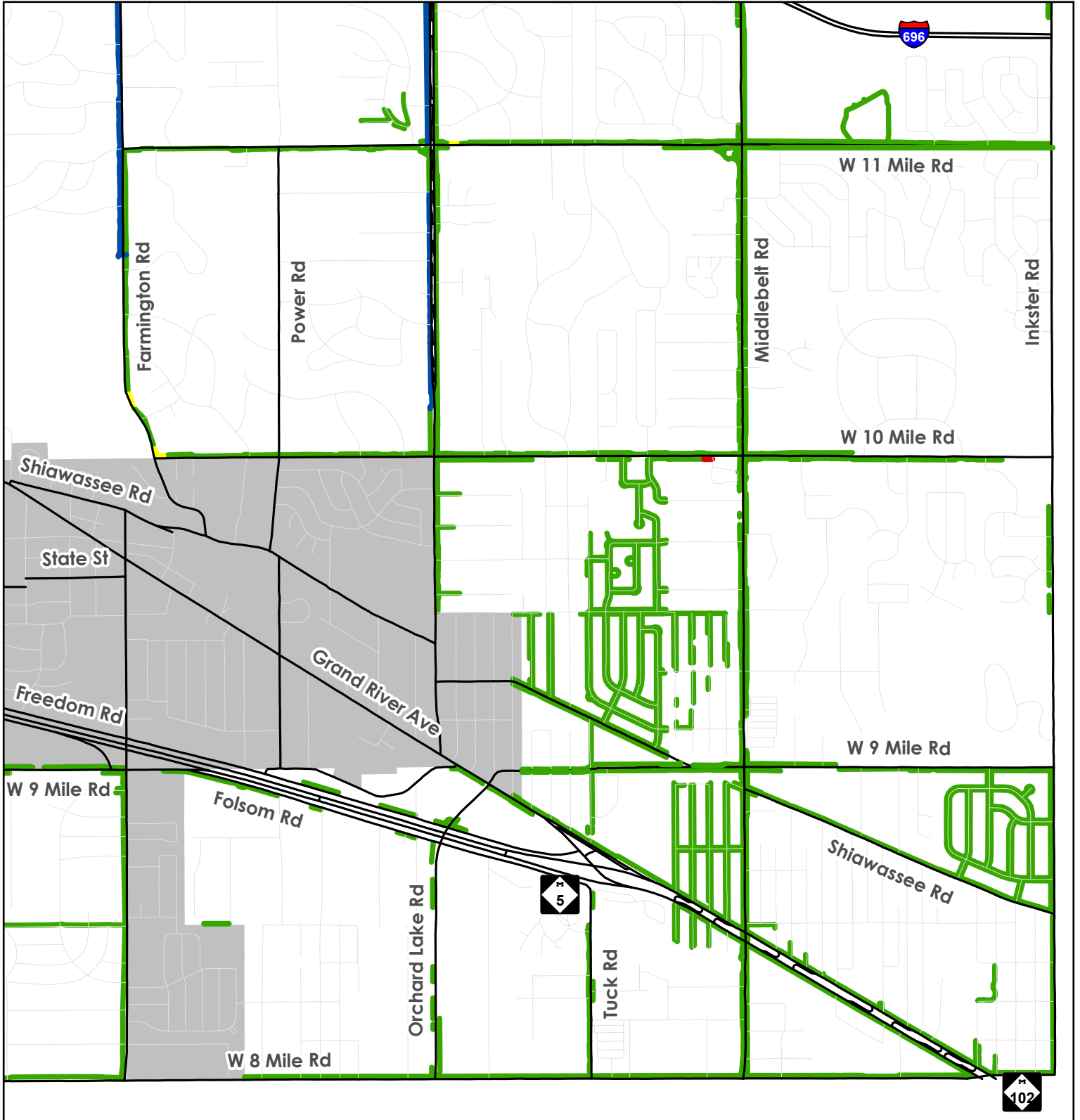
	8' concrete		5' concrete
	8' brick		5' brick
	8' asphalt		5' asphalt



0 0.28 0.55
Mile

DISCLAIMER: Although the information provided by this map is believed to be reliable, its accuracy is not warranted in any way. The City of Farmington Hills assumes no liability for any claims arising from the use of this map.

Sidewalk Locations



Legend

Sidewalks

—	8' concrete	—	5' concrete
—	8' brick	—	5' brick
—	8' asphalt	—	5' asphalt

0 0.28 0.55
Mile

DISCLAIMER: Although the information provided by this map is believed to be reliable, its accuracy is not warranted in any way. The City of Farmington Hills assumes no liability for any claims arising from the use of this map.

TRANSPORTATION

Major thoroughfares can be improved by providing greater capacity and efficiency. This is accomplished by improving intersections and roadway sections. Intersections are improved by the installation of through and turning lanes, curbs and realignments. Many of the major two-lane and three-lane thoroughfares are over capacity, creating lengthy backups of traffic especially at peak hours. These roadway sections are considered for expansion in order to minimize congestion and improve turning movements. In addition, major road repair is an essential component of a well-managed transportation system. Major road repairs usually involve base reconstruction and resurfacing.

Local roads also require attention. Recent paving and resurfacing programs have done much to reduce maintenance costs and improve the local road system. The success of these programs is in large part due to the CIP process and residents' support of financing local road improvements through special assessment districts. Once paved, local roads require on-going scheduled maintenance to ensure their longevity.

The gas and weight tax, commonly referred to as Act 51 road funds, is the primary source of revenue collected by the State. Those funds have not been able to keep pace with the demands for improvement to an aging road system. Costs for labor, material, and equipment to improve roads have increased. Budget constraints at the State and County levels have shifted a disproportionate financial burden on municipalities and as a result, a road millage was put on the ballot and approved by the residents of Farmington Hills during the November 2014 Election. This funding is essential to maintain and improve the quality of the City road network.

Major Roads

The Department of Public Services has developed a list of major road and intersection improvements that are recommended to satisfy the needs of the motoring public in Farmington Hills. The City has also identified safety improvements that must be completed to satisfy issues of poor alignment, varying roadway widths, and non-continuous pavements.

The list of major road projects was prepared using data received from various sources. The data includes projects previously planned but not constructed, resident input, pavement evaluation (PASER Rating) asset management principles, traffic counts along major roads, plans by the Road Commission for Oakland County, and ongoing plans for major road and freeway improvements which are still under consideration. In general, the projects outlined in this year's CIP provide the following benefits to the community:

- Assure that roadways provide improved efficiency and safety for motorists.
- Assure that intersections minimize traffic congestion and allow for smooth handling of turning movements.
- Minimize lengthy backups of traffic especially during the peak hours of the day.
- Make traveling more convenient and safer by providing paved roadways in place of gravel roadways.
- Maintain the natural features when possible while improving the roadways.

- Integrate Road Commission for Oakland County plans with City plans to have a coordinated and efficient street system.
- Correct intersection alignment for improved traffic flow and possible reduction in traffic accidents.
- Reduce the environmental impact of dust and noise pollution.
- Reduce road maintenance cost.
- Use best practices and asset management principles to increase the life of existing pavements and improve the condition of the network as a whole.
- Improve access to freeways by examining the effectiveness of the interchanges.
- Coordinate road improvements with the City's Master Plan for Future Land Use.

Local Roads

Historically, the residents have initiated local road improvements. Many miles of local roads have been reconstructed through the special assessment district process. The success of this approach was dependent upon the residents initiating a paving project in accordance with City Charter. Typically, the City participated up to 20% of the paving cost (per City Charter).

Based on the local road millage that was approved in November of 2018, funds will now be available for reconstruction as well as additional preventative maintenance and pavement preservation treatments. Approval of the local road millage eliminates the need for the special assessment process and allows the roads to be assessed and programmed for treatments in a cost-effective manner at the appropriate point in its life cycle.

PROPOSED TRANSPORTATION PROJECTS

1. **Gravel to Pave Conversion (Local Roads)**

The City currently has over 20 miles of local gravel roads. As part of the recently approved road millage there will be funds programmed annually to fund a project to convert an existing local gravel roadway to pavement. These projects will be initiated through a petitioning effort by the residents of the roadway in question.

2. **Local Road Reconstruction, (See Local Road spreadsheet)**

Local road systems with a PASER rating of 2.75 or less are prioritized and placed in a program that will consider their reconstruction in the upcoming years. These prioritized ratings are reviewed on a regular basis. The updated list of Local Road considerations are on a 5-year projection and are included directly after the Major Road Transportation CIP spreadsheet. Recently the residents of Farmington Hills approved a local road millage that replaces the Special Assessment process and funds reconstruction of local roadway.

3. **Tri-Party TBD**

The Tri-Party program provides one-third funding from each of the following: City, Road Commission for Oakland County and Oakland County Board of Commissioners. Tri-party funding has recently been increased from \pm \$150,000/year to \pm \$300,000/year. This funding is sometimes allowed to accrue over several years to help fund a larger project. Requirements are that the work be on a County road. Currently the City is planning to utilize existing funds for part of the City's contribution to the Orchard Lake Road project from Thirteen Mile to Fourteen Mile Road listed below.

4. **Major Road Capital Preventative Maintenance Projects
(See Major Road Capital Preventative Maintenance spreadsheet)**

These projects are intended to provide a nonstructural, thin overlay on a major roadway to cost effectively extend its useful life. It may include a milling off of the surface and some base repair.

5. **Industrial/Commercial Road Rehabilitation (See Industrial/Commercial Spreadsheet)**

Industrial roads with a PASER rating less than 2.75 are prioritized and placed on a list for reconstruction. These prioritized ratings are reviewed on a regular basis. The updated list of Industrial Park projects is described on the enclosed spreadsheet.

6. **Fourteen Mile, Drake to Farmington Road**

Reconstruction of this mile of roadway.

7.- **Farmington, Twelve Mile to Thirteen Mile**

Reconstruction of this mile of roadway.

8. **Eleven Mile Road, Farmington to Orchard Lake Road**

Reconstruction/rehabilitation of this mile of roadway.

9. **Nine Mile, Walsingham Dr. to Drake**

Reconstruction of this mile of roadway.

10. **Nine Mile, Drake to Gill, Reconstruction**

Reconstruction of this mile of roadway.

11. **Nine Mile Road, Gill Road to Farmington Road**

Reconstruction/rehabilitation of this mile of roadway.

12. **Folsom Road, Nine Mile to Orchard Lake**

Reconstruction of this mile of roadway.

13. **Twelve Mile Widening, Inkster to Middlebelt**

One improvement being considered is the installation of a five-lane pavement from Inkster to Middlebelt. This would complete the improvement of Twelve Mile from Telegraph west to the M-5 interchange west of Haggerty. This currently is the only remaining two-lane segment of Twelve Mile from Beck to Jefferson at Lake St. Clair.

14. **Ten Mile/Grand River/M-5 Phase II**

The first phase was completed with the installation of a loop ramp and a northwest-bound off-ramp. The second phase would complete the entire project. This includes the widening or addition of a bridge over the freeway and the installation of a boulevard section for Grand River. Several options were identified in the recent Grand River Scoping Project completed by MDOT.

15. **Orchard Lake Boulevard, Twelve to Thirteen Mile**

Widening of Orchard Lake using the marginal access drives to allow for a four-lane boulevard cross-section with landscaped median will follow the Northwestern Connector improvement.

16. **Folsom, Orchard Lake Road to Tuck Road**

Reconstruction/rehabilitation of this mile of roadway.

17. **Tuck Road, Folsom Road to Eight Mile Road**

Reconstruction/rehabilitation of this mile of roadway.

18. **Tuck Road, Grand River to Shiawassee**
Reconstruction/rehabilitation of this mile of roadway.
19. **Halsted Road, Eight Mile Road to Nine Mile Road**
Reconstruction/rehabilitation of this mile of roadway.
20. **Metroview Dr., Eight Mile to Green Hill Road**
Reconstruction/rehabilitation of this mile of roadway
21. **Drake Road, Eleven Mile to Twelve Mile Road**
Reconstruction/rehabilitation of this mile of roadway.
22. **Farmington Road, Thirteen Mile to Fourteen Mile Road**
Reconstruction/rehabilitation of this mile of roadway.
23. **Shiawassee Road, Inkster Road to Middlebelt Road**
Reconstruction/rehabilitation of this mile of roadway.
24. **Halsted Road, Twelve Mile Road to Fourteen Mile Road**
Reconstruction/rehabilitation of this section of roadway.
25. **Freedom Road, Drake Road to Gill Road**
Reconstruction/rehabilitation of this section of roadway.
26. **Freedom Road, Maple Street (City of Farmington) to Grand River Ave.**
Reconstruction/rehabilitation of this section of roadway.
27. **Hills Tech Dr., Halsted Road to Haggerty Road**
Reconstruction/rehabilitation of this section of roadway.
28. **Nine Mile Road, Middlebelt Road to Inkster Road**
Reconstruction/rehabilitation of this section of roadway.

TRANSPORTATION

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						FUTURE
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	
1	Gravel to Pave Conversion (Local Roads)	6,000,000	6,000,000	NC	100% City	1,000 WGM	1,000 WGM	1,000 WGM	1,000 WGM	1,000 WGM	1,000 WGM	
2	Local Road Reconstruction, (See Local Road spreadsheet)	60,000,000	60,000,000	NC	100% City	10,000 WGM	10,000 WGM	10,000 WGM	10,000 WGM	10,000 WGM	10,000 WGM	
3	Tri-Party TBD	2,070,000	690,000	NC	33% City 33% OC 33% RCOG	115 WGM	115 WGM	115 WGM	115 WGM	115 WGM	115 WGM	
4	Major Road Capital Preventative Maintenance Projects (See Major Road Capital Preventative Maintenance spreadsheet)	10,980,000	10,980,000	NC	100% City	1,675 WGM	1,675 WGM	600 WGM	825 WGM	1,500 WGM	830 WGM	5,550 WGM
5	Industrial/Commercial Rd Rehabilitation (See Industrial/Commercial spreadsheet)	16,925,000	16,925,000	NC	100% City	4,600 WGM	5,200 WGM	2,100 WGM	1,675 WGM	950 WGM	800 WGM	1,600 WGM
6	Fourteen Mile, Drake to Farmington Road	3,800,000	2,600,000	NC	32% FG 68% City	2,600 WGM						
7	Farmington, Twelve Mile to Thirteen Mile	5,000,000	3,460,000	NC	39% Fed 61% City	3,460 WGM						
8	Eleven Mile Road, Farmington to Orchard Lake Road	4,500,000	4,500,000	NC	100% City			4,500 WGM				
9	Nine Mile, Walsingham Dr. to Drake	2,400,000	2,400,000	NC	100% City				2,400 WGM			
10	Nine Mile Road, Drake to Gill, Reconstruction	2,400,000	2,400,000	NC	100% City				2,400 WGM			
11	Nine Mile Road, Gill Road to Farmington Road	2,400,000	2,400,000	NC	100% City					2,400 WGM		
12	Folsom Road, Nine Mile to Orchard Lake	2,800,000	2,800,000	NC	100% City					2,800 WGM		
13	Twelve Mile Widening, Inkster to Middlebelt	10,000,000	1,500,000	NC	70% FG 15% RCOG 15% CITY							1,500 WGM
14	Ten Mile/Grand River/M-5 Phase II	28,000,000	1,400,000	NC	5% City 95% SG							1,400 WGM
15	Orchard Lake Boulevard, Twelve to Thirteen Mile	37,500,000	3,750,000	NC	80% FG 10% RCOG 10% CITY							3,750 WGM
16	Folsom, Orchard Lake Road to Tuck Road	1,700,000	1,700,000	NC	100% City							1,700 WGM
17	Tuck Road, Folsom Road to Eight Mile Road	2,300,000	2,300,000	NC	100% City							2,300 WGM
18	Tuck Road, Grand River to Shiawassee	1,500,000	1,500,000	NC	100% City							1,500 WGM
19	Halsted Road, Eight Mile Road to Nine Mile Road	4,500,000	4,500,000	NC	100% City							4,500 WGM
20	Metroview Dr., Eight Mile to Green Hill Rd	1,300,000	1,300,000	NC	100% City							1,300 WGM
21	Drake Road, Nine Mile to north of M-5	1,250,000	1,250,000	NC	100% City							1,250 WGM
22	Farmington Road, Thirteen Mile to Fourteen Mile Road	5,250,000	5,250,000	NC	100% City							5,250 WGM
23	Shiawassee, Inkster Road to Middlebelt Road	4,000,000	4,000,000	NC	100% City							4,000 WGM
24	Halsted Road, Twelve Mile Road to Fourteen Mile Road	5,000,000	5,000,000	NC	100% City							5,000 WGM
25	Freedom Road, Drake Road to Gill Road	2,000,000	2,000,000	NC	100% City							2,000 WGM
26	Freedom Road, Maple Street (City of Farmington) to Grand River Ave.	4,000,000	4,000,000	NC	100% City							4,000 WGM
27	Hills Tech Dr., Halsted Road to Haggerty Road	4,750,000	4,750,000	NC	100% City							4,750 WGM
28	Nine Mile Road, Middlebelt Road to Inkster Road	4,000,000	4,000,000	NC	100% City							4,000 WGM
SUB-TOTAL:		\$236,325,000	\$163,355,000	NC		21,775	17,990	18,315	18,415	18,765	12,745	55,350

FG: Federal Grant
O: Other
OC: Oakland County
NC: No Change
SG: State Grant

RCOG: Road Commission for Oakland County
WGM: Weight & Gas Revenue & Millage

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

LOCAL ROADS

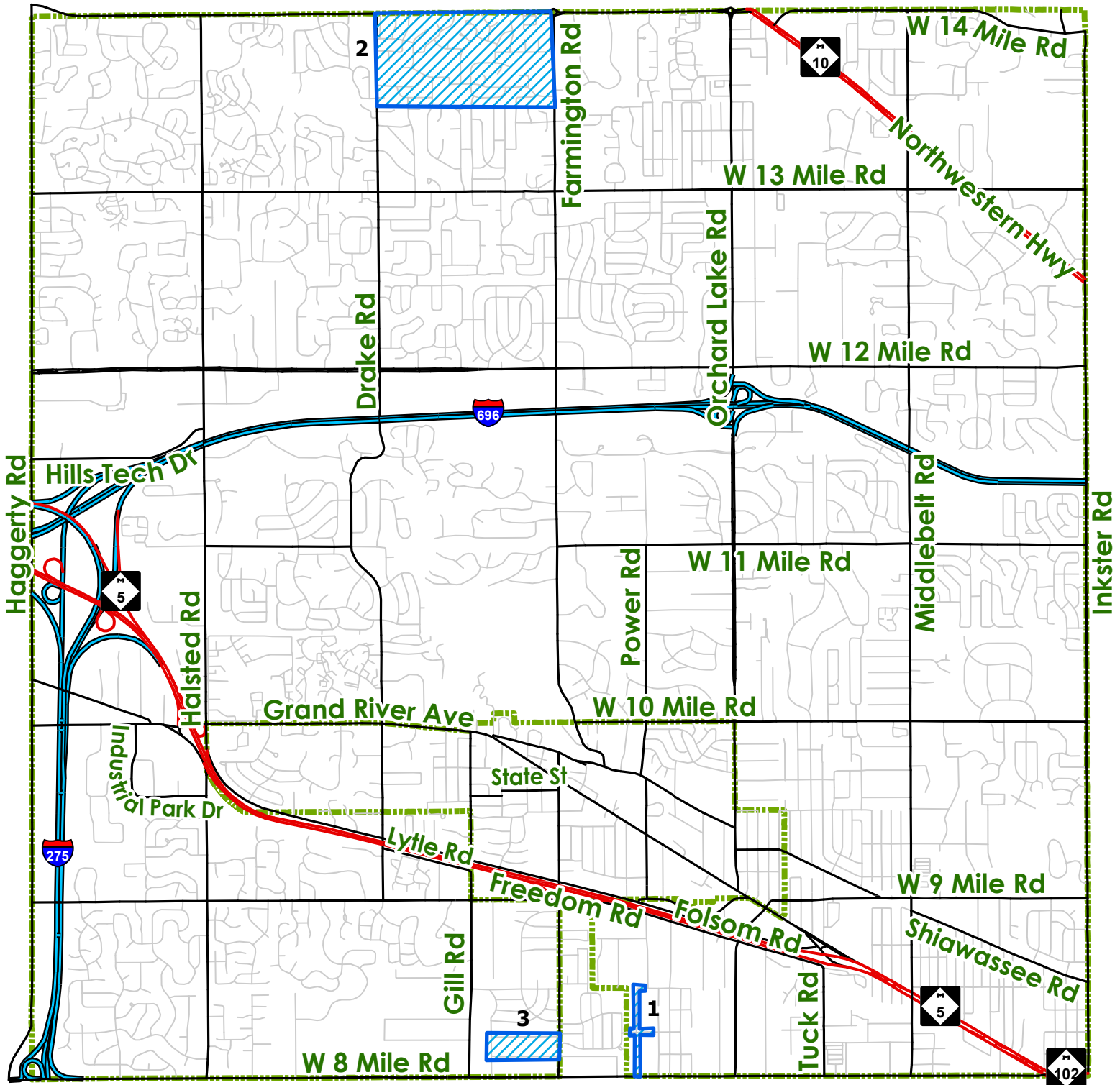
Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	Local Road Capital Preventative Maintenance Projects	7,600,000	7,600,000	NC	100% City	1,600 M	1,000 M	1,000 M	1,000 M	1,000 M	1,000 M	1,000 M
2	Heritage Hills/Wedgewood Commons	12,250,000	12,250,000	NC	100% City	6,000 M	6,250 M					
3	Richland Gardens Area Project	15,000,000	15,000,000	NC	100% City				7,500 M	7,500 M		
4	Fairgreen Hills (Fairway Hills Dr.)	635,000	635,000	NC	100% City		635 M					
5	Coventry (Chatsworth Rd, Scottsdale Rd.)	1,100,000	1,100,000	NC	100% City		1,100 M					
6	Normandy Hills	3,500,000	3,500,000	NC	100% City		3,500 M					
7	Supervisors Plat #12 & Fendt Farms (Rhonswood, Fendt St.)	3,000,000	3,000,000	NC	100% City	3,000 M						
8	Woodcreek Hills Subdivision	5,400,000	5,400,000	NC	100% City		5,400 M					
9	Supervisor's Sub #8 (Goldsmith)	1,500,000	1,500,000	NC	100% City			1,500 M				
10	Country Corner (Gramercy Ct.)	500,000	500,000	NC	100% City			500 M				
11	Supervisor's Plat of Quaker Valley Farms	4,500,000	4,500,000	NC	100% City			4,500 M				
12	Farrington Hills Subdivision (Broadview Dr., Dohany Dr.)	3,500,000	3,500,000	NC	100% City						3500 M	
13	Camelot Courts / Farm Meadows Subdivision	8,575,000	8,575,000	NC	100% City						4,288 M	4,287 M
14	Farrington Hills Hunt Club 1 & 2	7,300,000	7,300,000	NC	100% City							7,300 M
15	Halsted Estates Condos (Wintergreen N.)	750,000	750,000	NC	100% City						750 M	
16	Krave's Grand River Heights	7,400,000	7,400,000	NC	100% City							7,400 M
17	Meadowbrook Heights Subdivision	2,200,000	2,200,000	NC	100% City							2,200 M
18	Hunters Pointe Colony	830,000	830,000	NC	100% City							830 M
19	Grand River Homes	7,000,000	7,000,000	NC	100% City							7,000 M
20	Woodstream Farms Subdivision	4,000,000	4,000,000	NC	100% City							4,000 M
21	Barbizon Estates	3,000,000	3,000,000	NC	100% City							3,000 M
22	Wilcove Estates/Foxmoor	4,000,000	4,000,000	NC	100% City							4,000 M
23	Churchill Estates/Acom Valley Subdivision	8,000,000	8,000,000	NC	100% City							8,000 M
24	Franklin Fairways	1,400,000	1,400,000	NC	100% City							1,400 M
25	Normandy Hills (HMA)	3,600,000	3,600,000	NC	100% City							3,600 M
26	Brook Hills Estates	2,800,000	2,800,000	NC	100% City							2,800 M
27	Meadowbrook Forest (HMA)	9,000,000	9,000,000	NC	100% City							9,000 M
28	Ridgewood	2,250,000	2,250,000	NC	100% City							2,250 M
29	Pinebrook Estates	1,000,000	1,000,000	NC	100% City							1,000 M
30	Trestain (Part of Trestain Farms)	675,000	675,000	NC	100% City							675 M
31	Ramble Hills Sub #1	1,900,000	1,900,000	NC	100% City							1,900 M
32	Greencastle Subdivision	4,100,000	4,100,000	NC	100% City							4,100 M
33	Windwood Pointe Subdivision (Northpoint)	500,000	500,000	NC	100% City							500 M
34	Supervisor's Noblebrook Subdivision #2 (Eldon)	600,000	600,000	NC	100% City							600 M
SUB-TOTAL:		\$139,365,000	\$139,365,000	NC		10,600	17,885	7,500	8,500	8,500	9,538	76,842

NC: No Change
M: Millage

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

2022/2023 Local Road Projects



1. Whitlock Street (Gravel Road Conversion)
2. Heritage Hills/Wedgewood Commons Phase 2
3. Supervisor's Plat #12 & Fendt Farms (Rhonswood, Fendt St.)

Note: This map is a planning document and is subject to change. The priority level of a project may move up or down based on funding.

MAJOR ROAD CAPITAL PREVENTIVE MAINTENANCE

Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	FUTURE
1	Freedom Road, Drake Road to Gill Road	575,000	575,000	NC	100% City		575 M					
2	Freedom Road, Maple Street to Grand River Ave	1,100,000	1,100,000	NC	100% City		1,100 M					
3	Freedom, City Limits to Drake	600,000	600,000	NC	100% City			600 M				
4	Drake Road, Eleven Mile Road to Twelve Mile Road	1,500,000	1,500,000	NC	100% City					1,500 M		
5	Independence, Middlebelt Road to Ontaga	825,000	825,000	NC	100% City				825 M			
6	Gill/Lytle, Drake Road to Nine Mile Road	830,000	830,000	NC	100% City						830 M	
7	Farmington Road, Eleven Mile Road to Twelve Mile Road	1,600,000	1,600,000	NC	100% City							1,600 M
8	Ten Mile Road, Farmington Road to Orchard Lake Road	1,400,000	1,400,000	NC	100% City							1,400 M
9	Farmington Road, Ten Mile Road to Eleven Mile Road	1,300,000	1,300,000	NC	100% City							1,300 M
10	Shiawassee Road, Inkster to Middlebelt	1,250,000	1,250,000	NC	100% City							1,250 M
	TOTAL:	\$10,980,000	\$10,980,000	NC		0	1,675	600	825	1,500	830	5,550

NC: No change
M: Millage

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

INDUSTRIAL/COMMERCIAL ROADS

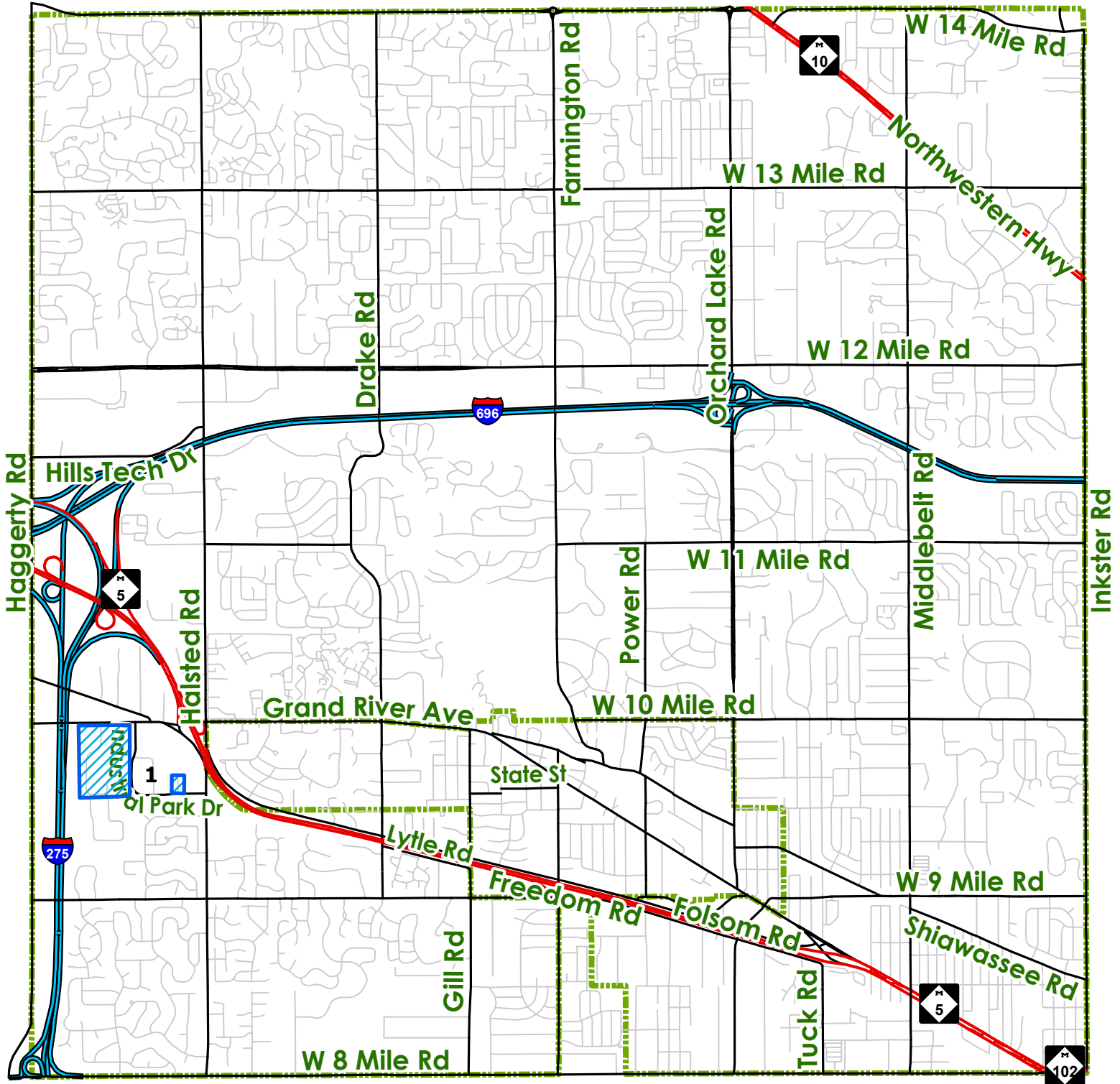
Reference No.	PROJECT	TOTAL COST	CITY COST	MAINTENANCE COSTS	PROJECTED FUNDING & SOURCE	City Cost figures shown are in thousands of dollars.						FUTURE
						2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	
1	Farmington Freeway Industrial Park 3	4,600,000	4,600,000	NC	100% City	4,600 WGM						
2	Farmington Freeway Industrial Park, 1	5,200,000	5,200,000	NC	100% City		5,200 WGM					
3	Farmington Freeway Industrial Park, 2	2,100,000	2,100,000	NC	100% City			2,100 WGM				
4	North Industrial Drive	1,675,000	1,675,000	NC	100% City				1,675 WGM			
5	Sinacola Industrial Park	950,000	950,000	NC	100% City					950 WGM		
6	Farmington Hills IRO Park North (Enterprise Ct.)	800,000	800,000	NC	100% City						800 WGM	
7	Hallwood/Hallwood Court	1,600,000	1,600,000	NC	100% City							1,600 WGM
	TOTAL:	\$16,925,000	\$16,925,000	NC		4,600	5,200	2,100	1,675	950	800	1,600

WGM: Weight & Gas Revenue & Millage

* This chart shows the identified public structures and improvements in the general order of their priority.

Revised: 1-27-2022

2022/2023 Industrial Road Projects



Note: This map is a planning document and is subject to change. The priority level of a project may move up or down based on funding.

1. Farmington Freeway Industrial Park 3

*Projects are referencing CIP Tables.

SITE PLAN 68-12-2021

Approval:

I move that Site Plan 68-12-2021, dated February 22, 2022, submitted by Jing-Jin, be approved because it appears to meet all applicable requirements of the Zoning Chapter. Subject to the following conditions:

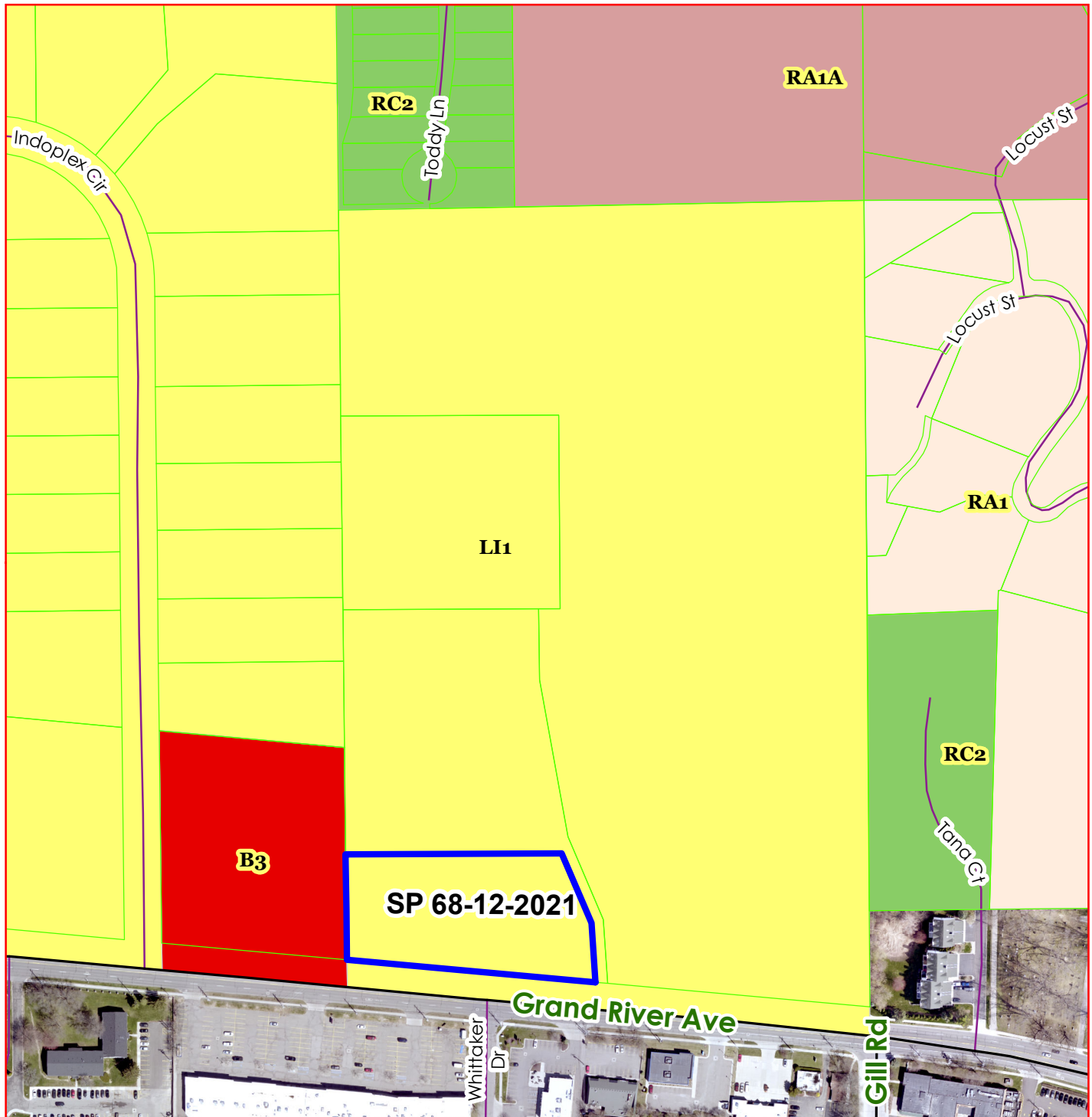
Denial:

I move that approval of Site Plan 68-12-2021, dated February 22, 2022, submitted by Jing-Jin, be denied for the following reasons:

SP 68-12-2021 LI-1

23-21-376-021, Parcel south of 34700 Grand River Ave..

New building on vacant parcel for Jing-Jin



□ Tax parcel

— Minor roads

Zoning Districts

Zoning Districts

■ B-3 General Business District

■ LI-1 Light Industrial District

■ RA-1 One Family Residential District

■ RA-1A One Family Residential District

■ RC-2 Multiple Family Residential



0
FEET



SOURCE: City of Farmington Hills, 2022
Oakland County GIS, 2022

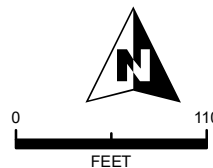
29
DISCLAIMER: Although the information provided by this map is believed to be reliable, its accuracy is not warranted in any way. The City of Farmington Hills assumes no liability for any claims arising from the use of this map.

SP 68-12-2021 LI-1
23-21-376-021, Parcel south of 34700 Grand River Ave..
New building on vacant parcel for Jing-Jin



Planning Division

- Tax parcel
- Minor roads



SOURCE: City of Farmington Hills, 2022
Oakland County GIS, 2022

DISCLAIMER: Although the information provided by this map is believed to be reliable, its accuracy is not warranted in any way. The City of Farmington Hills assumes no liability for any claims arising from the use of this map.

March 11, 2022

Farmington Hills Planning Commission
31555 W 11 Mile Rd
Farmington Hills, MI 48336

Site Plan Review

Case: SP 68-12-2021
Site: 34700 Grand River Ave (22-23-21-376-021)
Applicant: Billy Gongora
Plan Date: 2/18/2022
Zoning: LI-1 Light Industrial

We have completed a review of the application for site plan approval and a summary of our findings is below. Items in **bold** require specific action. Items in *italics* can be addressed administratively.



SUMMARY OF FINDINGS

Summary of Proposal. The applicant proposes to build an addition to existing manufacturing facility, with 73,667 square feet of new manufacturing space (2 stories) and 10,227 square feet of new office space (3 stories). The existing building is 83,819 square feet; a breakdown of office and manufacturing square footage in the existing building was not provided.

Summary of Issues.

- **Label all setbacks.**
- **Shortfall in loading spaces.**
- **Parking in the required 50-foot setback.**
- **Parking count is not split between office and manufacturing uses. Area devoted to office space is not defined.**
- **Rooftop equipment and mechanical equipment not addressed; dumpster enclosure detail needed.**
- **Lighting plan requires adjustments**
- **Pedestrian connection to Grand River sidewalk not provided.**

Existing Conditions

1. **Zoning.** The site is 6.65 acres and zoned LI-1.
2. **Existing site.** The site is developed with an existing manufacturing facility for Jing Jin Electric, which makes electric powertrains. The southern portion of the site, which is vacant at present, and where most of the work will occur, was re-zoned to LI-1 from B-3 in 2021.
3. **Adjacent properties.**

Direction	Zoning	Land Use
North	LI-1	Industrial/Research
East	LI-1	Industrial/Research
South (Farmington)	C2	Strip Mall/Restaurant
West	B-3	Large Office/Industrial

4. **Site configuration and access.** The site is accessed via a driveway off Grand River; this same driveway serves two other industrial sites to the north and east.

Site Plan & Use:

1. **Use.** Manufacturing is a principally permitted use in the LI-1 district, subject to PC approval and the standards of Section 4.46.1 (see below).
2. **Dimensional Standards (LI-1 district).** See footnotes after the table for remarks on compliance issues.

Item	Required	Proposed/Comments
Standards of Sec. 34-3.1.29.E		
Min. lot size	None specified	2.26 acres
Min. lot width	None specified	471.75 ft

Item	Required	Proposed/Comments
Front Setback (south)	50 ft	Greater than 50 ft ¹⁾
Rear Setback (north)	20 ft	Greater than 20 ft ¹⁾
Side Setback (east)	10 ft	Greater than 10 ft ¹⁾
Side Setback (west)	10 ft	Greater than 10 ft ¹⁾
Building Height	50 feet/3 stories	45 feet w/ 50-foot architectural features
Front Yard Open Space	No requirement	--
Other dimensional standards		
Yard landscaping (34-3.5.2.A)	For all uses except one-family detached residential units, landscaping of all yards abutting a street shall be provided	See landscaping comments below.
Minimum parking setback (34-3.5.2.J)	10 feet	See item 7 of this letter below.
Loading space (34-3.5.4.3)	5 10' x 50' loading spaces, plus one per 40,000 sq ft over 100,000 Surfaced with concrete	4 loading dock spaces in interior side yard, surfaced w/ concrete ²⁾
Rooftop equipment (34-3.5.2.U.)	Rooftop equipment shall be screened in accordance with Section 34-5.17.	Rooftop equipment is not addressed on the plans
Landscape area abutting street or freeway (34-3.5.2.V.)	A landscaped area not less than ten (10) feet deep	Varies and appears compliant, but width of each section should be labeled to verify compliance.

1) **The setbacks are clearly compliant; however, the actual distance should be labeled on the plan.**

2) **The loading spaces are associated with loading docks, and while their square footage adds up to more than a six-space equivalent, there are only four actual spaces; it appears this standard is not met. There is an existing covered truck well with three docks on the north side of the building, but there are parking spaces labeled in front of this truck well, so it is not clear how it could be used as a loading space. This must be addressed.**

3. **Dumpster (34-5.1.2.D).**

Item	Required	Proposed/Comments
Location	Rear yard or interior side yard	A dumpster enclosure is shown next to the truck well, but no detail was provided.
Screening	Permanent building wall or earth mound not less than 6 feet or 1 foot above the enclosed dumpster whichever is greater	
Setback	20 feet from any residential property	

4. **Mechanical Equipment (34-5.1.4.D). The plan does not address mechanical equipment.**

5. **Minimum parking (34-5.2.11. D.ii. / E.i.). The plans calculate required parking based on the 1/550 standard for manufacturing, not accounting for the portion of the building devoted to office use. It is not clear from the information provided how much of the total building is manufacturing and how much is office.**

Requirement	Calculations	Provided
D.ii. Office: 1 for each 220 sq ft of usable floor area for first 15,000 sq ft 1 for each 250 sq ft ufa for area over 15,000 sq ft E.i. Industrial: 3 + 1 space per 550 sq ft usable floor area (97 employees; sq ft standard is greater, so that applies)	Total square footages not provided by use	218 spaces
Barrier-Free Spaces (201 to 300 total)	7 spaces	7 spaces

6. **Off-street parking dimensions (34-5.3.3.A & B.).** The spaces meet the minimum requirements for parking spaces.

Item	Required	Proposed/Comments
Maneuvering lane width	20 ft. (90°), 15 ft. (60°)	20 ft. (90°), 15 ft. (60°)
Parking space width	9 ft. (90°), 8.5 ft. (60°)	9 ft. (90°), 8.5 ft. (60°)
Parking space length	20 ft. for minimum required (May include a maximum two-foot unobstructed vehicle overhang area at the front of the parking space.) 17 ft. for additional parking (May include a maximum one-foot unobstructed vehicle overhang area at the front of the parking space)	20 ft

7. **Parking Location.** Per Section 34-5.2.1, Off-street parking spaces may be located within a side or rear yard unless otherwise provided. Off-street parking shall not be permitted within a minimum front yard setback unless otherwise provided. Per footnote 34-3.5.2.S, in the LI-1 district, "Off-street parking for visitors, over and above the number of spaces required under Section 34-5.2, may be permitted within the required front yard provided that such off-street parking is not located within twenty (20) feet of the front lot line and provided further that the number of such spaces does not equal more than ten (10) percent of the total number of spaces required." There is a bay of parking arrayed along the southern front of the building that is partially within the 50-foot setback, and six additional spaces encroach partially into the setback, for a total of 23 spaces, **which exceeds ten percent of the total (though, as noted above, this may not be the correct total). These spaces are also not labeled for visitor parking, and are not in excess of the requirement.**
8. **Acceleration-Deceleration-Passing Lanes (34-5.6.2.)** Driveways providing ingress and egress to all three-lane paved major or secondary thoroughfares shall be provided with paved acceleration and deceleration lanes. If in the opinion of the director of public services no useful purpose would be served or if unusual difficulty would be encountered by reason of grade changes, intersections, bridges, or other land restrictions, the director may waive or modify the requirements of this section. **We defer to engineering to address this issue.**
9. **Standards of Section 34-4.46.1.** "Uses are permitted when conducted wholly within a completely enclosed building, or within a designated area enclosed on all sides with a six (6) foot fence or solid wall. Such wall shall be completely obscuring on those sides which front upon a street or where abutting or adjacent to districts zoned for residential use." The applicant proposes no outdoor storage or other outdoor uses.

10. **Circulation.** The plan provides a continuous driveway/fire lane around the building and is accessed from a driveway shared with two adjacent properties.
11. **Corner Clearance (34-5.10).** Corner clearance standards are met (see Sheet L-2).
12. **Landscaping.**

Item	Required			Proposed/Comments
Minimum distance from the property line (34-5.14.C.ii)	4 ft from the property line for trees and large shrubs			Compliant
Minimum parking lot island area	Minimum of 180 square feet; 3 feet minimum radius at the trunk of the tree			Compliant
Cost estimate	Not required			--
Minimum size and spacing requirements at planting (34-5.14.F)	Size	Center to center distance (max)		
	(Height/width)	groupings	rows	
• Evergreen Trees	8 ft. height	20 ft.	12 ft.	Standard is met
• Narrow Evergreen Trees	5 ft. height	10 ft.	5 ft.	N/A
• Large Shrubs	30 in. height	10 ft.	5 ft.	Standard is met
• Small Shrubs	24 in. width	4 ft.	4 ft.	Standard is met
• Large Deciduous	3 in. caliper	30 ft.	-	Standard is met
• Small deciduous trees	2 in. caliper	15 ft.	-	Standard is met
• Hedge shrubs	24 in. height	3 ft.	3 ft.	No hedge
Canopy Trees	Shall be large deciduous. PC may permit large evergreens			4 large deciduous trees provided
Minimum number of parking lot trees (34-5.14.4.C)	1 per every 2,800 square feet of paved surface area: $108,270/2,800 = 39$ trees			39 trees provided (including trees already on site and not to be removed)
Parking lot screening from public thoroughfare (34-5.14.5)	A planted hedge of small shrubs, or A masonry wall or berm of 2 feet high			3-foot hedge provided
Wall or Berm (34-5.15)	Required when abutting a residential district. (See 34-5.15)			Not required
Tree replacement (34-5.18)	See below			See below

13. **Tree Replacement (34-5.18).** The applicant proposes 33 replacement trees, twelve of which are 4-inch dbh trees, which adds the equivalent of 4 trees. Additionally, 22 evergreens are proposed to be planted with a 12-foot height rather than the minimum required 8 feet. **When replacement or relocation of trees on site or on a one-to-one basis is not feasible and/or desirable, the planning commission may substitute greater size for replacement trees**

Trees Removed	Replacements Required	Provided
Regulated Trees: 24	24	24
Landmark Trees: 9 w total dbh of 240 inches	$240 \times 0.25 = 60$ inches $60/3 = 20$ trees	20
Total: 33 of 58 trees removed	44*	33**

* The plan expresses this as 132 caliper inches, but the totals are the same.

**34.66 equivalent with the 5 4-inch dbh trees.

14. **Lighting (Section 34-5.16).**

- a. **Operation hours (34-5.16.3.B.v.).** *The following notes must be added to or addressed on the plan; it is unclear from the existing plans whether these standards are met. The applicant should clarify how these standards are met.*
- i. Exterior lighting shall not operate during daylight hours.
 - ii. Building façade and landscape lighting shall be turned off between midnight or one hour after close of business, whichever is later, and 6:00am or opening, whichever is earlier.
 - iii. All other exterior lighting shall be reduced to no greater than 70% of maximum from midnight or one hour after close of business, whichever is later, and 6:00am or opening, whichever is earlier.
 - iv. Use of occupancy sensors to turn off or reduce lighting within 15 minutes of zero occupancy is recommended.
- b. **Illumination Levels.** With the exception of the undetailed sconces, the fixtures appear capable of meeting cutoff requirements.

Item	Required	Proposed/Comments
Maximum height (34-5.16.3.A.)	30 feet maximum	30/15 ft.
Building Lighting (34-5.16.3.A. iii.)	Relevant building elevation drawings showing all fixtures and the portions of the walls to be illuminated	Compliant, though it seems likely the loading dock will be lit, but no values are provided.
Average to minimum illumination ratio (34-5.16.3.C)	4:1	6:1 for new area, not available for full site
Maximum illumination at the property line	0.3 fc	Exceeded at several points on western property line
Illumination Levels- Hardscape areas (e.g., parking areas, sidewalks)	2.5 lumens per sq ft of hardscape area	Unclear from plan

Item	Required	Proposed/Comments
Illumination Levels Building Entrances – within 20 ft of door	2,000 lumens per door	Unclear from plan

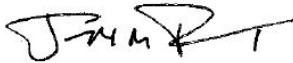
15. **Additional lighting standards for sites abutting a residential district (Sec. 34-5.16.3.B.iii.)**

- a. No direct light source shall be visible at the property line (adjacent to residential) at ground level.
This standard appears to be met.
- b. All fixtures mounted within 50 feet of a residential property line or public right-of-way boundary shall be fitted with a shielding reflector on the side facing the residential property line or public right-of-way. *This standard does not apply to this site.*

16. **Pedestrian Connection (Sec. 34-5.19).** A pedestrian connection to the Grand River sidewalk is not provided.

We are available to answer questions.

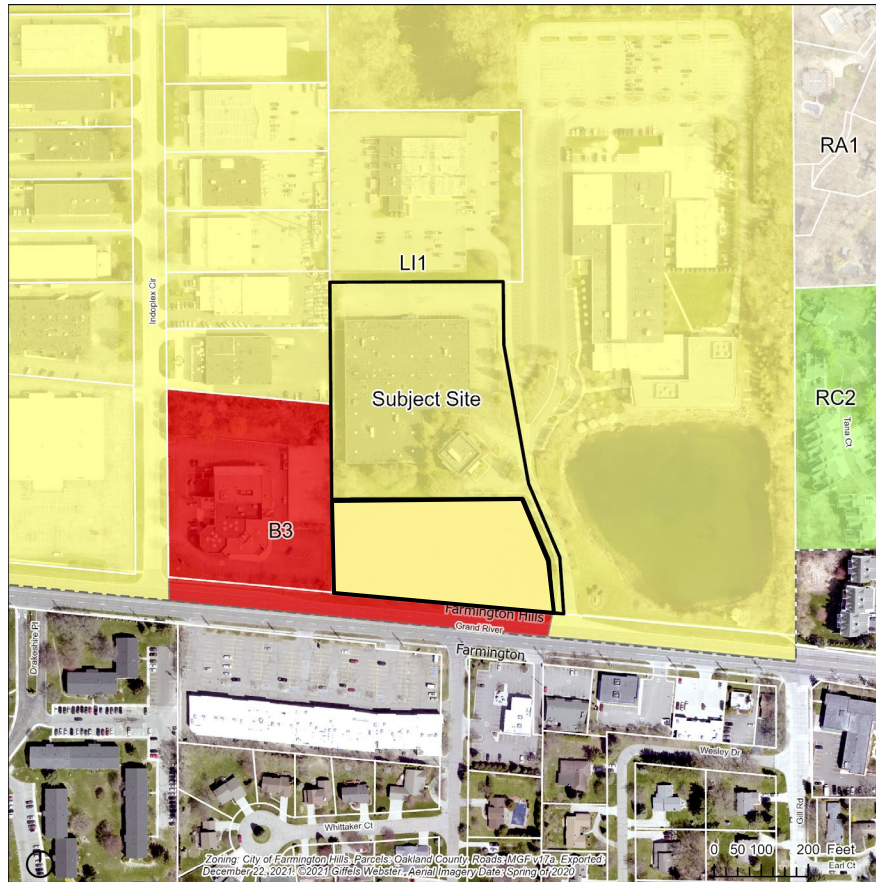
Respectfully,
Giffels Webster



Joe Tangari, AICP
Senior Planner




Rod Arroyo, AICP
Secretary | Partner





DEPARTMENT OF PUBLIC SERVICES
KAREN MONDORA, P.E., DIRECTOR

INTEROFFICE CORRESPONDENCE


DATE: March 3, 2022
TO: Planning Commission
FROM: James Cubera, Engineering 
SUBJECT: Jing Jin Electric Expansion
Revised SP#: 67-12-2021 – PJ#: 21-21-56
22-23-21-376-020

This office has performed a preliminary review of the above referenced revised site plan submitted to the Planning Department on February 22, 2022. We note that the plan now includes an expanded ring road around the entire facility as well as some revised parking. With the above in mind, our comments remain as called out in our memo dated December 28, 2021.



DEPARTMENT OF PUBLIC SERVICES
KAREN MONDORA, P.E., DIRECTOR

INTEROFFICE CORRESPONDENCE

DATE: December 28, 2021
TO: Planning Commission
FROM: James Cubera, Engineering 
SUBJECT: Jing Jin Electric Expansion
SP#: 67-12-2021 – PJ#: 21-21-56
22-23-21-376-020

This office has performed a preliminary review of the above referenced site plan submitted to the Planning Department on December 20, 2021. Our preliminary comments are as follows:

1. An 8-inch water main exists along the west side of this site as well as along the east side of the building paralleling the service road that provides access. In addition, there is an 8-inch watermain on the north side of Grand River Ave. All lines are available for service. The proponent needs to identify where their water service will be provided as this particular expansion is attached to the existing building. If the current domestic service being utilized for the existing facility is to be extended internally, it needs to be identified on the plan.
2. An 8-inch sanitary sewer exists approximately 30-feet north of the expansion along the west property line where a public manhole exists. The proponent has identified extending a sewer lead to accommodate this expansion along with the use of a private grinder pump to provide service. The proponent will be obligated to confirm that gravity service cannot be provided in order for this method to be considered by the City. The plans need to further identify if basement service will be needed and whether this building will be a slab on grade.
3. This site currently utilizes a private access road along the east side of this site. It appears that the proponent is maintaining this use. We note that no access to Grand River Avenue is proposed. This is appropriate.

4. A 5-foot-wide sidewalk currently exists along the Grand River Avenue frontage. Therefore, no additional walk requirements will be in effect.
5. Storm water detention is being proposed through an underground pipe system in the proposed parking lot east of the expansion. Details of this design must be provided to Engineering to confirm that it meets the City requirements of 2 inches over the gross area of the site. Note that discharge must be restricted to an agricultural rate of 0.2cfs per acre.
6. Our office notes that the detention system taps into a 21-inch storm sewer on the north side of Grand River Avenue. This appears to be a portion of the US20 drain which is a County drain. A permit from the WRC will be necessary to allow for this. They may have additional requirements that need to be addressed.
7. Storm water quality improvements must be provided for this site. The plans need to identify these measures. Attached are comments from the City's Environmental Engineer Tyler Sonoga. Any question regarding these items can be referred to him at 248-871-2533.
8. Our office notes that the site immediately west of this development currently has drainage issues that have previously caused backup and flooding into the lower level of their building. The proponent of this development will be obligated to provide a gravity outfall to accommodate this issue along their west property line if feasible. This can be further addressed during construction review.
9. It is suggested that the proponent and his engineer meet via Zoom or some other telecommunication method with the City Engineering Division to discuss this site in further detail.
10. The ultimate right of way on Grand River Avenue is 120 feet. The plans identify the existing right of way as 100 feet. It is suggested that the proponent dedicate the additional 10 feet on the north side of Grand River Avenue in order to conform with the master ultimate right of way plan.



INTEROFFICE CORRESPONDENCE

DATE: March 8, 2022
TO: Planning Commission
FROM: Jason Baloga, Fire Marshal
SUBJECT: Revised Site Plan 68-12-2021 (34700 Grand River)

The Fire Department has no objections to approval of this site plan contingent upon compliance with the following conditions:

1. The site must be designed to accommodate fire apparatus with a 50' turning radius outlined in Chapter 12 Section 12-11(1) of the City Code. It appears to be close. Please confirm with the Engineering Department that the 50' radius is met.
2. Above ground storage tank installation proposal must be submitted for State review or Local AHJ 3rd party review and approval prior to installation.
3. Contact the Fire Department if this occupancy is testing or storing Lithium-Ion batteries on site.
4. No areas under construction shall be occupied until the Final Certificate of Occupancy has been recommended by the Fire Department and issued by the Building Department.
5. The building shall be combined into one (1) fire alarm system.
6. There shall be one (1) Fire Department Connection located on this building. A re-review of the FDC's current location shall be required.
7. Building shall be maintained in accordance with minimum Fire Prevention Code requirements.

A handwritten signature in blue ink, appearing to read "Jason Baloga".

Jason Baloga, Fire Marshal

JB/al



JING-JIN ELECTRIC NORTH AMERICA LLC EXPANSION

34700 GRAND RIVER AVE.
FARMINGTON HILLS, MI 48335

SHEET MATRIX

SHEET #	DRAWING TITLE	ISSUE
1	TITLE SHEET, SITE & LOCATION PLANS	02/18/2022
2	ALTA SURVEY	
3	SITE PLAN SOUTH	
4	SITE PLAN NORTH	
5	OVERALL SITE PLAN & DETENTION CALCULATIONS	
6	DETENTION & TREATMENT STRUCTURE DETAILS	
7	US-65 TRUCK MOVEMENT PLAN	
8	FIRE TRUCK MOVEMENT PLAN	
9	LANDSCAPE	
10	EXISTING TREE INVENTORY	
11	LANDSCAPE PLAN	
12	LANDSCAPE PLAN	
13	LANDSCAPE DETAILS	
14	ARCHITECTURAL	
15	FIRST FLOOR PLAN	
16	SECOND & THIRD FLOOR PLANS	
17	EXTERIOR ELEVATIONS	
18	EXTERIOR ELEVATIONS	
19	PHOTOMETRIC	

PROJECT SCOPE:

THIS PROJECT INVOLVES THE ADDITION OF A 2 STORY MANUFACTURING (13,667 S.F.) & 3 STORY OFFICE (10,227 S.F.) STRUCTURE ONTO THE EXISTING JJE NORTH AMERICA LLC BUILDING. THE PROPOSED BUILDING ADDITION WILL BE LOCATED ON AN EXISTING OPEN AREA FACING GRAND RIVER.

CODE INFORMATION:

2015 MICHIGAN BUILDING
2015 MICHIGAN MECHANICAL CODE
2015 MICHIGAN PLUMBING CODE
2011 MICHIGAN PART 8 ELECTRICAL CODE
2015 MICHIGAN UNIFORM ENERGY CODE-COMMERCIAL
2015 INTERNATIONAL PROPERTY MAINTENANCE CODE
2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS

SITE DATA:

EXISTING SITE ZONING: LI-1 LIGHT INDUSTRIAL DISTRICT
EXISTING SITE AREA: 285,318 S.F. (6.55 ACRES)

PROPOSED BUILDING HEIGHT: 50'-0"
BUILDING LOT COVERAGE: 44.9%

REQUIRED YARDS:

FRONT: 5'-0"
SIDE: 10'
REAR: 20'
PARKING SETBACK: PARKING NOT ALLOWED IN FRONT BUILDING SETBACK-20'
10% OF REQUIRED PARKING

PARKING REQUIREMENTS

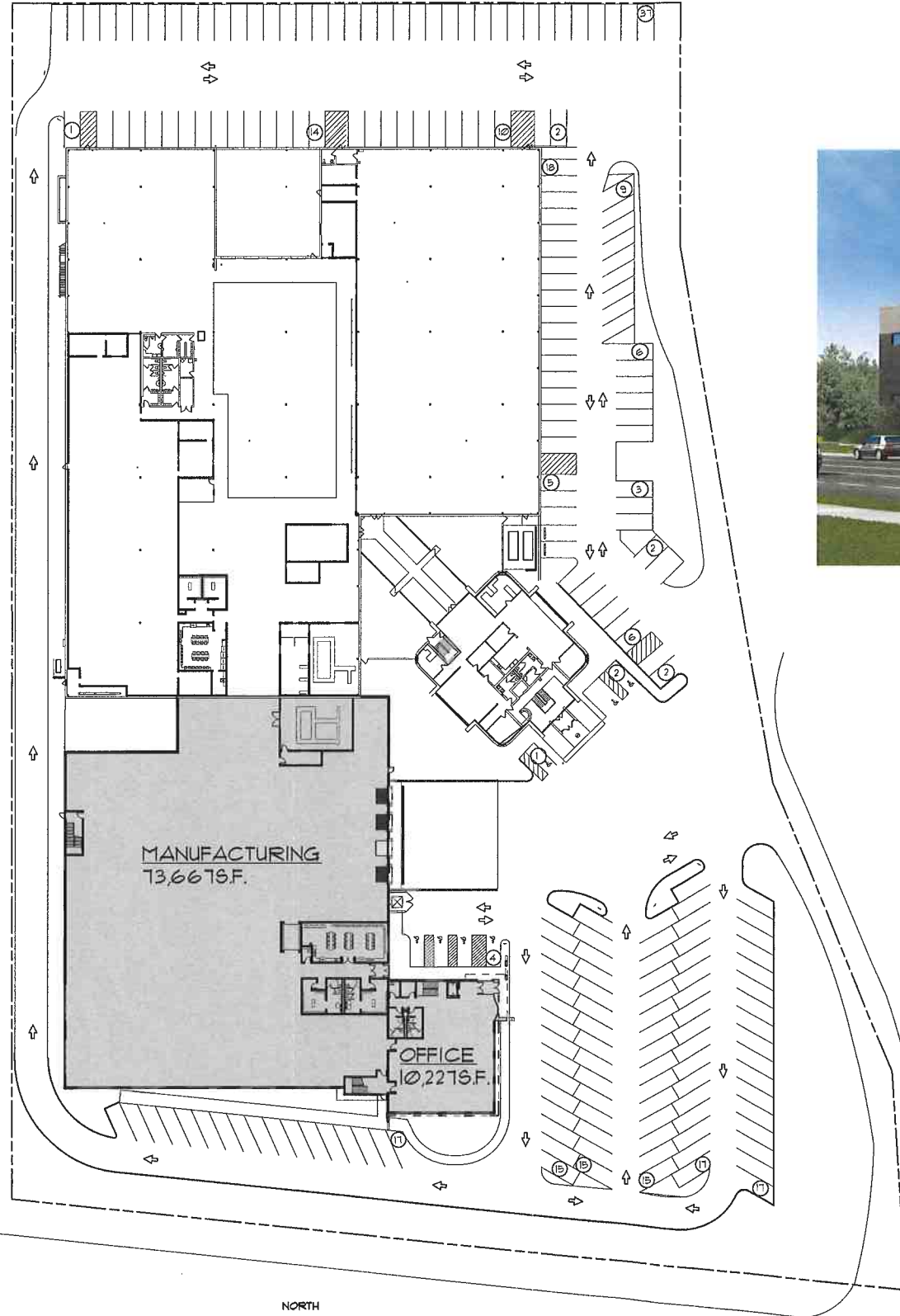
FOR EACH FIVE HUNDRED FIFTY (550) OF USABLE AREA TOTAL S.F./550X10%+3
(161,131 S.F./550 X .10)+3=211 REQUIRED SPACES

126 SPACES PROPOSED+92 EXISTING+TOTAL 218 SPACES

LOADING:

REQUIRED: 6'-50" X 10' SPACE=3,000 S.F.
PROPOSED: 6'-50" X 10' SPACE=3,621 S.F.

PRESENT USE OF PROPERTY: MANUFACTURING/OFFICE
PROPOSED USE OF PROPERTY: MANUFACTURING/OFFICE



SITE PLAN

SCALE: 1"=40'-0"



GRAND RIVER AVENUE LOOKING EAST TO WEST



EAST VIEW MAIN ENTRY

REV. DP 08.12.2021
RECEIVED

FEB 22 2022

CITY OF FARMINGTON HILLS
PLANNING DEPT.



PRELIMINARY
NOT FOR CONSTRUCTION



LOCATION PLAN
NO SCALE

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CHESTER STEMPEN ASSOC.

PROJECT
JING-JIN ELECTRIC
EXPANSION
34700 GRAND RIVER AVE
FARMINGTON HILLS, MI 48335

SUBJECT
SITE PLAN

ARCHITECTS
CHESTER STEMPEN ASSOCIATES • AIA
29895 GREENFIELD ROAD SOUTHFIELD, MICHIGAN 48076
(248) 557-2145 FAX: (248) 559-2856



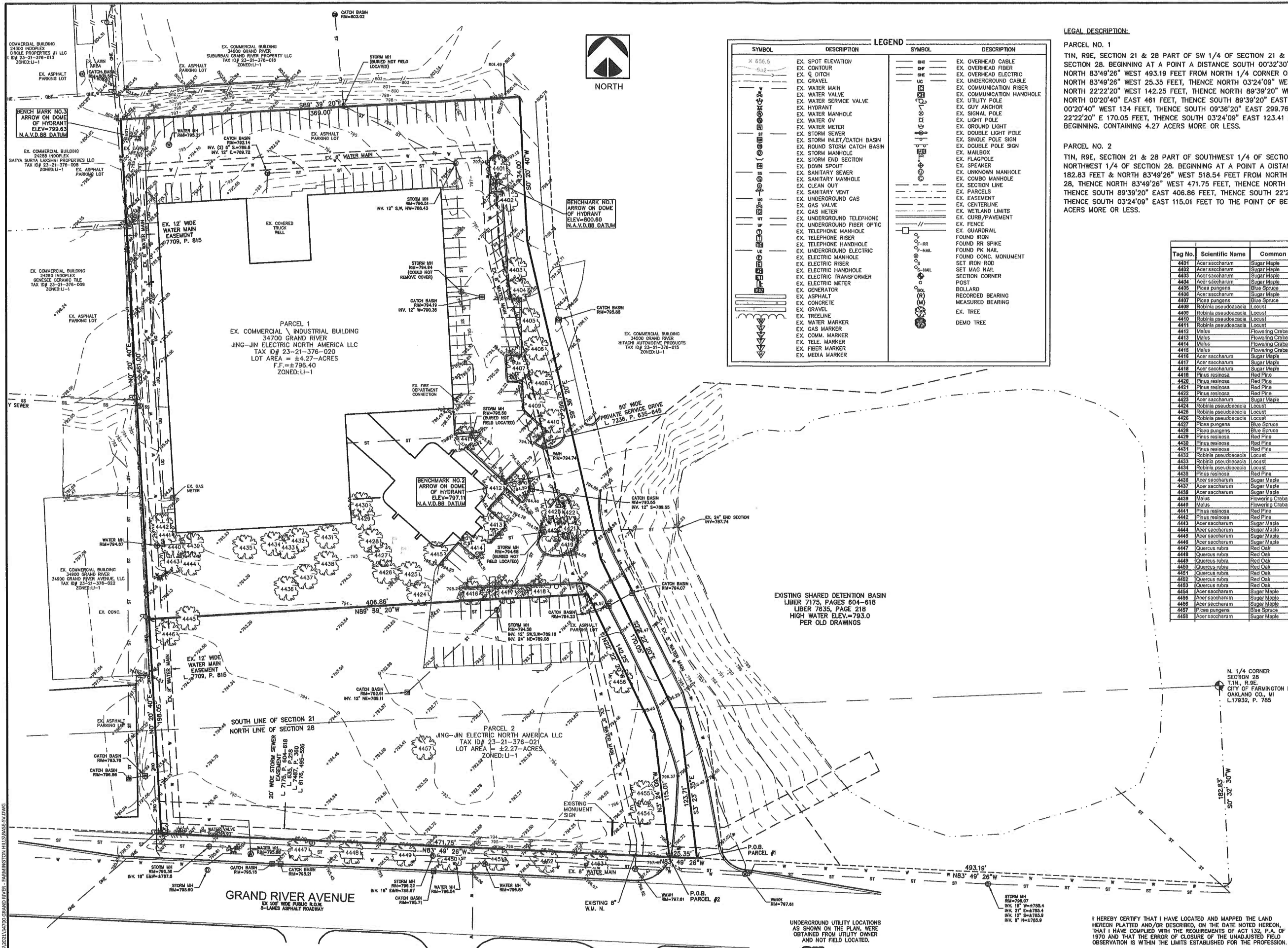
ISSUED:
SITE PLAN
APPROVAL
02/18/2022

DESIGNED K.P.
CHECKED T.J.F.
APPROVED C.R.S.
DATE 02/25/2022
DRAWN BY

JOB NO.
T202021

SHEET
T.1

JING JIN
FARMINGTON HILLS

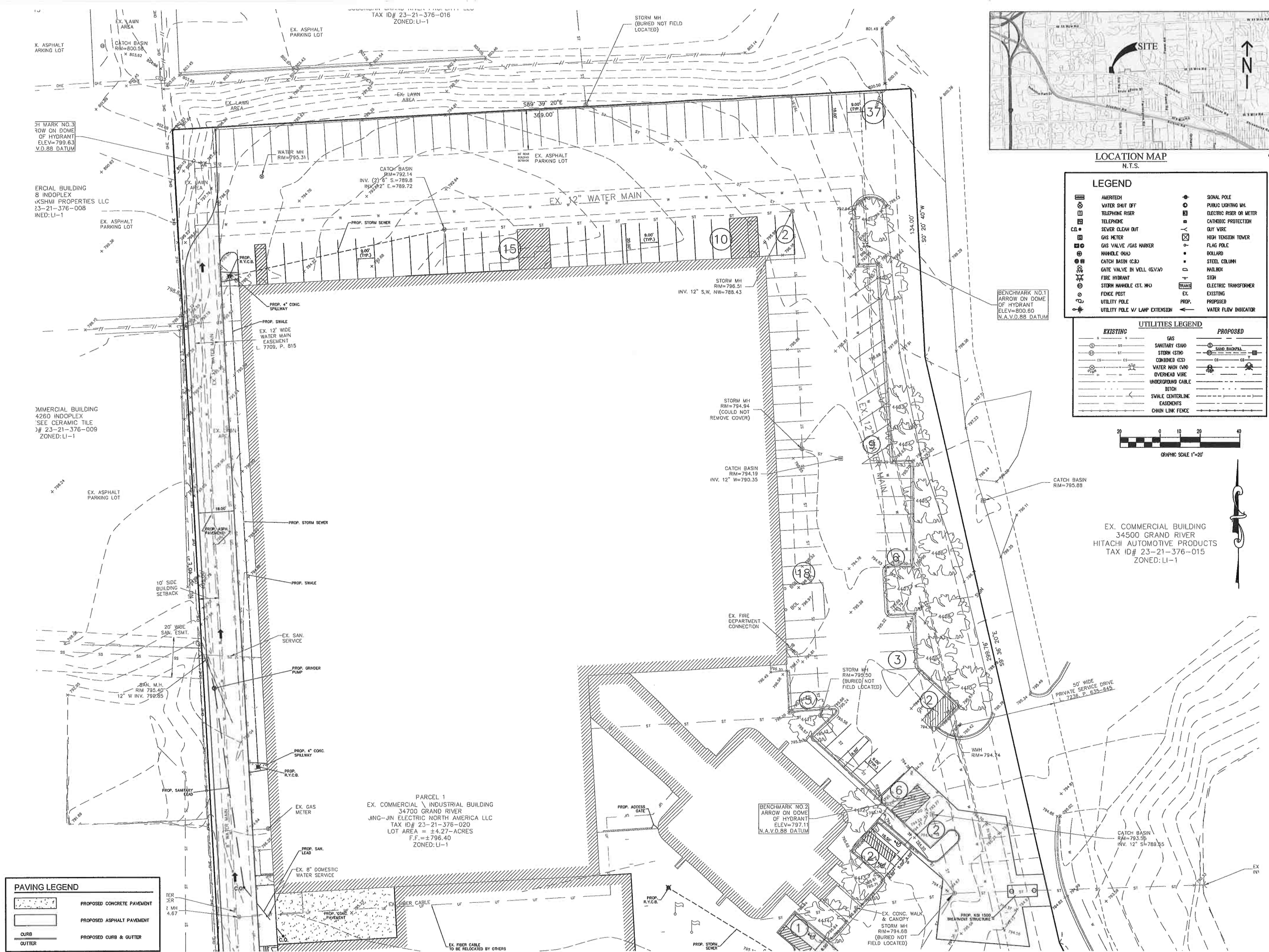


SYMBOL		DESCRIPTION	
X 656.5		EX. SPOT ELEVATION	
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[Symbol]		EX. DITCH	
[Symbol]		EX. GRAVEL	
[Symbol]		EX. WATER MAIN	
[Symbol]		EX. WATER VALVE	
[Symbol]		EX. WATER SERVICE VALVE	
[Symbol]		EX. HYDRANT	
[Symbol]		EX. WATER MANHOLE	
[Symbol]		EX. WATER GY	
[Symbol]		EX. WATER METER	
[Symbol]		EX. STORM SEWER	
[Symbol]		EX. STORM INLET/CATCH BASIN	
[Symbol]		EX. STORM MANHOLE	
[Symbol]		EX. STORM END SECTION	
[Symbol]		EX. DOWN SPOUT	
[Symbol]		EX. SANITARY SEWER	
[Symbol]		EX. SANITARY MANHOLE	
[Symbol]		EX. CLEAN OUT	
[Symbol]		EX. SANITARY VENT	
[Symbol]		EX. UNDERGROUND GAS	
[Symbol]		EX. GAS VALVE	
[Symbol]		EX. GAS METER	
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[Symbol]		FOUND RR SPIKE	
[Symbol]		FOUND PK NAIL	
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[Symbol]		SET IRON ROD	
[Symbol]		SET MAG NAIL	
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[Symbol]		DEMO TREE	

LEGAL DESCRIPTION:
PARCEL NO. 1
T1N, R9E, SECTION 21 & 28 PART OF SW 1/4 OF SECTION 21 & PART OF NORTHWEST 1/4 OF SECTION 28, BEGINNING AT A POINT A DISTANCE SOUTH 00°32'30" WEST 182.83 FEET & NORTH 83°49'26" WEST 493.19 FEET FROM NORTH 1/4 CORNER OF SECTION 28, THENCE NORTH 83°49'26" WEST 25.35 FEET, THENCE NORTH 03°24'09" WEST 115.01 FEET, THENCE NORTH 22°22'20" WEST 142.25 FEET, THENCE NORTH 89°39'20" WEST 406.86 FEET, THENCE NORTH 00°20'40" EAST 481 FEET, THENCE SOUTH 89°39'20" EAST 369 FEET, THENCE SOUTH 00°20'40" WEST 134 FEET, THENCE SOUTH 09°36'20" EAST 299.76 FEET, THENCE SOUTH 22°22'20" E 170.05 FEET, THENCE SOUTH 03°24'09" EAST 123.41 FEET TO THE POINT OF BEGINNING, CONTAINING 4.27 ACERS MORE OR LESS.

PARCEL NO. 2
T1N, R9E, SECTION 21 & 28 PART OF SOUTHWEST 1/4 OF SECTION 21 & PART OF NORTHWEST 1/4 OF SECTION 28, BEGINNING AT A POINT A DISTANCE SOUTH 00°32'30" WEST 182.83 FEET & NORTH 83°49'26" WEST 518.54 FEET FROM NORTH 1/4 CORNER OF SECTION 28, THENCE NORTH 83°49'26" WEST 471.75 FEET, THENCE NORTH 00°20'40" EAST 198.05 FEET, THENCE SOUTH 89°39'20" EAST 406.86 FEET, THENCE SOUTH 22°22'20" EAST 142.25 FEET, THENCE SOUTH 03°24'09" EAST 115.01 FEET TO THE POINT OF BEGINNING, CONTAINING 2.28 ACERS MORE OR LESS.

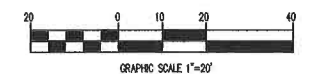
Tag No.	Scientific Name	Common Name	DBH(s)	Condition
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4402	Acer saccharum	Sugar Maple	13"	Good
4403	Acer saccharum	Sugar Maple	20"	Good
4404	Acer saccharum	Sugar Maple	14"	Good
4405	Picea pungens	Blue Spruce	17"	Fair
4406	Acer saccharum	Sugar Maple	25", 22"	Good
4407	Picea pungens	Blue Spruce	20"	Fair
4408	Robinia pseudoacacia	Locust	22"	Good
4409	Robinia pseudoacacia	Locust	19"	Good
4410	Robinia pseudoacacia	Locust	18"	Good
4411	Robinia pseudoacacia	Locust	20"	Good
4412	Malus	Flowering Crabapple	5"	Good
4413	Malus	Flowering Crabapple	5"	Good
4414	Malus	Flowering Crabapple	5"	Good
4415	Malus	Flowering Crabapple	5"	Good
4416	Acer saccharum	Sugar Maple	8"	Good
4417	Acer saccharum	Sugar Maple	10"	Good
4418	Acer saccharum	Sugar Maple	11"	Good
4419	Pinus resinosa	Red Pine	13"	Fair
4420	Pinus resinosa	Red Pine	13"	Fair
4421	Pinus resinosa	Red Pine	20"	Fair
4422	Pinus resinosa	Red Pine	11"	Fair
4423	Acer saccharum	Sugar Maple	9"	Good
4424	Robinia pseudoacacia	Locust	22"	Good
4425	Robinia pseudoacacia	Locust	19"	Good
4426	Robinia pseudoacacia	Locust	17"	Good
4427	Picea pungens	Blue Spruce	14"	Fair
4428	Picea pungens	Blue Spruce	14"	Fair
4429	Pinus resinosa	Red Pine	24"	Fair
4430	Pinus resinosa	Red Pine	20"	Fair
4431	Pinus resinosa	Red Pine	11"	Fair
4432	Robinia pseudoacacia	Locust	18"	Good
4433	Robinia pseudoacacia	Locust	18"	Good
4434	Robinia pseudoacacia	Locust	19"	Good
4435	Pinus resinosa	Red Pine	15"	Good
4436	Acer saccharum	Sugar Maple	5"	Good
4437	Acer saccharum	Sugar Maple	16"	Good
4438	Acer saccharum	Sugar Maple	17"	Good
4439	Malus	Flowering Crabapple	8", 6"	Good
4440	Malus	Flowering Crabapple	7"	Good
4441	Pinus resinosa	Red Pine	5"	Fair
4442	Pinus resinosa	Red Pine	12"	Good
4443	Acer saccharum	Sugar Maple	9"	Good
4444	Acer saccharum	Sugar Maple	19"	Good
4445	Acer saccharum	Sugar Maple	52"	Good
4446	Acer saccharum	Sugar Maple	26", 16"	Good
4447	Quercus rubra	Red Oak	13"	Good
4448	Quercus rubra	Red Oak	12"	Good
4449	Quercus rubra	Red Oak	12"	Good
4450	Quercus rubra	Red Oak	13"	Good
4451	Quercus rubra	Red Oak	15"	Good
4452	Quercus rubra	Red Oak	15"	Good
4453	Quercus rubra	Red Oak	16"	Good
4454	Acer saccharum	Sugar Maple	24"	Good
4455	Acer saccharum	Sugar Maple	25"	Good
4456	Acer saccharum	Sugar Maple	25"	Good
4457	Picea pungens	Blue Spruce	25"	Fair
4458	Acer saccharum	Sugar Maple	28"	Good



LOCATION MAP
N.T.S.

LEGEND	
	AMERITECH
	WATER SHUT OFF
	TELEPHONE RISER
	TELEPHONE
	SEWER CLEAN OUT
	GAS METER
	GAS VALVE / GAS MARKER
	MANHOLE (MHO)
	CATCH BASIN (C.B.)
	GATE VALVE IN WELL (G.V.W.)
	FIRE HYDRANT
	STORM MANHOLE (ST. MH)
	FENCE POST
	UTILITY POLE
	UTILITY POLE W/ LAMP EXTENSION
	SIGNAL POLE
	PUBLIC LIGHTING MH.
	ELECTRIC RISER OR METER
	CATHODIC PROTECTION
	GUY WIRE
	HIGH TENSION TOWER
	FLAG POLE
	BOLLARD
	STEEL COLUMN
	MAILBOX
	SIGN
	ELECTRIC TRANSFORMER
	EXISTING
	PROPOSED
	WATER FLOW INDICATOR

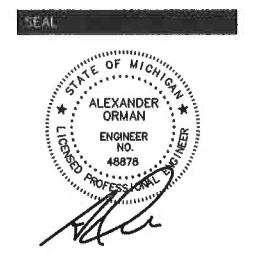
UTILITIES LEGEND	
EXISTING	PROPOSED
	GAS
	SANITARY (SND)
	STORM (STD)
	COMBINED (CS)
	WATER MAIN (WM)
	OVERHEAD WIRE
	UNDERGROUND CABLE
	DITCH
	SWALE CENTERLINE
	EASEMENTS
	CHAIN LINK FENCE



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5476 Vivian Lane
Waterford, MI 48327
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email: alex@ormanengineering.com

PROJECT
PROPOSED BUILDING
ADDITION

CLIENT
Jing-Jin Electric North
America LLC
34700 Grand River Ave.
Farmington Hills, MI 48335



SHEET
SITE PLAN NORTH

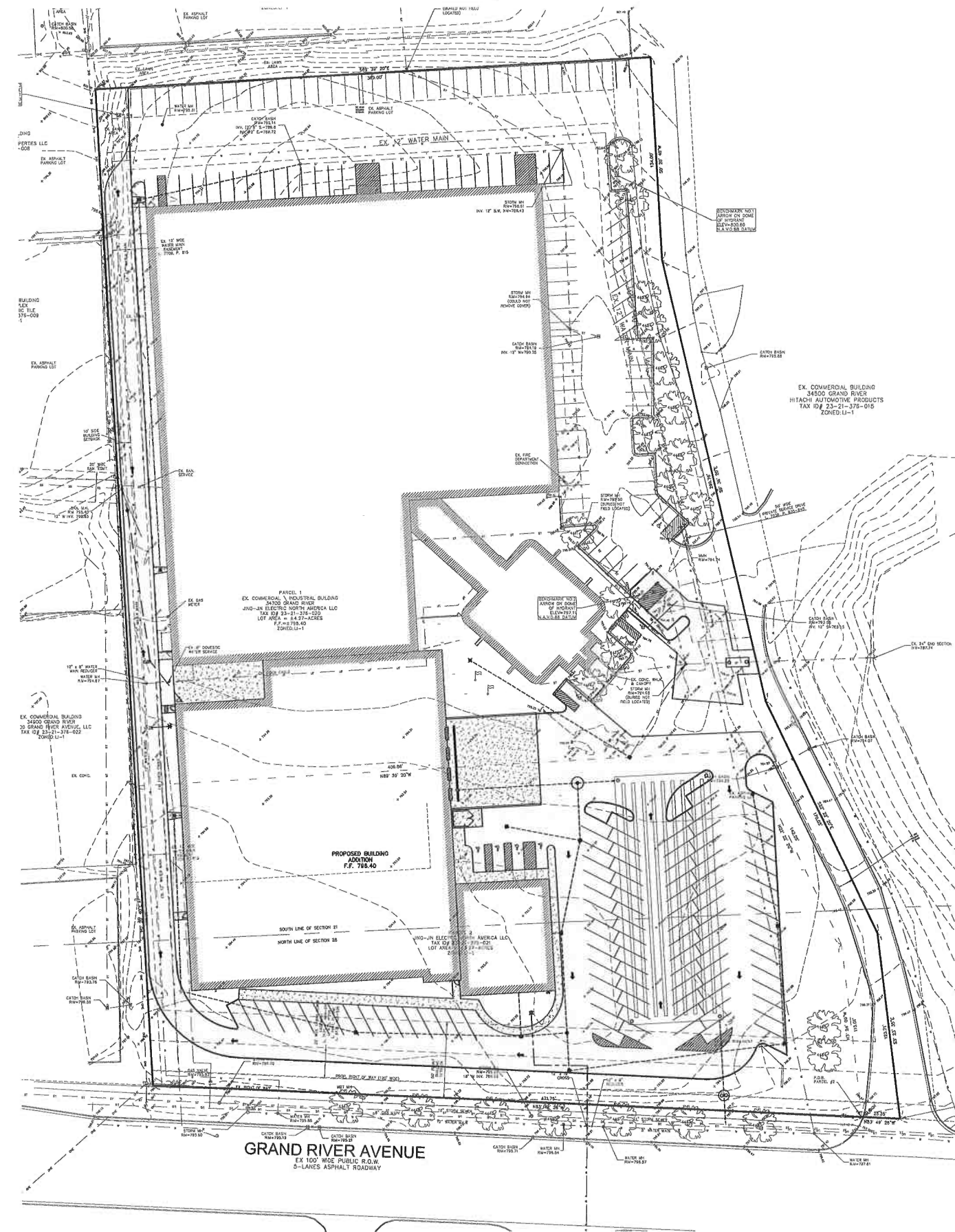
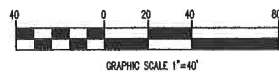
PROJECT LOCATION
34700 Grand River Ave.
City of Farmington Hills,
Oakland County, MI 48335



Know what's below
Call before you dig.

REVISIONS	

02-18-2022 SITE PLAN SUBMITTAL	
Designed by:	Drawn by:
A.O.	S.D.M.
Approved by:	Date:
A.O.	02-18-2022
Scale:	1" = 20'
Job No.:	Sheet:
1347	SP-2



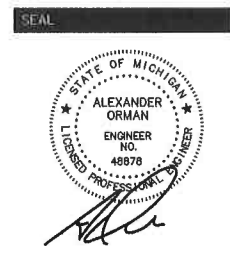
LOCATION MAP
N.T.S.



Orman Engineering, LLC
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PROJECT
PROPOSED BUILDING
ADDITION

CLIENT
Jing-Jin Electric North
America LLC
34700 Grand River Ave.
Farmington Hills, MI 48335



SHEET
OVERALL SITE
PLAN &
DETENTION
CALCULATIONS

PROJECT LOCATION
34700 Grand River Ave.
City of Farmington Hills,
Oakland County, MI 48335



REVISIONS	
No.	Description

02-18-2022 SITE PLAN SUBMITTAL
Designed by: A.O. Drawn by: S.D.M.
Approved by: A.O. Date: 02-18-2022
Scale: 1" = 40'
Job No.: SP-3

Stormwater Underground Detention Calculations
Project: Jing-Jin, Farmington Hills, MI.

City of Farmington Hills Design Volume Requirements:
A (area) = 2.48 Acres
C_{0.01} = 0.70
Q₀ (allowable) = 0.496 cfs/Acre 0.20 x A
V_{0.01} = A * 2.7 / 12 18,005 cubic feet
V_{0.01} = 5,160 * A * C 8,358 cubic feet
Oakland County WRC Design Volume Requirements:
I100 = 5.42 min. 83.3 / (Tc + 9.17) * 0.81
Q100n = 9.410 cfs C x 1100 x A
Q_{err} = 0.595 cfs/Acre 1.1055 - 0.206 x A
Q_r = 0.200
R = 0.547 0.206 - 0.15 x (Q_{err} / Q100n)
V100 = 32,558 cubic feet 18,985 x C x A
V1000 = 21,338 cubic feet V100 x R - V_{0.01}

Using a larger volume: 21,338 cubic feet
First flush calculations will not be required due to existence of mechanical forbay.

Provided Storage Volume:
Pipe I.D. (inches) Area pipe length Volume Provided
48 12.56 1,700 21,352
Z₀ = 787.30 pipe invert at Detention pipes
Z_{0.4} = 787.15 pipe invert at outlet control structure

Extended Detention Calculations
V_{ed} = 11973 cubic feet
Water depth = 2.22 ft
Z_{ed} = 789.37 ft
100-year Storm Elevation:
Required Area = V_{ed} / pipe length = 10.59 square feet
Water depth = 4.00 ft
Z_{ed} = V_{ed} Elevation = 791.30 ft

Outlet Control Structure Design
Sizing for Extended Detention
Extended Detention discharge should be released within time period 48 hours

1" Holes 1.72 ea V_{ed} / 666" (Hed * 0.5)
Use 2 holes at elev. 789.37
A_{actual} = 0.0055 sq ft
Q_{act} Actual = 0.028 cfs (0.62 x A_{actual} x (32.2 x 2 x 1.05)^{0.5})

Sizing for 100-year Flood
Q_{act} = 0.496 cfs Q₀
h_{max} = 4.15 ft Z100 - Z_{out}
Hole size 1.00 inch
Hole Area 0.00645 sq ft
of holes 2
Q_{max(ed)} = 0.111 cfs (0.62 x A_{actual} x (32.2 x 2 x h_{max})^{0.5})

Extra Hole(s) are Required
h_{max} = 1.93 ft Z₁₀₀ - Z_{ed}
Hole size 3.0 inch
Hole Area = 0.049 sq ft
Hole number 1.00
Q_{max100} 0.339 cfs
Q_{act} = 0.450 cfs
*The actual release rate during the 100-year storm is less than the allowable release rate

Outlet Pipe Design
Q_{act} = 6.06 cfs Q10
Assume the outlet is 12" Dia RCP pipe:
Pipe Size = 12 in
n = 0.013
Area = 0.785 ft²
R = 0.25 ft
min. slope 0.0028 %
Use 12" concrete pipe with the slope of 0.32%

Determine Storm Water Runoff Treatment Structure:
Q_{act} = 6.06 cfs Q10
Use ADS Barracuda Model 58

JING-JIN STORMWATER CONTRIBUTION TO EXISTING 24" STORM PIPE (CONTRIBUTION FROM THE AREA OF THE PROPOSED IMPROVEMENTS)					
PRE-DEVELOPMENT					
Cover	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient	C x A
PAVING	HA	13,900.00	0.319	0.95	0.303
BUILDING	HA	0.00	0.000	0.95	0.000
Green Space*	41B	107,189.00	2.461	0.15	0.369
				Total C x A	0.672
				Tributary Area	2.780
				Weighted C	0.242
*Soil types 41B and 41C are per the USGS National Engineering Survey. All three soil types belong to Hydrologic Soil Group A and typically exist in low or no proposed slope < 4%.					
ACTUAL DISCHARGE, Q _{act} = 2.616 cfs Q _{act} - C1A					
POST-DEVELOPMENT					
Cover	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient	C x A
PAVING	HA	15,288.00	0.351	0.95	0.333
Green Space*	41B	4,371.00	0.100	0.15	0.015
				Total C x A	0.348
				Tributary Area	0.451
				Weighted C	0.772
*Soil types 41B and 41C are per the USGS National Engineering Survey. Both soil types belong to Hydrologic Soil Group A and typically exist in low or no proposed slope < 4%.					
ACTUAL DISCHARGE, Q _{act} = 1.365 cfs Q _{act} - C1A					
Therefore the existing 24" storm sewer pipe has enough pipe capacity.					
SIZING A MANUFACTURED TREATMENT STRUCTURE FOR THE EXISTING OUTFLOW.					
A treatment structure calculated based on the full pipe capacity of the existing 24" pipe flow of 7.9 cfs.					
Therefore use KSI 1500-60-24 structure					

KSI EFFICIENCY WORKSHEET
Series 1500 SWTC
(Based on 75 micron particle size)

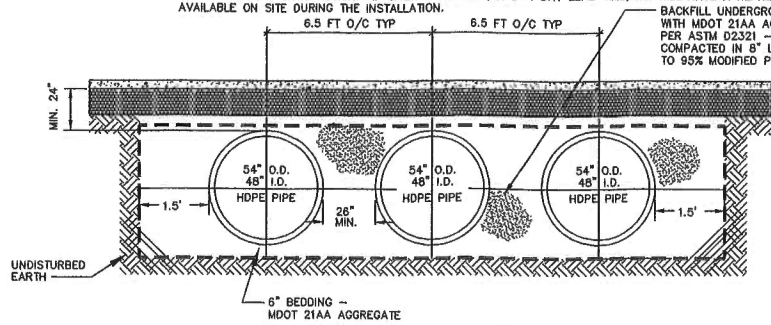
State: MI	Project: Jing-Jin Farmington Hills
NCDC Station: Detroit City Airport	
Data Range: 5.5 yrs of 15 min. precipitation data	
Site Area (acres):	2.23
Runoff Coeff:	0.74
Desired Minimum Removal Efficiency:	80%
KSI Model:	1500
Net Annual TSS Removal Eff. %:	86.25
Oil/Floatables Storage Capacity (gallons)	
Sediment Storage Capacity (cu. Yds)	

Rainfall Intensity (in./hr.)	Operating Rate (cfs)	Total Rainfall (%)	Removal Efficiency (%)	Relative Efficiency (%)
0.080	0.1320	34.40	97.49	33.54
0.160	0.2640	18.20	95.02	17.29
0.240	0.3960	9.40	92.80	8.70
0.320	0.5281	5.70	90.23	5.14
0.400	0.6601	3.30	87.90	2.90
0.480	0.7921	3.10	85.62	2.65
0.560	0.9241	2.20	83.39	1.83
0.640	1.0561	3.10	81.20	2.62
0.720	1.1881	2.10	79.05	1.66
0.800	1.3202	1.60	76.96	1.23
0.880	1.4522	2.00	74.91	1.50
0.960	1.5842	1.00	72.90	0.73
1.040	1.7162	1.50	70.94	1.06
1.120	1.8482	1.20	69.03	0.83
1.200	1.9802	1.30	67.16	0.87
1.280	2.1123	1.10	65.34	0.72
1.360	2.2443	0.90	63.67	0.57
1.440	2.3763	0.70	61.84	0.43
1.520	2.5083	0.70	60.16	0.42
1.600	2.6403	0.30	58.52	0.18
2.000	3.3604	2.00	51.03	1.02
2.400	3.9605	0.80	44.69	0.36
2.800	4.6206	0.20	39.50	0.08

Note: Removal efficiency is calculated based on field test results on the 1500 Unit for a 75 micron particle size. Equation of a best fit curve through the data is shown below.
 $y = 1.3212x^{*2} - 19.199x + 100$
 y = removal efficiency in %
 x = operating rate (cfs)

Total
Cumulative
Rainfall % = 98.80
Net
Annual % = 86.25

INSTALLATION NOTE:
HDPE UNDERGROUND DETENTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.
CARE SHOULD BE EXERCISED WITH CONSTRUCTION EQUIPMENT DURING INSTALLATION TO PROTECT THE SYSTEM FROM DAMAGE DUE TO POINT AND IMPACT LOADING. USE A LARGE EXCAVATOR TO PLACE STONE BETWEEN AND ABOVE THE PIPE IS PREFERABLE. COMPACTION OF THE 21AA STONE IN 8 INCH LIFTS TO 6 INCHES ABOVE PIPE. USE A VIBRATORY COMPACTOR, NOT A HOE PACK.
PLACE THE REMAINING 21AA STONE USING A TRACKED PIECE OF EQUIPMENT (DOZER) OR CONTINUE USING THE LARGE EQUIP. DESCRIBED ABOVE. DO NOT USE RUBBER TIED EQUIP.
ONCE THE SYSTEM IS INSTALLED, PLACE AN ORANGE SAFETY FENCE 4-5 FT HIGH W/ TEE POST, AROUND THE SYSTEM. PLACE FENCE 5 FT BEYOND GRID FOOTPRINT. ANY DAMAGE TO THE SYSTEM AS A RESULT OF NOT FOLLOWING THESE INSTRUCTIONS AND THE BLUEPRINT DETAILS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR THE SYSTEM TO KSI'S SATISFACTION. IF GIVEN IN WRITING, A 3-4 DAY LEAD TIME, KSI WILL HAVE A REPRESENTATIVE AVAILABLE ON SITE DURING THE INSTALLATION.



- NOTES:
- HDPE PIPE & FITTINGS SHALL CONFORM TO AASHTO M-294, TYPE S, LATEST EDITION
 - INSTALL UNDERGROUND DETENTION SYSTEM IN ACCORDANCE WITH ASTM D 2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE OR SEWER AND OTHER GRAVITY FLOW APPLICATIONS"
 - MEASURES SHALL BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL.

TYPICAL CROSS SECTION FOR 48" HDPE SOLID UNDERGROUND DETENTION SYSTEM

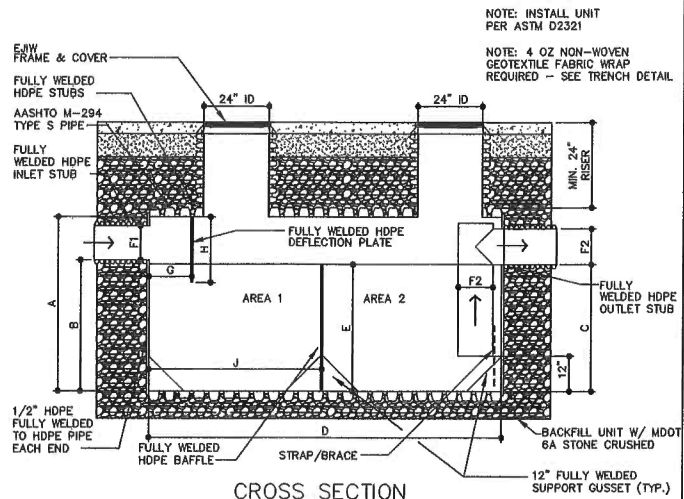
NO SCALE

**DESIGN ENGINEER TO DETERMINE IF SITE CONDITIONS REQUIRE THE USE OF NON WOVEN FABRIC OR GEOTEXTILE

NOTE:
HDPE PIPE MANUFACTURED
PER AASHTO M294, TYPE S, LATEST EDITION
UNDERGROUND DETENTION SYSTEM DISTRIBUTED BY
KENNEDY SOLUTIONS INC. 800-699-4046

DESIGN BY: AG / RK	REV. DATE: 12-31-21	2 OF 4
MANUF. APPROVAL BY: SCALE: NTS	SHEET NO.	
DRAWING NO. 48 UGDS CROSS SECTION v1		

STORM WATER TREATMENT CHAMBER
KSI SERIES 1500 HDPE CHAMBER



STORM WATER TREATMENT CHAMBER DIMENSIONS AND CAPACITIES

MODEL NO.	A	B	C	D	E	F1	F2	G	H	J	AREA 1	AREA 2
1500-60-24	60"	33"	32"	179"	32"	24"	24"	12"	30"	90"	79.1 CF	166 CF

DESIGN BY: AG / RK	REV. DATE: 8-22-21	1 OF 1
MANUF. APPROVAL BY: SCALE: NTS	SHEET NO.	
DRAWING NO. SERIES 1500 SWTC v8.1.21		



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5476 Vivian Lane
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PROPOSED BUILDING
ADDITION

Jing-Jin Electric North
America LLC
34700 Grand River Ave.
Farmington Hills, MI 48335

SEAL



DETENTION &
TREATMENT
STRUCTURE
DETAILS

PROJECT LOCATION
34700 Grand River Ave.
City of Farmington Hills,
Oakland County, MI 48335



REVISIONS

02-18-2022 SITE PLAN SUBMITTAL

Desiged by: Drawn by:

A.O. S.D.M.

Approved by: Date:

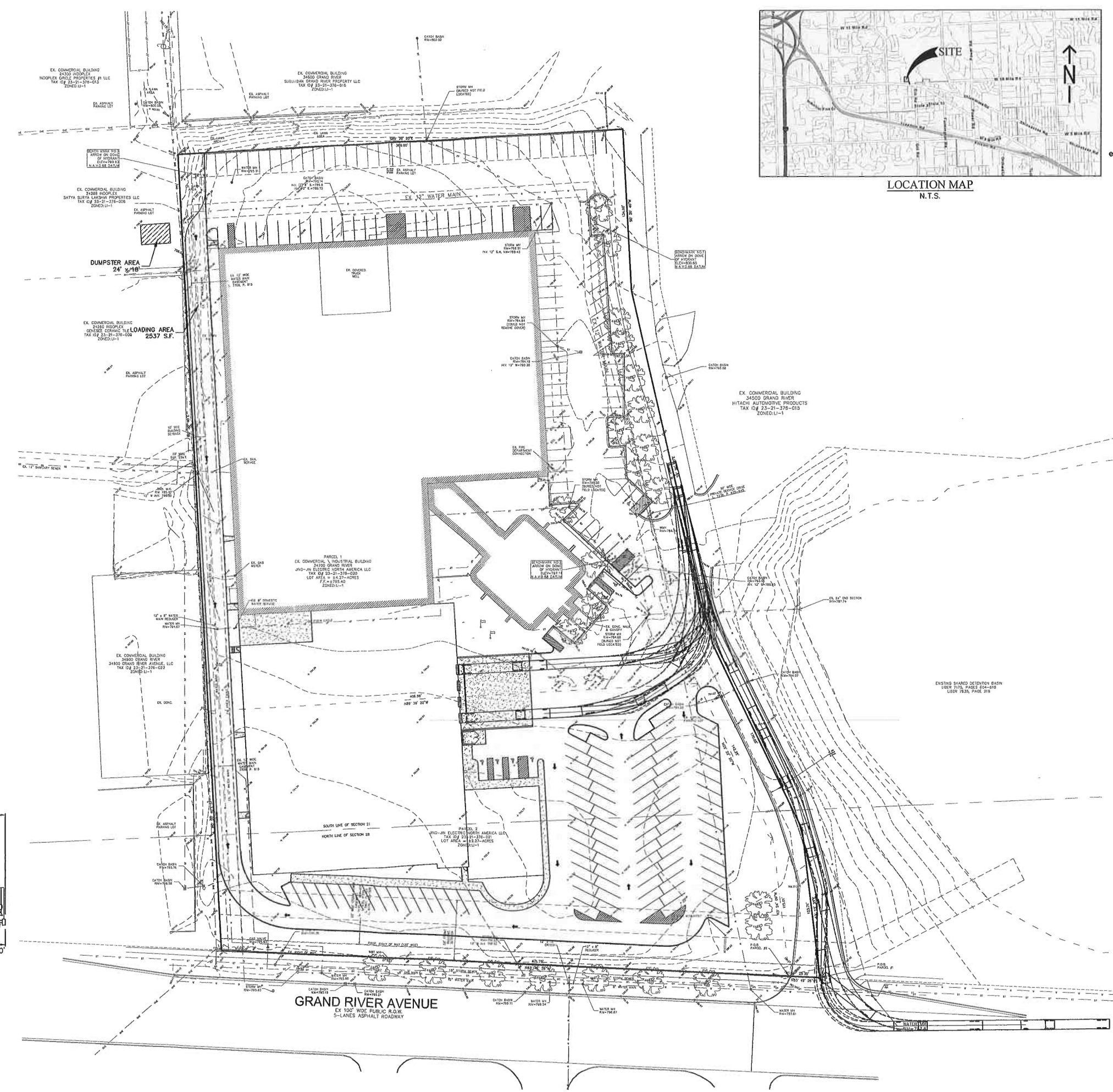
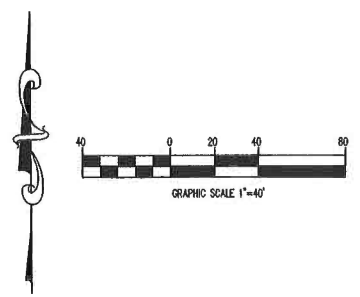
A.O. 02-18-2022

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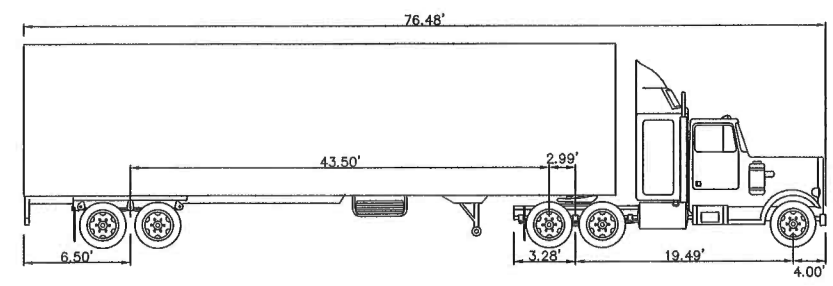
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Job No.: Sheet:

1347 SP-4

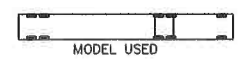


LOCATION MAP
N.T.S.



WB-65 INTERSTATE TRUCK DETAILS
N.T.S.

LOCK TO LOCK TIME = 7 SECONDS
MAX. WHEEL TURNING ANGLE (1ST SEGMENT) = 28.4°
MAX. ANGLE BETWEEN SEGMENTS = 70°



--- WHEEL TRACK LINE
--- BODY SWEEP LINE
--- DIRECTION OF TRAVEL



Orman Engineering, LLC
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email: alex@ormanengineering.com

PROJECT
PROPOSED BUILDING
ADDITION

CLIENT
Jing-Jin Electric North
America LLC
34700 Grand River Ave.
Farmington Hills, MI 48335

SEAL

SHEET
WB-65 TRUCK
MOVEMENT PLAN

PROJECT LOCATION
34700 Grand River Ave.
City of Farmington Hills,
Oakland County, MI 48335



REVISIONS	

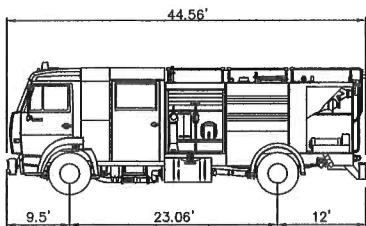
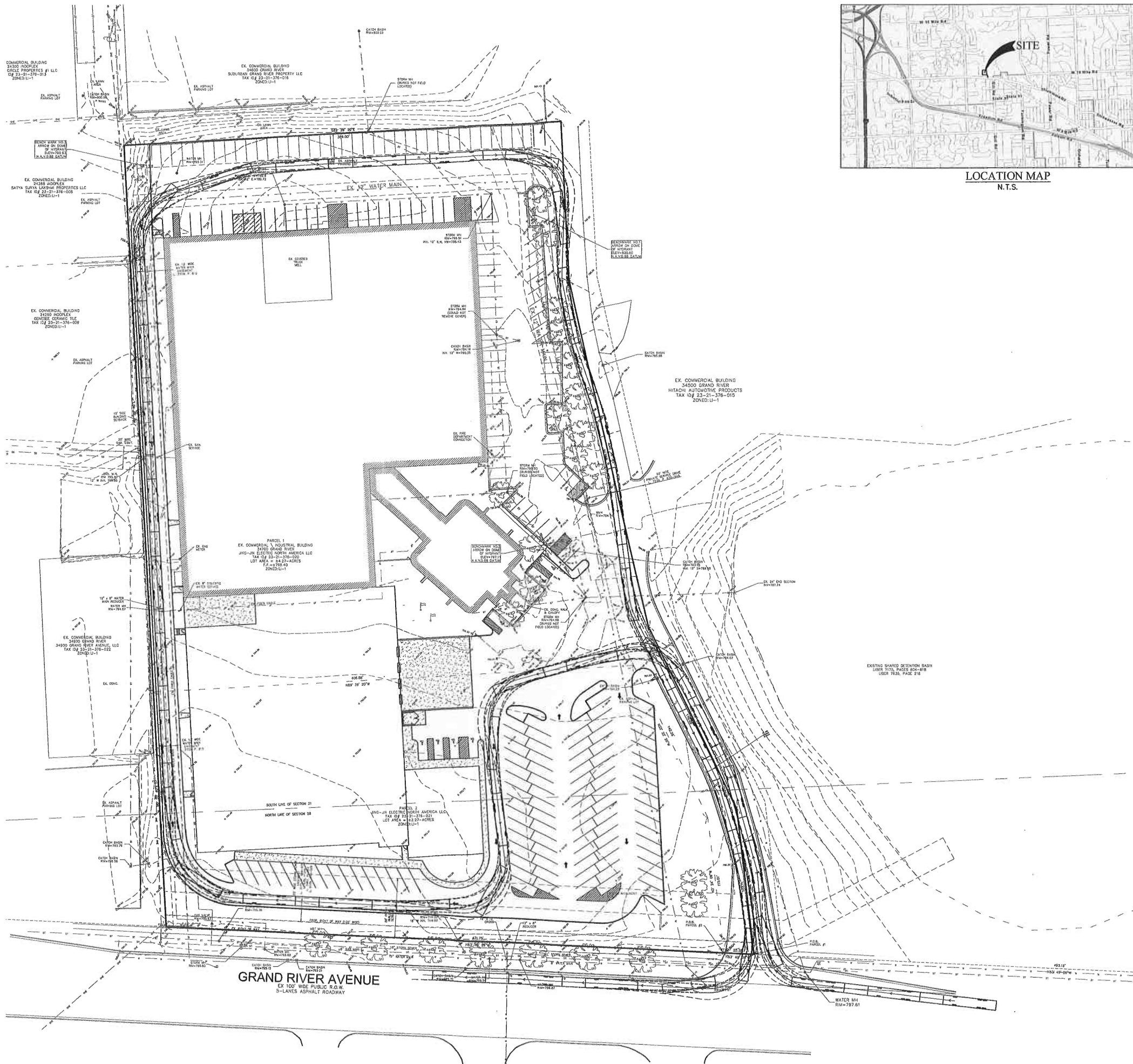
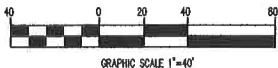
02-18-2022 SITE PLAN SUBMITTAL

Designed by: A.O. Drawn by: S.D.M.

Approved by: A.O. Date: 02-18-2022

Scale: 1" = 40'

Job No.: Sheet



PIERCE QUANTUM PUMPER FIRE TRUCK
feet

Width :8.00 Lock to Lock Time :6.0
Track :8.00 Steering Angle :40.0

PUMPER FIRE TRUCK
NOT TO SCALE

PIERCE PUMPER TRUCK TEMPLATE USED

--- WHEEL TRACK LINE
--- BODY SWEEP LINE
--- DIRECTION OF TRAVEL



LOCATION MAP
N.T.S.



Orman Engineering, LLC
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email: alex@ormanengineering.com

PROJECT
PROPOSED BUILDING
ADDITION

CLIENT
Jing-Jin Electric North
America LLC
34700 Grand River Ave.
Farmington Hills, MI 48335

SEAL

SHEET
FIRE TRUCK
MOVEMENT PLAN

PROJECT LOCATION
34700 Grand River Ave.
City of Farmington Hills,
Oakland County, MI 48335



Know what's below
Call before you dig.

REVISIONS

02-18-2022 SITE PLAN SUBMITTAL

Date Description

Designed by: Drawn by:

A.O. S.D.M.

Approved by: Date:

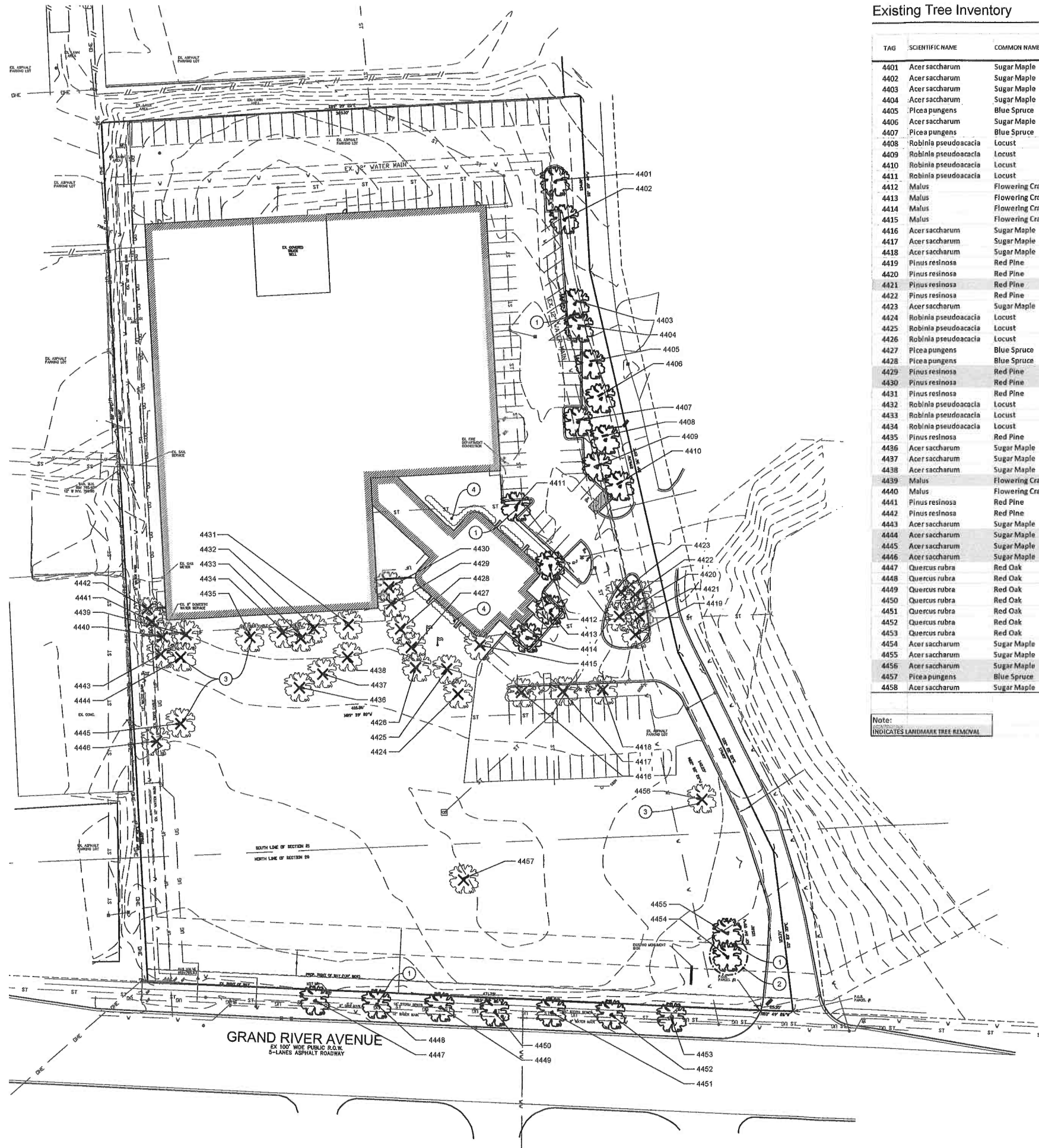
A.O. 02-18-2022

Scale:

1" = 40'

Job No.: Sheet:

1347 SP-6



Existing Tree Inventory

TAG	SCIENTIFIC NAME	COMMON NAME	DBH	CONDITION	STATUS	CALIPER REPLACEMENT REQUIRED
4401	Acer saccharum	Sugar Maple	14	Good	Preserve	
4402	Acer saccharum	Sugar Maple	13	Good	Preserve	
4403	Acer saccharum	Sugar Maple	20	Good	Preserve	
4404	Acer saccharum	Sugar Maple	14	Good	Preserve	
4405	Picea pungens	Blue Spruce	17	Fair	Preserve	
4406	Acer saccharum	Sugar Maple	25,22	Good	Preserve	
4407	Picea pungens	Blue Spruce	20	Fair	Preserve	
4408	Robinia pseudoacacia	Locust	22	Good	Preserve	
4409	Robinia pseudoacacia	Locust	18	Good	Preserve	
4410	Robinia pseudoacacia	Locust	18	Good	Preserve	
4411	Robinia pseudoacacia	Locust	20	Good	Preserve	
4412	Malus	Flowering Crabapple	8	Good	Preserve	
4413	Malus	Flowering Crabapple	8	Good	Preserve	
4414	Malus	Flowering Crabapple	8	Good	Preserve	
4415	Malus	Flowering Crabapple	8	Good	TO BE REMOVED	3
4416	Acer saccharum	Sugar Maple	8	Good	TO BE REMOVED	3
4417	Acer saccharum	Sugar Maple	10	Good	TO BE REMOVED	3
4418	Acer saccharum	Sugar Maple	11	Good	TO BE REMOVED	3
4419	Pinus resinosa	Red Pine	13	Fair	TO BE REMOVED	3
4420	Pinus resinosa	Red Pine	13	Fair	TO BE REMOVED	3
4421	Pinus resinosa	Red Pine	20	Fair	TO BE REMOVED	5
4422	Pinus resinosa	Red Pine	11	Fair	TO BE REMOVED	3
4423	Acer saccharum	Sugar Maple	9	Good	TO BE REMOVED	3
4424	Robinia pseudoacacia	Locust	22	Good	TO BE REMOVED	3
4425	Robinia pseudoacacia	Locust	19	Good	TO BE REMOVED	3
4426	Robinia pseudoacacia	Locust	17	Good	Preserve	
4427	Picea pungens	Blue Spruce	10	Fair	TO BE REMOVED	3
4428	Picea pungens	Blue Spruce	14	Fair	TO BE REMOVED	3
4429	Pinus resinosa	Red Pine	24	Fair	TO BE REMOVED	6
4430	Pinus resinosa	Red Pine	20	Fair	TO BE REMOVED	5
4431	Pinus resinosa	Red Pine	11	Fair	TO BE REMOVED	3
4432	Robinia pseudoacacia	Locust	18	Good	TO BE REMOVED	3
4433	Robinia pseudoacacia	Locust	18	Good	TO BE REMOVED	3
4434	Robinia pseudoacacia	Locust	19	Good	TO BE REMOVED	3
4435	Pinus resinosa	Red Pine	15	Fair	TO BE REMOVED	3
4436	Acer saccharum	Sugar Maple	8	Good	TO BE REMOVED	3
4437	Acer saccharum	Sugar Maple	16	Good	TO BE REMOVED	3
4438	Acer saccharum	Sugar Maple	17	Good	TO BE REMOVED	3
4439	Malus	Flowering Crabapple	6,6	Good	TO BE REMOVED	3
4440	Malus	Flowering Crabapple	7	Good	TO BE REMOVED	3
4441	Pinus resinosa	Red Pine	9	Fair	TO BE REMOVED	3
4442	Pinus resinosa	Red Pine	12	Good	TO BE REMOVED	3
4443	Acer saccharum	Sugar Maple	9	Good	TO BE REMOVED	3
4444	Acer saccharum	Sugar Maple	19	Good	TO BE REMOVED	4.75
4445	Acer saccharum	Sugar Maple	52	Good	TO BE REMOVED	13
4446	Acer saccharum	Sugar Maple	26,16	Good	TO BE REMOVED	10.5
4447	Quercus rubra	Red Oak	13	Good	Preserve	
4448	Quercus rubra	Red Oak	12	Good	Preserve	
4449	Quercus rubra	Red Oak	12	Good	Preserve	
4450	Quercus rubra	Red Oak	13	Good	Preserve	
4451	Quercus rubra	Red Oak	15	Good	Preserve	
4452	Quercus rubra	Red Oak	16	Good	Preserve	
4453	Quercus rubra	Red Oak	16	Good	Preserve	
4454	Acer saccharum	Sugar Maple	24	Good	Preserve	
4455	Acer saccharum	Sugar Maple	26	Good	Preserve	
4456	Acer saccharum	Sugar Maple	26	Good	TO BE REMOVED	6.5
4457	Picea pungens	Blue Spruce	25	Fair	TO BE REMOVED	6.25
4458	Acer saccharum	Sugar Maple	28	Good	Preserve	
TOTAL TREES ON SITE:			58			
TOTAL TREES TO BE REMOVED:			28			
TOTAL CAL. IN REPLACEMENT REQUIRED:					132	
TOTAL CAL. IN REPLACEMENT PROVIDED:					132	

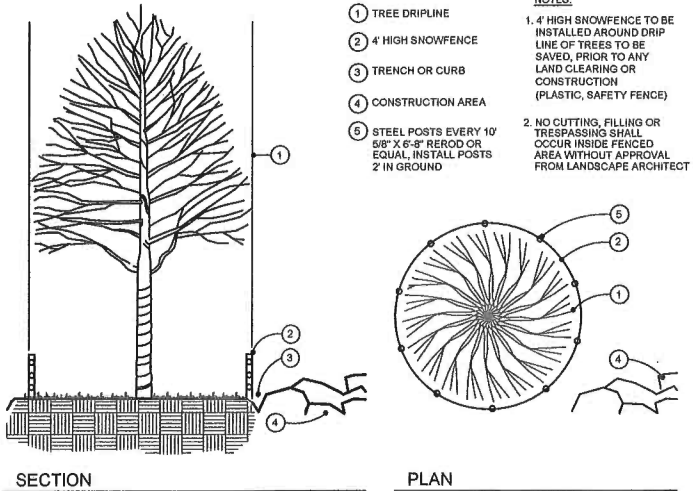
Note:
INDICATES LANDMARK TREE REMOVAL

Note Key

- 1 EXISTING TREE TO BE PRESERVED. PROTECT AS REQUIRED, SEE TYP. DETAIL.
- 2 TREE PROTECTION FENCE, SEE TYP. DETAIL.
- 3 EXISTING TREE TO BE REMOVED.
- 4 EXISTING PLANTINGS TO BE PRESERVED. PROTECT AS REQUIRED.

NOTES:

1. A TREE REMOVAL PERMIT MUST BE OBTAINED FROM THE PLANNING OFFICE PRIOR TO ALL TREE REMOVAL ACTIVITY INVOLVING TREES SIX (6) INCHES OR MORE DBH IN ACCORDANCE WITH THE CITY OF FARMINGTON HILLS ZONING CHAPTER 34-5.18.



1 TREE PROTECTION DETAIL
NOT TO SCALE

- NOTES:
- 1. 4' HIGH SNOWFENCE TO BE INSTALLED AROUND DRIP LINE OF TREES TO BE SAVED, PRIOR TO ANY LAND CLEARING OR CONSTRUCTION (PLASTIC, SAFETY FENCE)
 - 2. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE FENCED AREA WITHOUT APPROVAL FROM LANDSCAPE ARCHITECT



RUSSELL DESIGN
LANDSCAPE ARCHITECTURE
DESIGN ■ ■ ■ PLANNING
114 Rayson Street Suite 2A Northville, MI 48167 P. 248.374.2222

Project:
Jing Jin NA Electric Expansion
34700 Grand River Ave.
Farmington Hills, MI 48335

Client:
Chester Stempien Associates
29895 Greenfield Rd.
Southfield, MI 48076

Job Number: S36-211
Drawn: JBG
Checked: MRR
Date: 12.08.21
Scale: 1" = 40' - 0'

Issued:
12.14.21 OWNER REVIEW
12.20.21 SITE PLAN APPROVAL
02.18.22 SITE PLAN APPROVAL

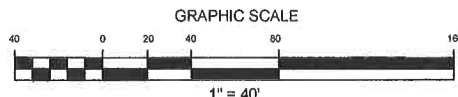
PRELIMINARY
NOT FOR CONSTRUCTION
Existing Tree Inventory

Sheet Number: L-1
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SURVEY PROVIDED BY:
Reichert Surveying Inc.
140 Flumerfelt Lane
Rochester, MI 48306
248.651.0592

JOB NUMBER: 20-047
DATED: April 16, 2020

3 FULL WORKING DAYS
BEFORE YOU DIG CALL



MATCHLINE: SEE SHEET L-3

PARCEL 1
EX. COMMERCIAL / INDUSTRIAL BUILDING
34700 GRAND RIVER
JING-JIN ELECTRIC NORTH AMERICA LLC
TAX ID# 23-21-376-020
LOT AREA = ±4.27-ACRES
F.F. = ±796.40
ZONED: LI-1

PROPOSED BUILDING ADDITION
F.F. 796.40

CATCH BASIN
RIM=795.61
INV. 12" NE=787.00

PARCEL 2
JING-JIN ELECTRIC NORTH AMERICA LLC
TAX ID# 23-21-376-021
LOT AREA = ±4.27-ACRES
ZONED: LI-1

GRAND RIVER AVENUE
EX 100' WIDE PUBLIC R.O.W.
5-LANES ASPHALT ROADWAY

Note Key

- EXISTING TREE TO BE REMOVED AS REQUIRED, SEE TYPE
- EXISTING PLANTINGS TO BE MAINTAINED
- DECIDUOUS TREE PLANTING
- EVERGREEN TREE PLANTING DETAIL
- HEDGE PLANTINGS, SEE DETAIL
- SHRUB PLANTINGS, SEE DETAIL
- PERENNIAL PLANTINGS
- SODDED LAWN ON 8" DRAINAGE BED
- METAL EDGING BETWEEN LANDSCAPE BEDS
- STONE MULCH MAINTENANCE DETAIL
- EXISTING MONUMENT SIGN
- CONCRETE WALK, SEE DETAIL
- 25FT CORNER CLEARANCE
- EXISTING LAWN TO REMAIN AS REQUIRED.

Site Landscaping

PARKING LOT LANDSCAPING

TREES
108,270 SF PARKING LOT
39 LARGE TREES REQUIRED
39 TOTAL PROVIDED
(23 PROPOSED)

LANDSCAPE AREA
39 TREES x 180 SF = 7,020 SF LANDSCAPE
9,145 SF PROVIDED

SCREENING, GRAND RIVER AVENUE
372 LF SCREENING REQUIRED
372+ LF SOLID PROVIDED

TREE REPLACEMENT REQUIREMENTS
(SEE SHEET L-2 FOR FULL DETAILS)
132 CALIPER INCHES
132 CALIPER INCHES
(12) 4"-CAL. DECIDUOUS

Symbols

- Circle with crosshair: Tree
- Circle with dot: Shrub
- Circle with horizontal lines: Hedge
- Circle with vertical lines: Perennial
- Circle with diagonal lines: Sodded Lawn
- Circle with wavy lines: Stone Mulch
- Circle with solid black: Existing Monument Sign
- Circle with dashed border: Concrete Walk
- Circle with diagonal hatching: 25ft Corner Clearance
- Circle with solid black: Existing Lawn

GRAPHIC SCALE
1" = 20'

NORTH

- ① EXISTING TREE TO BE PRESERVED. PROTECT AS REQUIRED, SEE TYP. DETAIL.
- ② EXISTING PLANTINGS TO REMAIN.
- ③ DECIDUOUS TREE PLANTING, SEE TYP. DETAIL.
- ④ EVERGREEN TREE PLANTING, SEE TYP. DETAIL.
- ⑤ HEDGE PLANTINGS, SEE TYP. DETAIL.
- ⑥ SHRUB PLANTINGS, SEE TYP. DETAIL.
- ⑦ PERENNIAL PLANTINGS, SEE TYP. DETAIL.
- ⑧ SODDED LAWN ON 6" DEPTH TOPSOIL, TYP.
- ⑨ METAL EDGING BETWEEN LAWN AND LANDSCAPE BED.
- ⑩ STONE MULCH MAINTENANCE STRIP, SEE TYP. DETAIL.
- ⑪ EXISTING MONUMENT SIGN.
- ⑫ CONCRETE WALK, SEE CIVIL DETAILS.
- ⑬ 25FT CORNER CLEARANCE.
- ⑭ EXISTING LAWN TO REMAIN. REPAIR/REPLACE AS REQUIRED.

1. SEE SHEET L-4 FOR PLANT LIST.
2. DOUBLE SHREDDED BARK MULCH IN PLANTING BEDS AND EVERGREEN TREE BEDS. SEE TYPICAL PLANTING DETAILS FOR REQUIRED DEPTH.
3. ALL LANDSCAPED AREAS SHALL BE EXCAVATED OF ALL BUILDING MATERIAL AND DEBRIS TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES AND BACK FILLED WITH A MEDIUM TEXTURE PLANTING MIX. ALL LANDSCAPED AREAS ARE TO HAVE MINIMUM SIX (6) INCHES OF TOPSOIL AND ARE TO BE CROWNED A MINIMUM SIX (6) INCHES HIGHER THAN ADJACENT CURBS OR WALKS.
4. A TREE REMOVAL PERMIT MUST BE OBTAINED FROM THE PLANNING OFFICE PRIOR TO ALL TREE REMOVAL ACTIVITY INVOLVING TREES SIX (6) INCHES OR MORE DBH IN ACCORDANCE WITH THE CITY OF FARMINGTON HILLS ZONING CHAPTER 34-5.18.
5. NO TREES ARE TO BE PLANTED WITHIN SIX (6) FEET FROM ANY UNDERGROUND UTILITY, OR TEN (TEN) FEET FROM ANY FIRE HYDRANT.

PARKING LOT LANDSCAPE REQUIREMENTS:

TREES

108,270 SF PARKING / 2,800 = 38.6
39 LARGE TREES REQUIRED
39 TOTAL PROVIDED
(23 PROPOSED + 16 EXISTING TREES)

LANDSCAPE AREA

39 TREES x 180 SF = 7,020
7,020 SF LANDSCAPE REQUIRED
8,145 SF PROVIDED LANDSCAPE

SCREENING, GRAND RIVER AVE

372 LF SCREENING REQUIRED
372+ LF SOLID HEDGE PROVIDED

Landscaping required by this ordinance shall be maintained in a healthy, neat and orderly appearance, free from refuse and debris. All unhealthy and dead plant material shall be replaced immediately, unless the season is not appropriate for replacement, in which case such plant material shall be replaced at the beginning of the next planting season. The owner shall insure perpetual and mandatory maintenance and/or replacement of vegetative plantings pursuant to the approved landscape plan.

All landscaped areas will be irrigated with an automatic irrigation system. The existing irrigation system will be restored and modified to accept proposed landscape.

(SEE SHEET L-2 FOR FULL TREE REMOVAL LIST)
132 CALIPER INCHES REPLACEMENT REQUIRED
132 CALIPER INCHES TOTAL PROVIDED
(12) 4"-CAL. DECIDUOUS + (21) 12"-HT. EVERGREEN TREES)

WOODLAND
REPLACEMENT
DECIDUOUS TREE

WOODLAND
REPLACEMENT
EVERGREEN TREE

PARKING LOT
LANDSCAPE TREE



Project: Jing Jin NA Electric Expansion
34700 Grand River Ave.
Farmington Hills, MI 48335

Client: Chester Stempien Associates
29895 Greenfield Rd.
Southfield, MI 48076

Job Number: S36-211

Drawn: JBG

Checked: MRR

Date: 12.06.21

Scale: $1" = 20' - 0"$

result:

12.14.21 OWNER REVIEW

12.20.21 SITE PLAN AFF

02.18.22 SITE PLAN APPROVAL

[illegible]

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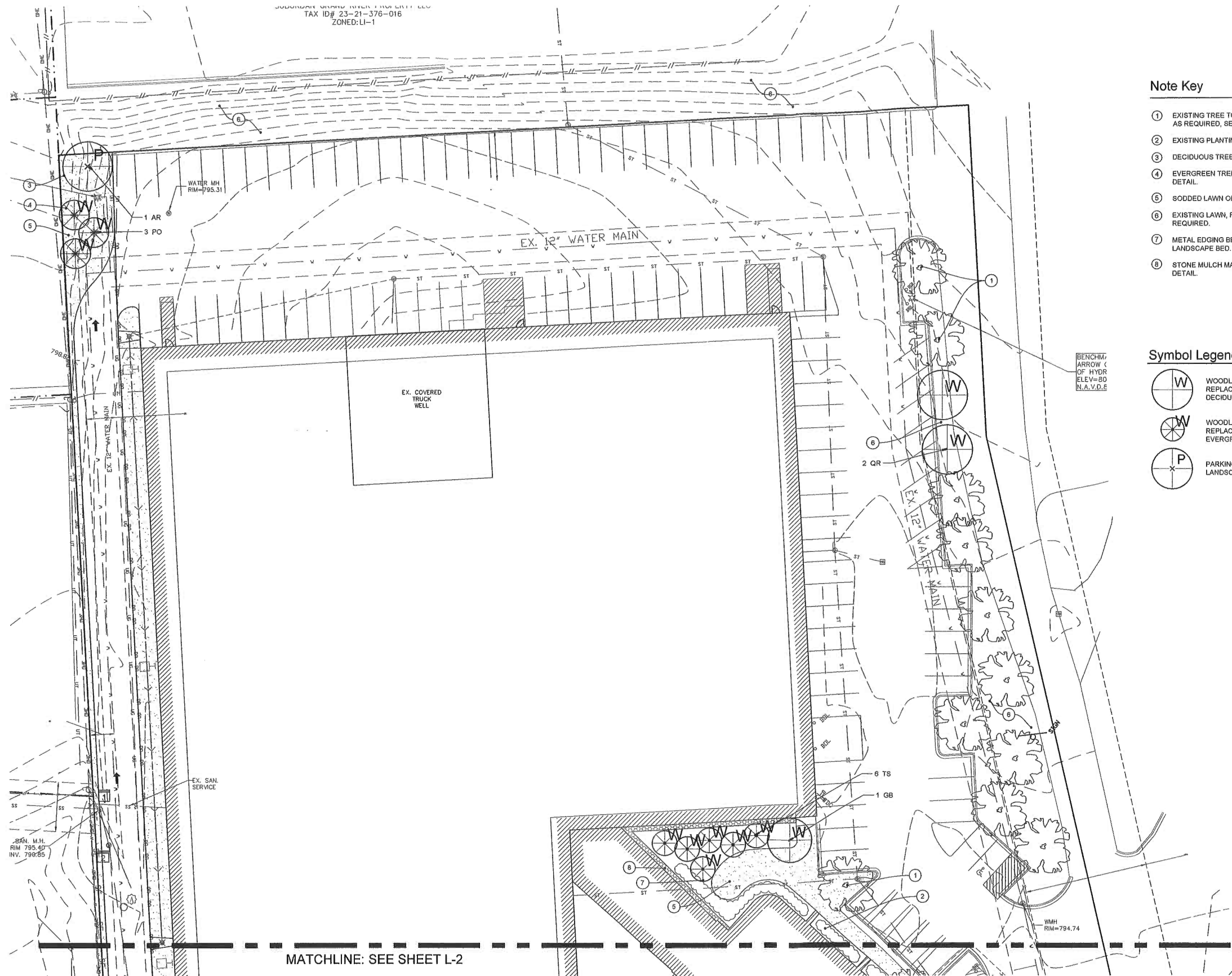
Sheet: _____

Landscape Plan

13

Sheet Number: **L-2**

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Note Key

- 1 EXISTING TREE TO BE PRESERVED. PROTECT AS REQUIRED, SEE TYP. DETAIL.
- 2 EXISTING PLANTINGS TO REMAIN.
- 3 DECIDUOUS TREE PLANTING, SEE TYP. DETAIL.
- 4 EVERGREEN TREE PLANTING, SEE TYP. DETAIL.
- 5 SODDED LAWN ON 6" DEPTH TOPSOIL, TYP.
- 6 EXISTING LAWN, REPAIR/REPLACE AS REQUIRED.
- 7 METAL EDGING BETWEEN LAWN AND LANDSCAPE BED.
- 8 STONE MULCH MAINTENANCE STRIP, SEE TYP. DETAIL.

NOTES:

- 1. SEE SHEET L-4 FOR PLANT LIST.
- 2. DOUBLE SHREDDED BARK MULCH IN PLANTING BEDS AND EVERGREEN TREE BEDS, SEE TYPICAL PLANTING DETAILS FOR REQUIRED DEPTH.
- 3. ALL LANDSCAPED AREAS SHALL BE EXCAVATED OF ALL BUILDING MATERIAL AND DEBRIS TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES AND BACK FILLED WITH A MEDIUM TEXTURE PLANTING SOIL. ALL LANDSCAPED AREAS ARE TO HAVE MINIMUM SIX (6) INCHES OF TOPSOIL AND ARE TO BE CROWNED A MINIMUM SIX (6) INCHES HIGHER THAN ADJACENT CURBS OR WALKS.
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- 5. NO TREES ARE TO BE PLANTED WITHIN SIX (6) FEET FROM ANY UNDERGROUND UTILITY, OR TEN (TEN) FEET FROM ANY FIRE HYDRANT.

Symbol Legend

- WOODLAND REPLACEMENT DECIDUOUS TREE
- WOODLAND REPLACEMENT EVERGREEN TREE
- PARKING LOT LANDSCAPE TREE



RUSSELL Design
LANDSCAPE ARCHITECTURE
DESIGN ■ ■ ■ PLANNING
114 Rayson Street Suite 2A Northville, MI 48197 P. 248.374.3222

Project:
Jing Jin NA Electric Expansion
34700 Grand River Ave.
Farmington Hills, MI 48335

Client:
Chester Stempien Associates
29895 Greenfield Rd
Southfield, MI 48076

Job Number: S36-211
Drawn: JBG
Checked: MRR
Date: 12.06.21
Scale: 1" = 20' - 0"

Issued:
12.14.21 OWNER REVIEW
12.20.21 SITE PLAN APPROVAL
02.18.22 SITE PLAN APPROVAL

**PRELIMINARY
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Sheet:
Landscape Plan

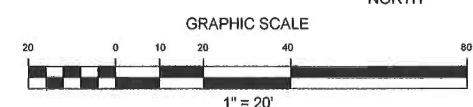
Sheet Number: **L-3**
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SURVEY PROVIDED BY:

Reichert Surveying Inc.
140 Flumerfelt Lane
Rochester, MI 48306
248.651.0592

JOB NUMBER: 20-047
DATED: April 16, 2020

**3 FULL WORKING DAYS
BEFORE YOU DIG CALL**



Planting Notes:

The Contractor shall verify all rights of way, easements, property lines and limits of work, etc. prior to commencing work.

The Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make themselves familiar with all underground utilities, pipes and structures. The Contractor shall take sole responsibility for any cost incurred of said utilities.

The Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall be immediately brought to the attention of the owner's representative and/or Landscape Architect. The Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.

Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's representative and Landscape Architect. Failure to make such discrepancies known will result in the Contractor's responsibility and liability for any changes and associated cost.

The Contractor shall be responsible for any coordination with subcontractors as required to accomplish construction installation operations.

Do not scale drawings. Refer to written dimensions only.

The Contractor shall provide and maintain positive surface drainage.

The Contractor shall be responsible for any existing materials that are damaged during construction.

See specifications, plant list and planting details for planting requirements, materials and execution.

All trees to have clay loam or clay balls - trees with sand balls shall not be accepted.

All trees to be approved by Owner's Representative and/or Landscape Architect prior to delivery to the site. Any trees delivered to the site not previously approved may be rejected and are the sole responsibility of the Contractor.

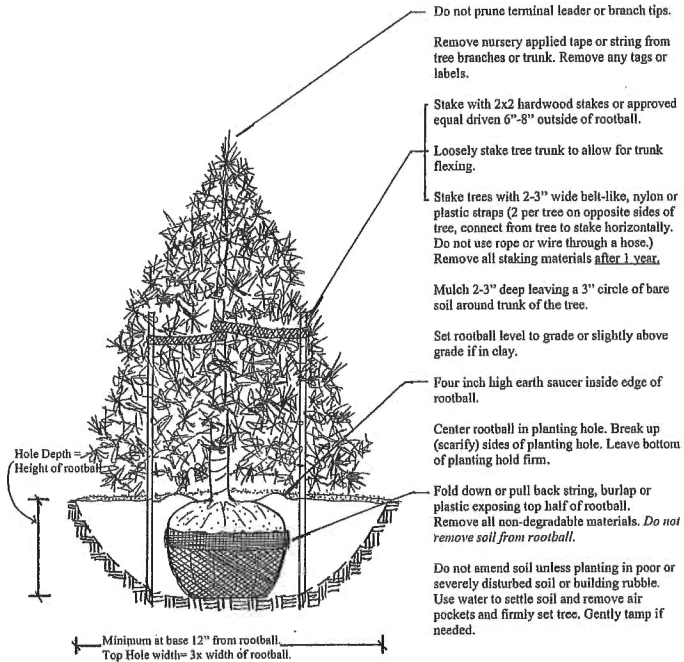
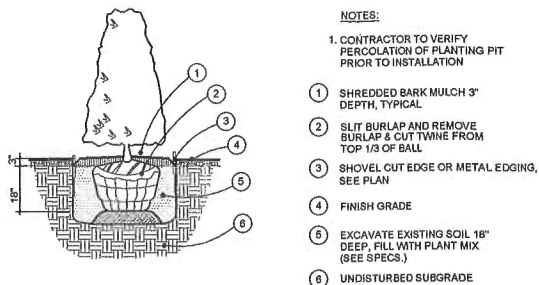
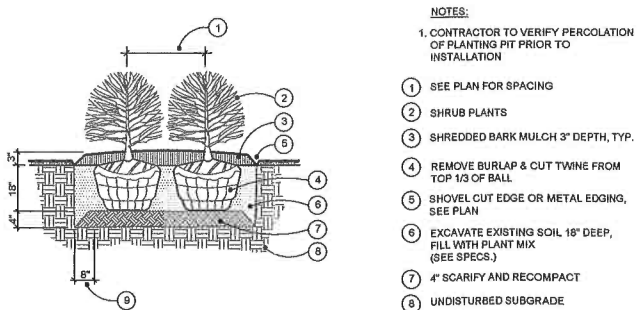
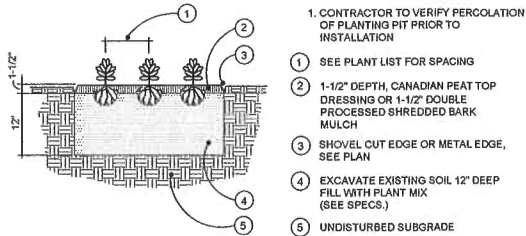
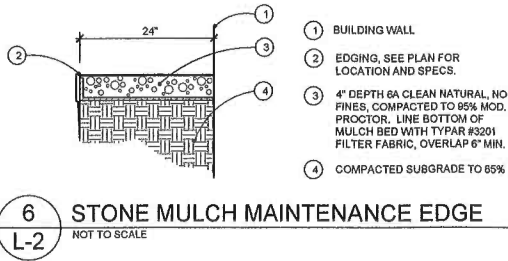
Final location of all plant material shall be subject to the approval of the Landscape Architect.

The Contractor to verify percolation of all planting pits prior to installation of plant material.

The Contractor shall place 3" depth shredded bark mulch in all planting beds, unless otherwise indicated.

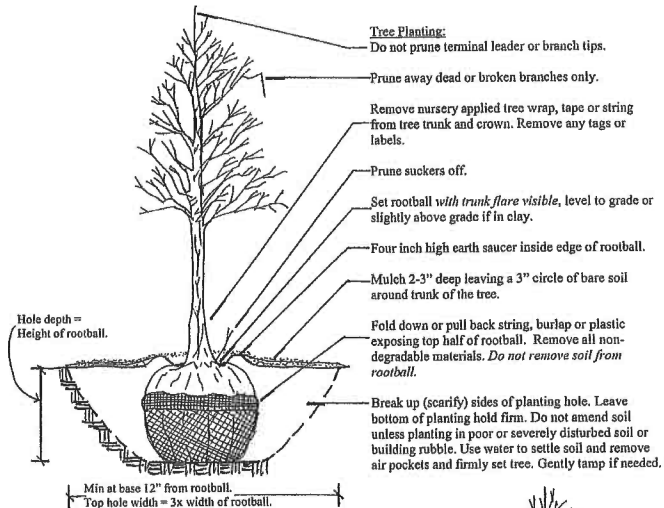
Plant List

Trees						
sym.	qty.	botanical name	common name	size	spacing	root
AR	6	Acer rubrum 'Armstrong'	Armstrong Red Maple	3" cal.	as shown	B&B
GB	5	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	4" cal.	as shown	B&B
QT	2	Gleditsia triacanthos 'Skyline'	Skyline Honeylocust	3" cal.	as shown	B&B
PO	11	Picea omarika	Serbian Spruce	12' ht.	as shown	B&B
TS	10	Thuja x 'Steeplechase'	Steeplechase Arborvitae	12' ht.	as shown	B&B
QR	7	Quercus rubra	Northern Red Oak	4" cal.	as shown	B&B
ZS	15	Zelkova serrata 'Green Vase'	Green Vase Japanese Zelkova	3" cal.	as shown	B&B
Shrubs						
sym.	qty.	botanical name	common name	size	spacing	root
CS	8	Comus sericea 'Arctic Fire'	Arctic Fire Dogwood	5 gal.	as shown	cont.
HA	11	Hydrangea arborescens 'Incrediball'	Incrediball Hydrangea	5 gal.	as shown	cont.
JS	12	Juniperus sabina 'Broadmoor'	Broadmoor Juniper	5 gal.	4' o.c.	cont.
TH	218	Taxus x media 'Hicksii'	Hicks Yew	30-36" ht.	36" o.c.	B&B
Perennials						
sym.	qty.	botanical name	common name	size	spacing	root
LM	265	Liriope muscari 'Big Blue'	Big Blue Lily-turf	1 gal.	18" o.c.	cont.
NW	40	Nepeta 'Walker's Low'	Walker's Low Catmint	1 gal.	30" o.c.	cont.



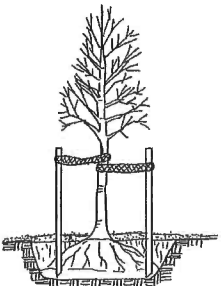
2 Evergreen Tree Planting and Staking Detail
City of Farmington Hills - January 2009

Modified from Tree Planting Details of Dr. Bonnie Appleton, Virginia Polytechnic Institute and State University and International Society of Arboriculture, Champaign Illinois



1 Deciduous Tree Planting and Staking Detail
City of Farmington Hills - January 2009

Modified from Tree Planting Details of Dr. Bonnie Appleton, Virginia Polytechnic Institute and State University



Project: **Jing Jin NA Electric Expansion**
34700 Grand River Ave.
Farmington Hills, MI 48335

Client: **Chester Stempien Associates**
29895 Greenfield Rd.
Southfield, MI 48076

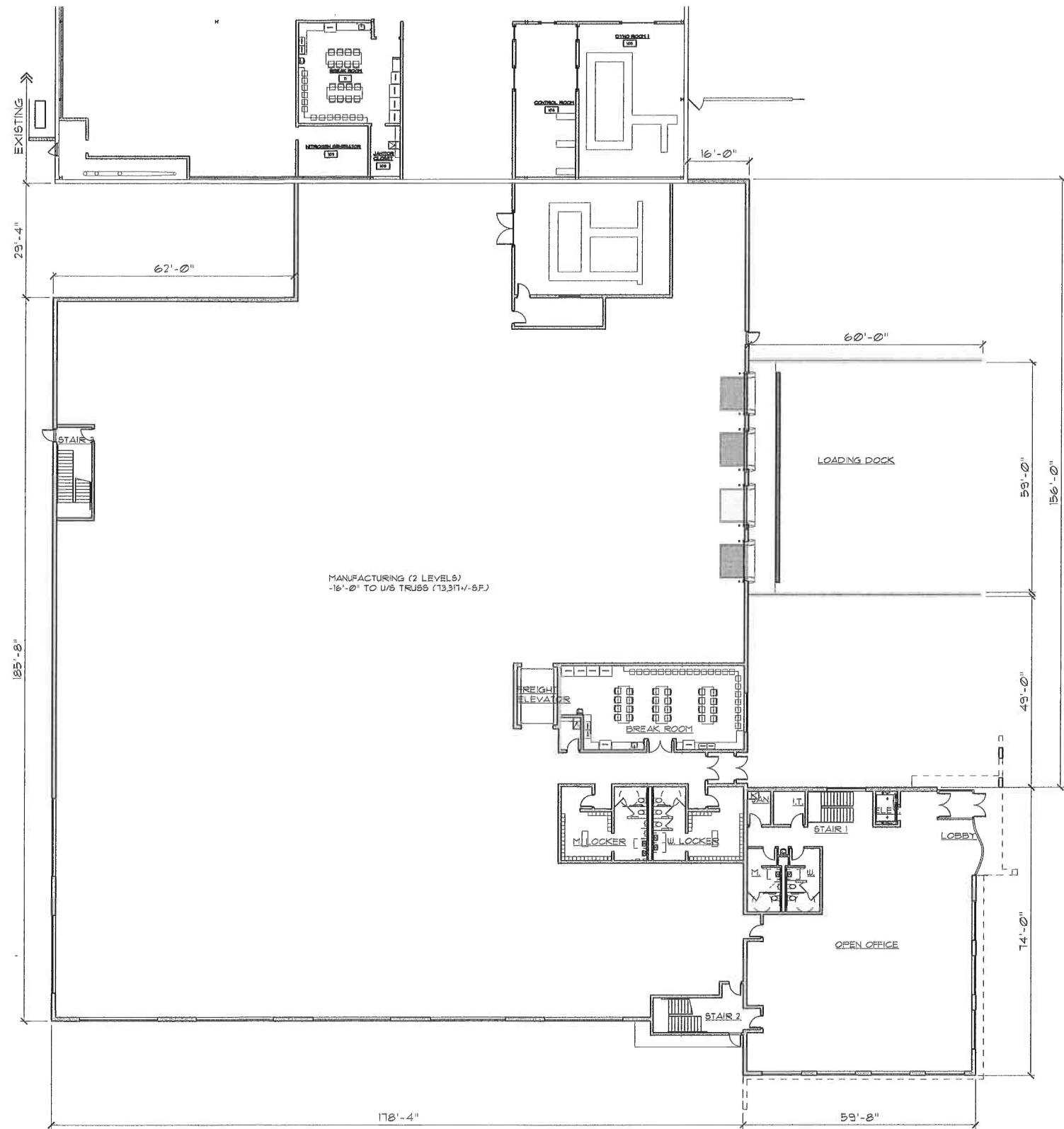
Job Number: **S36-211**
Drawn: **JBG**
Checked: **MRR**
Date: **12.06.21**
Scale: **1" = 20' - 0"**

Issued:
12.14.21 **OWNER REVIEW**
12.20.21 **SITE PLAN APPROVAL**
02.18.22 **SITE PLAN APPROVAL**

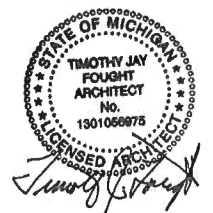
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NOT FOR CONSTRUCTION**

Sheet: **Landscape Details**

Sheet Number: **L-4**
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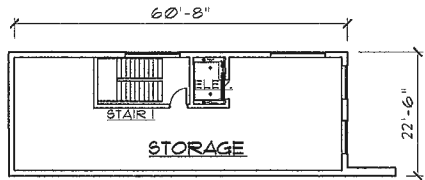


FIRST FLOOR PLAN
SCALE: 1/16"=1'-0"
NORTH

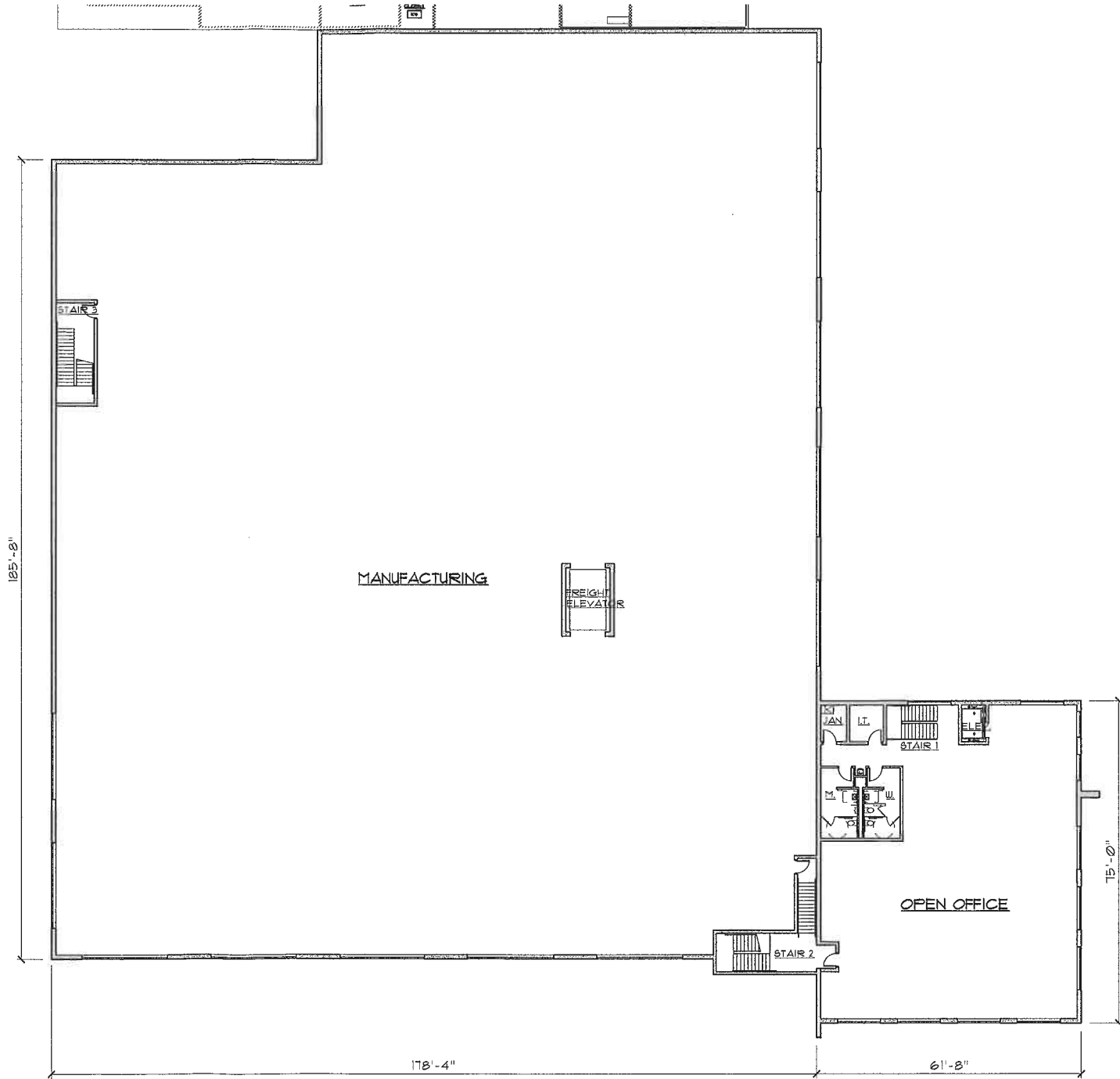


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PROJECT	JING JIN NA ELECTRIC EXPANSION
SUBJECT	FIRST FLOOR PLAN
ARCHITECTS	CHESTER STEPIEN ASSOCIATES • AIA 29895 GREENFIELD ROAD SOUTHFIELD, MICHIGAN 48076 (248) 557-2145 FAX (248) 589-2856
ISSUED:	SITE PLAN APPROVAL 02/18/2022
DESIGNED	K.P.
DRAWN	T.J.F.
APPROVED	C.R.S.
DATE	
CONTRACT	
DO NOT SCALE PRINTS - USE DIMENSIONS ONLY	
JOB NO.	T202021
SHEET	A.1
JING JIN FARMINGTON HILLS	



THIRD FLOOR PLAN
SCALE: 1/16"=1'-0"



SECOND FLOOR PLAN
SCALE: 1/16"=1'-0"



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CHESTER STEMPHEN ASSOC.

PROJECT
JING JIN NA ELECTRIC
EXPANSION
34700 GRAND RIVER AVE
FARMINGTON HILLS, MI 48335

SUBJECT
SECOND LEVEL
FLOOR PLAN

ARCHITECTS
CHESTER STEMPHEN ASSOCIATES • AIA
29955 GREENFIELD ROAD SOUTHFIELD, MICHIGAN 48076
(248) 557-2145 FAX: (248) 569-2856



ISSUED:
SITE PLAN
APPROVAL
02/19/2022

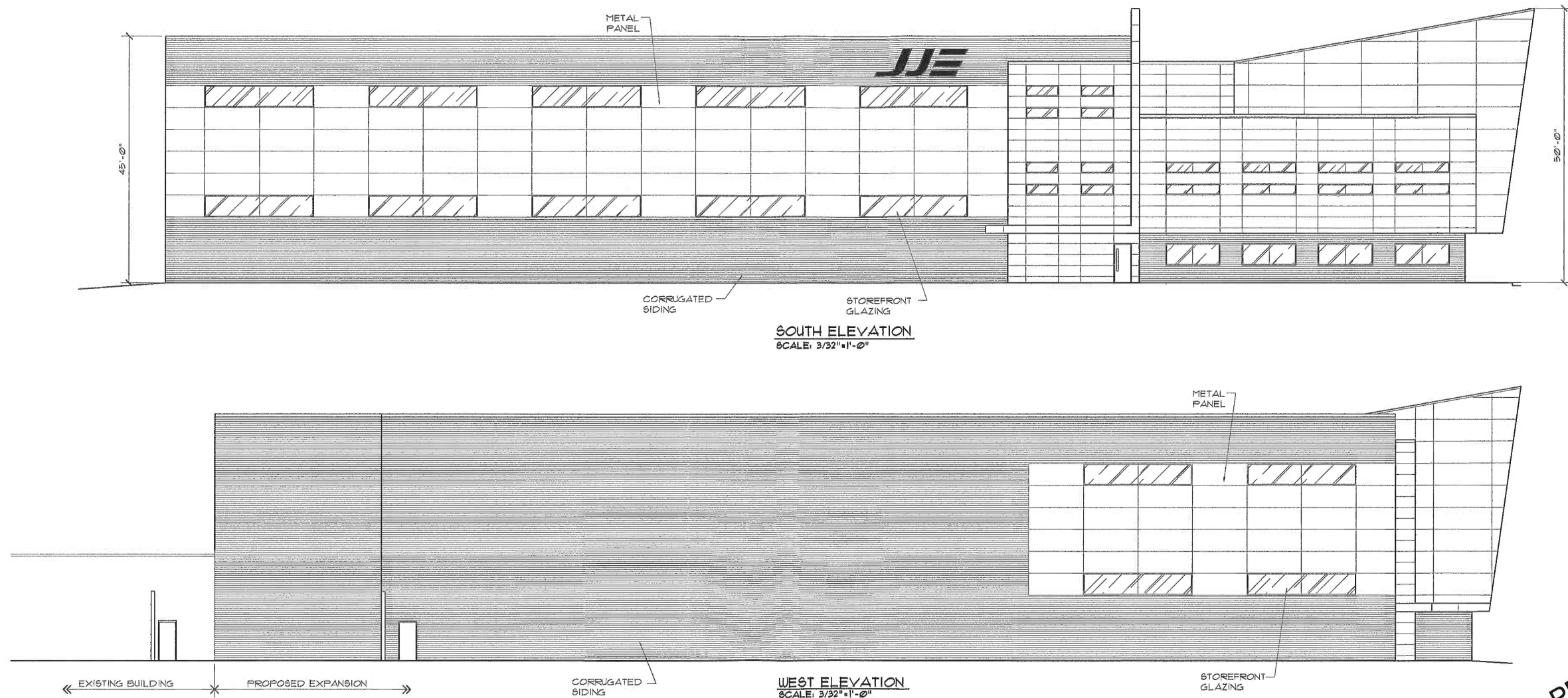
DRAWN: K.P.
CHECKED: T.J.F.
APPROVED: C.R.B.
R.D.S.
DESIGNED:

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FARMINGTON HILLS



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PROJECT
**JING JIN NA ELECTRIC
EXPANSION**
34700 GRAND RIVER AVE.
FARMINGTON HILLS, MI 48335

SUBJECT
EXTERIOR ELEVATIONS

ARCHITECTS
CHESTER STEMPEN ASSOCIATES • AIA
29895 GREENFIELD ROAD SOUTHFIELD, MICHIGAN 48076
(248) 557-2145 FAX (248) 599-2856



ISSUED:
SITE PLAN
APPROVAL
02/18/2022

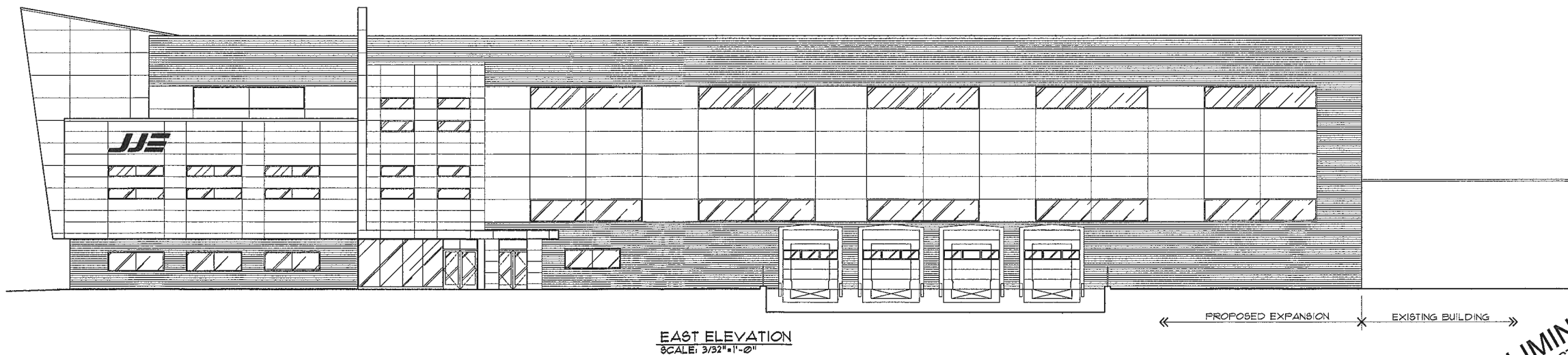
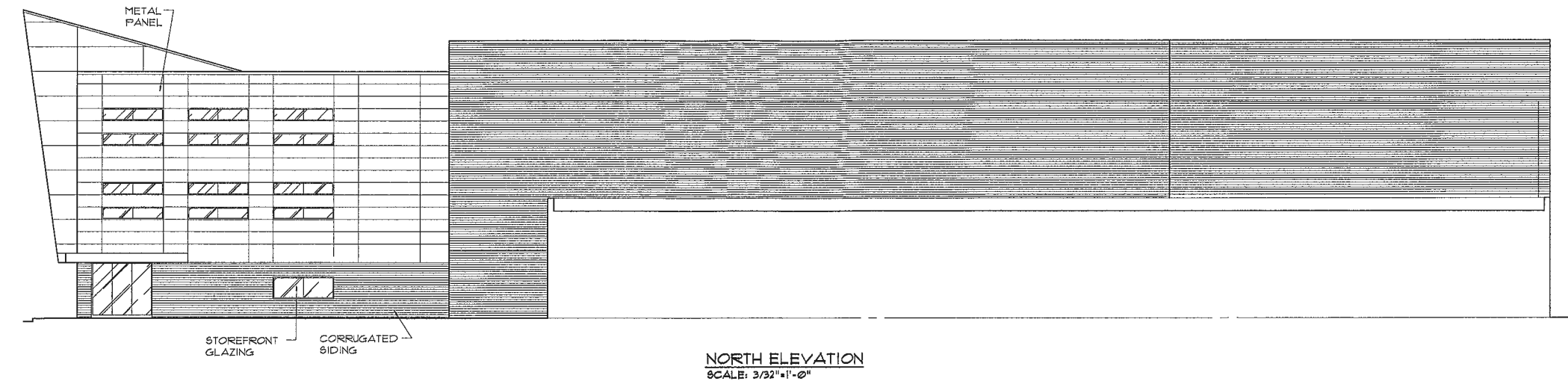
DESIGNED K.P.
DRAWN T.J.F.
APPROVED C.R.S.
CHECKED

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DIMENSIONS ONLY

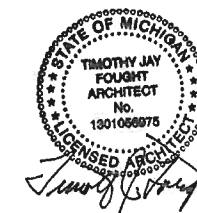
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A.3

JING JIN
FARMINGTON HILLS



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PROJECT JING JIN NA ELECTRIC EXPANSION 34700 GRAND RIVER AVE FARMINGTON HILLS, MI 48335	SUBJECT EXTERIOR ELEVATIONS
ARCHITECTS CHESTER STEMPEN ASSOCIATES • AIA 29895 GREENFIELD ROAD SOUTHELD, MICHIGAN 48076 (248) 557-2145 FAX: (248) 569-2856	
ISSUED: SITE PLAN APPROVAL 02/18/2022	
DRAWN K.P.	APPROVED T.J.F.
APPROVED C.R.S.	DRAWN C.R.S.
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JOB NO. T202021	
SHEET A.4	
JING JIN FARMINGTON HILLS	

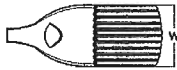


D-Series Size 1 LED Area Luminaire



Specifications

EPA:	1.01 ft ² (0.09 m ²)
Length:	33" (841 mm)
Width:	13" (330 mm)
Height H1:	7-1/2" (190 mm)
Height H2:	3-1/2" (91 mm)
Weight (max):	27 lbs (12 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.



D-Series Size 1 LED Wall Luminaire



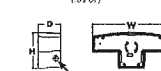
Specifications Luminaire

Width:	13-3/4" (349 mm)
Depth:	10" (254 mm)
Height:	6-3/8" (163 mm)



Back Box (BBW, ELCW)

Width:	13-3/4" (349 mm)
Depth:	4" (102 mm)
Height:	6-3/8" (163 mm)



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces a site that are exceptionally illuminated.

Ordering Information

Series	LED	Power (Watt)	Color Temperature	Mounting	Notes
DSX1 LED	DSX1 LED	40K	3000K	TIS	Type I Short
	P1	P1	P1	TIS	Type I Short
	P2	P2	P2	TIS	Type I Short
	P3	P3	P3	TIS	Type I Short
	P4	P4	P4	TIS	Type I Short
	P5	P5	P5	TIS	Type I Short
	P6	P6	P6	TIS	Type I Short
	P7	P7	P7	TIS	Type I Short
	P8	P8	P8	TIS	Type I Short
	P9	P9	P9	TIS	Type I Short

Control options

Control options	Notes
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED
DSX1 LED	DSX1 LED

Statistics

Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Calc Zone #3	+	0.3 fc	5.0 fc	0.0 fc	N/A	N/A
New Parking	X	1.2 fc	4.4 fc	0.2 fc	6.0:1	22.0:1

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
OA	OA	4	Lithonia Lighting	DSX1 LED P2 40K T4M MVOLT	DSX1 LED P2 40K T4M MVOLT	LED	8707	0.9	70
OB	OB	3	Lithonia Lighting	DSX1 LED P3 40K T4M MVOLT	DSX1 LED P3 40K T4M MVOLT	LED	12308	0.9	204
OC	OC	6	Lithonia Lighting	DSXW1 LED 10C 700 40K T2M MVOLT	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T2M OPTIC, 4000K, @ 700mA.	LED	2683	0.9	26.2

General Note

- SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
- LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

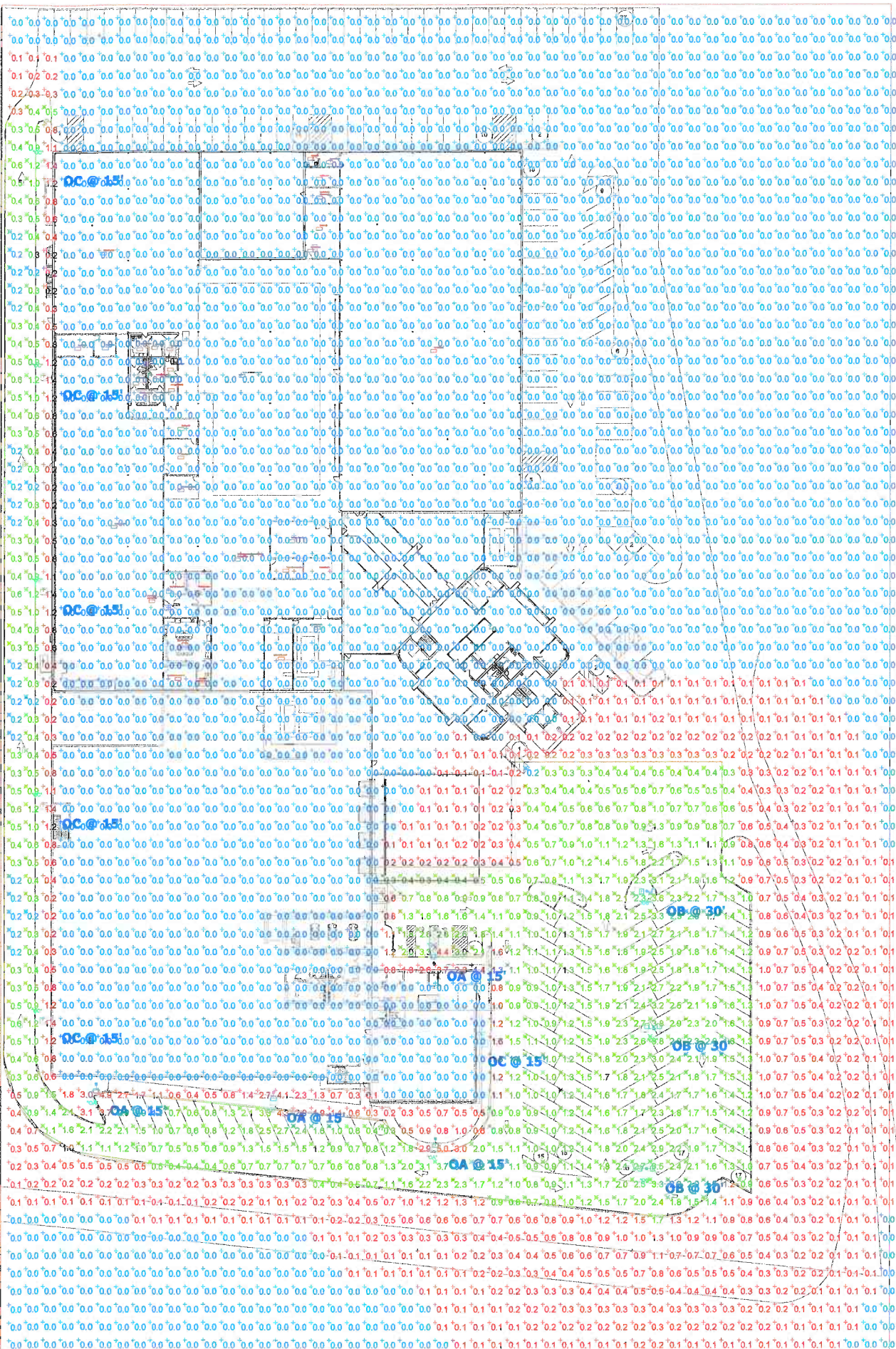
THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.



Plan View
Scale - 1" = 35'

**MINUTES
CITY OF FARMINGTON HILLS
PLANNING COMMISSION PUBLIC HEARING
31555 W ELEVEN MILE ROAD
FARMINGTON HILLS, MICHIGAN
FEBRUARY 17, 2022, 7:30 P.M.**

CALL MEETING TO ORDER

The Planning Commission Regular Meeting was called to order by Vice Chair Countegan at 7:30 p.m.

ROLL CALL

Commissioners Present: Brickner, Countegan, Mantey, Schwartz, Trafelet, Varga

Commissioners Absent: Stimson
(two vacancies)

Others Present: Staff Planner Perdonik, City Attorney Schultz, Planning Consultant Tangari, Staff Engineer Geelhood

APPROVAL OF AGENDA

MOTION by Brickner, support by Trafelet, to approve the agenda as submitted.

MOTION carried unanimously by voice vote.

PUBLIC HEARING

A. SPECIAL APPROVAL 53-1-2022

LOCATION:	29411 W. Twelve Mile Rd.
PARCEL I.D.:	23-14-226-004
PROPOSAL:	Gasoline station and convenience store in B-1, Local Business District
ACTION REQUESTED:	Special Land Use Approval including Site Plan Approval by Planning Commission
APPLICANT:	Bazco Holdings, LLC
OWNER:	Bazco Holdings, LLC

Applicant presentation

Uldis Vitins, Vitins Engineering, 44275 Brandywine Rd., Canton MI was present on behalf of this application for a request for a special land use and site plan approval for a gasoline station and convenience store in a B-1 District, at 29411 W. Twelve Mile Road. Architect John Saad, 31786 Clarita St., Livonia MI was also present.

Mr. Vitins explained that they were proposing to demolish the existing gas station in order to construct a new station on the site. They would re-use the existing storm water management system. The existing underground detention system should be adequate for the new proposal as the impervious area was being reduced slightly by removing some of the pavement behind the building. A landscape plan had also been submitted.

Mr. Saad made the following points:

- There was existing landscaping on the south side of the site that was in good condition. This was not shown on the landscape plan, but could be added if requested by the Planning Commission. The building would be 20' from the property line, and they were proposing to landscape the area behind the building and around the dumpster, adding ornamental and evergreen shrubs, and plant grass where nothing was planted presently.
- Parking was adequate on the site, with 3 parking spots for employees.
- The canopy would be a minimum of 14' clearance from the pavement to the bottom of the canopy.
- The 42" – 48" high HVAC would be in the middle of the roof. With the 2-foot high parapet, the HVAC would not be visible from a 45-degree angle anywhere around the building; this could be added to the drawing if required.

In response to questions from the Commission, the applicants gave the following information:

- There was a fire hydrant on the northeast portion of the site, with either a 12" or 16" water main. They were willing to meet with the Planning Consultant and Fire Marshal to discuss any issues regarding the hydrant.
- There had been questions regarding maneuverability as shown on Sheet C-1A, which showed traffic patterns for the fuel truck delivery. Per AASHTO standards (American Association of State Highway and Transportation Officials), a fire department pumper truck would be more maneuverable on the site than the fuel truck. The Fire Marshal had indicated a minimum 50' turning radius was desired, although the minimum turning radius for an aerial ladder fire truck was 48', and it was unlikely a ladder truck would ever be used at a gas station. Additional drawings could be provided if necessary, and they were prepared to discuss and address any concerns with the Fire Marshal.
- The underground detention system had elliptical pipes that were approximately 5' wide, 38" tall, and about 5.5" thick, providing adequate coverage. The edge of the canopy will be about 1.5' from the pipe, allowing access for maintenance if needed without damaging the canopy.
- The underground storage tanks would be replaced at all 3 locations being considered this evening, per state regulations, and with any state-required remediation of environmental issues.

Mr. Saad said they were adding amenities to the neighborhood, including sidewalk connectivity, additional landscaping, additional parking, a canopy further back from the right-of-way, and a bicycle rack.

Planning Consultant Review

Referencing his February 4, 2022 letter, Planning Consultant Tangari gave the background and review for this application for special land use and site plan approval, in order to rebuild an existing gas station and convenience store at 29411 12 Mile Road.

Outstanding issues included:

- Inadequate labeling of buffer width on Sheet C-1.
- The loading area blocks access to some spaces; an explanation is needed regarding how the loading area would work operationally.
- Calculation of paved area is needed to determine the tree requirement, and the status of existing trees needs to be provided. If a nonconformity is allowed to continue, it should be determined what the nonconformity is.

- Planning Commission to review method of parking lot screening, which is typically a hedge row. In this case the screening is an irregular arrangement of shrubs. The Planning Commission should determine whether this has the same effect as a hedge row.
- Lighting plan adjustments required.
- Other minor items can be resolved and approved administratively.

Vice Chair Countegan asked the applicants to respond to the Consultant's review.

Mr. Vitins said they would comply in all instances. Missing dimensions and information will be provided.

Mr. Saad added that they were confident the site exceeded the tree requirement; they would complete the calculations and depict them on the drawing.

Vice Chair Countegan opened the public hearing. Seeing that no public indicated they wished to speak on this matter, Vice Chair Countegan closed the public hearing and brought the matter back to the Commission for discussion and/or a motion.

Commissioner Schwartz commented that since the site is already a gas station, it was difficult to see it used for anything else, and he offered the following motion:

MOTION by Schwartz, support by Trafelet, that Special Approval No. 53-1-2022, submitted by Bazco Holdings, LLC, be approved subject to all applicable provisions of the Zoning Chapter, for the following reasons:

1. The use will not be injurious to the district and environs.
2. The effects of the use will not be contrary to the spirit and intent of the Zoning Chapter.
3. The use will be compatible with existing uses in the area.
4. The use will not interfere with orderly development of the area.
5. The use will not be detrimental to the safety or convenience of vehicular or pedestrian traffic.

And with the following condition:

- All items in the February 4, 2022 Giffels Webster letter be addressed for administrative review and approval.

Motion carried unanimously by voice vote.

REGULAR MEETING

A. HISTORIC DISTRICT COMMISSION ANNUAL REPORT

Historic District Commission (HDC) Chair Ken Klemmer presented the 2021 Annual Report.

The 7-member City of Farmington Hills Historic District Commission is charged with preserving historic districts within the City that reflect elements of the architectural, cultural, economic, political, or social history of the community. City Council Liaison is Valerie Knoll, and City Staff Liaison is Staff Planner Perdonik.

Achievement of goals for 2021 were impacted by the Covid pandemic, although work continued throughout the year. 2022 Goals and Objectives are:

- Assist the City's Special Services Department with upcoming restoration work on the fieldstone wall at the Sherman-Goodenough House (Historic District Site No. 312).
- Assist the City's Special Services Department with the upcoming work on the Spicer House (Historic District Site No. 508) and implement a comprehensive restoration plan for the site.
- Continue collaboration between the Historic District Commission and City's Department of Public Works in implementing the cemetery preservation plan, including additional monument cleaning and resetting.
- Continue the oral history project using online meeting software and other digital tools to capture interviews of residents, officials, and community stakeholders.
- Continue to update the "Blue Book," the City's official guide to its Historic Districts, for accuracy and comprehensiveness, and explore a potential internship opportunity within the Planning Office to assist in such process.
- Comprehensive video and photo documentation of Sarah Fisher property since development may begin soon.
- Continue to monitor the preservation status of the Botsford Inn and work with the responsible parties to address various issues regarding the exterior of the structure.
- Complete study of properties identified in the 2019 reconnaissance survey by contacting property owners and informing them of benefits of local historic designation and continue to identify new sites for potential historic designation.
- Develop a standardized "welcome package" for new owners of designated historic sites.

Additionally, the HDC has solicited proposals from preservation architects to work on the Marcus Burrowes House.

Four Certificates of Appropriateness were issued in 2021:

- John Garfield House on 13 Mile, new roof
- Edward Shane House on Ardmore Drive, restoration work
- James Cain House on Holly Hill Drive, window replacement
- Sarah Fisher Home, 12 Mile and Inkster, amendment to certificate of appropriateness issued in 2020 regarding demolition permissions.

The Commission thanked Chair Klemmer and the Historic District Commission for the work they were doing in the City to preserve historic structures and also for the preservation work they were doing in the City's historic cemeteries.

MOTION by Trafelet, support by Brickner, that the Planning Commission accepts the 2021 Historic District Commission Annual Report.

Motion carried unanimously by voice vote.

B. SITE PLAN 54-1-2022

LOCATION:	29509 Orchard Lake Rd.
PARCEL I.D.:	23-03-477-056 & 052
PROPOSAL:	Gasoline station and convenience store in B-3, General Business District
ACTION REQUESTED:	Site Plan Approval by Planning Commission
APPLICANT:	Bazco Holding, LLC
OWNER:	Bazco Holdings, LLC

Referencing his February 4, 2022 letter, Planning Consultant Tangari gave the background and review for this application for site plan approval, in order to rebuild an existing gas station and convenience store at 29509 Orchard Lake Road.

Outstanding issues included:

- Variance required for west side setback: 1.5' requested when 10' is required; 8.5' variance needed.
- Inadequate labeling of setbacks and buffer widths on Sheet C-1. The setbacks do appear to be compliant.
- Address rooftop and other mechanical equipment.
- Address loading requirement/labeling/blocked spaces.
- Calculation of paved area needed to determine tree requirement.
- Applicant proposing mixture of shrubs rather than uniform hedgerow for parking lot screening. The Planning Commission should determine whether or not this is acceptable.
- Lighting plan adjustments required.

Commissioner Schwartz said that he had previously worked near this site, and had never noticed a maneuverability issue regarding Space #13, as called out in the review letter.

Planning Consultant Tangari said he would defer to engineering as to whether or not the width of the driveway is adequate to deal with potential conflicts.

Commissioner Trafelet noted that at one time there was a leak on this property. The tanks were replaced but gas still leaked out. Were the monitoring wells on this site and in the adjacent parking lot still active?

Vice Chair Countegan asked the applicants to make their presentation.

Uldis Vitins, Vitins Engineering, 44275 Brandywine Rd. Canton MI was present on behalf of this application for a request for site plan approval for a gasoline station and convenience store in a B-1 District, at 29509 Orchard Lake Road. Architect John Saad, 31786 Clarita St., Livonia MI, and Ali Bazzi, Bazco Oil Company, 30825 26 Mile Road, New Haven, were also present.

Mr. Bazzi explained that Mobil Oil had owned the property in the 1970's, and Mobil Oil was responsible for the cleanup and had hired an environmental consultant when the leak was detected. The monitoring wells were still existing. Mobil Oil finally received approval for a closure report about six months ago, so that as of today, as far as the State of Michigan was concerned, the site was clean.

Mr. Saad said this site was similar to the case heard during public hearing. The applicants will resolve all issues in the consultant's and staff reviews, and will co-ordinate with Planning Consultant Tangari regarding achieving the best landscape scenario. Since the site met parking requirements, they would prefer to eliminate space #13 rather than change the approach.

Mr. Saad said that the rebuild of the gas station at this location would improve the use of the station and the accessibility to the pumps, as well as moving the canopy back.

Mr. Vitins gave the following information:

- Grades would be matched at the property lines. No retaining walls were proposed.

- Per City Engineer Cubera, current stormwater outlets are very shallow, with a cross-road storm sewer that passes in front of the site, with only about two feet of cover.
- The existing site has parking lot detention, which is not optimum. Several options were being proposed including working with Oakland County Road Commission and the City's Engineering Department to utilize storm sewer access across Orchard Lake Road.
- Regarding potentially blocked spaces in the loading area, deliveries will be scheduled in off peak hours, and employee parking will be in the affected spaces.

In response to a question from Commissioner Mantey, Mr. Vitins explained that the existing building did not meet the 10' setback requirement; a variance had been granted for the building on the north property line. The applicants would be requesting a variance for the west property line for the parking lot, not the building.

It came out in discussion that any work done regarding storm water management on Orchard Lake Road would likely require federal funding contribution. This was a possibility as the Road Commission had active plans for this portion of Orchard Lake Road.

Vice Chair Countegan indicated he was ready to entertain a motion, noting that final plans would need to be approved by the Engineering Department before permits were issued.

MOTION by Schwartz, support by Mantey, that Site Plan No. 54-1-2022, dated January 18, 2022, submitted by Bazco Holdings, LLC, be approved because it appears to meet all applicable requirements of the zoning chapter, subject to the following conditions:

1. Any necessary setback variances be granted by the Zoning Board of Appeals.
2. All items identified in the February 4, 2022 Giffels Webster report be addressed for administrative review and approval.
3. The parking space at the southwest corner of the parking area (space no. 13) be removed and replaced with green space.

Motion carried unanimously by voice vote.

C. SITE PLAN 55-1-2022

LOCATION:	27730 Orchard Lake Rd.
PARCEL I.D.:	23-14-101-036
PROPOSAL:	Gasoline station and convenience store in B-3, General Business District
ACTION REQUESTED:	Site Plan Approval by Planning Commission
APPLICANT:	Bazco Holding, LLC
OWNER:	Bazco Holdings, LLC

Referring to his February 8, 2022 letter, Planning Consultant Tangari gave the background and review for this request for site plan approval, in order to rebuild an existing gas station and convenience store at 27730 Orchard Lake Road.

This application and review were similar to the previous case. Outstanding issues included:

- The proposed addition does not meet the required east side setback; a variance will be required.
- Parking spaces should be dimensioned. It appeared that the maneuvering lane is narrow (15') along spaces 5 to 7 when a vehicle is at the southernmost fueling position.

- Photometric plan is required.
- Landscape plan is required .
- Pedestrian connection to public sidewalk not provided.

Uldis Vitins, Vitins Engineering, 44275 Brandywine Rd. Canton MI was present on behalf of this application for a request for site plan approval. Architect John Saad, 31786 Clarita St., Livonia MI, and Ali Bazzi, Bazco Oil Company, 30825 26 Mile Road, New Haven, were also present.

Mr. Saad pointed out that the southern aisle was for two electric charging stations. The gas pumps were in the same location as before. The landscaping met requirements, and there was a 7-foot sidewalk connection. They were meeting the landscape requirement at the corner, including maintaining corner clearance of 24". The new sign – permitted separately – will be in the same location as the old sign. They will screen the HVAC equipment. A variance for the rear setback will be needed.

Planning Consultant Tangari said that regarding the narrow maneuvering lane at the southern end of the canopy, there was a 20' requirement, but when a vehicle was in the fueling position, the maneuvering lane goes down to 15'. The request for a 15' maneuverability lane should be added to the request going before the Zoning Board of Appeals. Mr. Saad said they would do this, or alternatively move the canopy to the north.

Planning Consultant Tangari advised for the record that the Engineering Department was requesting the elimination of a curb cut on Orchard Lake Road, if possible.

Commissioner Brickner opposed removing a curb cut at this location, due to maneuverability issues.

Commissioner Mantey confirmed that the owner had installed an electrical charging station at a different gas station, and wanted to also install an EV station at this location.

MOTION by Schwartz, support by Trafelet, that Site Plan No. 55-1-2022, dated January 18, 2022, submitted by Bazco Holdings, LLC, be approved because it appears to meet all applicable requirements of the zoning chapter, subject to the following conditions:

1. Any necessary setback variances be granted by the Zoning Board of Appeals.
2. All items identified in the February 8, 2022 Giffels Webster report be addressed for administrative review and approval.

Motion carried unanimously by voice vote.

D. SITE PLAN 66-12-2021

LOCATION:	38400 W. Ten Mile Rd.
PARCEL I.D.:	23-19-351-012
PROPOSAL:	Renovation of existing building for car wash in B-3, General Business District
ACTION REQUESTED:	Site Plan Approval by Planning Commission
APPLICANT:	Mustafa Gardi
OWNER:	38400 W. 10 Mile Road, LLC

Referencing his February 8, 2022 letter, Planning Consultant Tangari gave the background and review for this application for site plan approval for a renovation of an existing building for a car wash in the B-3 General Business District, located at 38400 W. 10 Mile Road.

Planning Consultant Tangari gave the following information:

- This property was located where 10 Mile Road joined with Grand River Avenue.
- The use was previously a drive-thru McDonalds restaurant. The applicant was proposing to turn the location into a carwash.
- Outstanding issues included:
 - No pedestrian connection provided to 10 Mile Road; the Planning Commission needed to determine whether this was acceptable.
 - The last three stacking spaces could conflict with the southbound maneuvering lane that runs along the property's east side; the Planning Commission needed to determine whether this was acceptable.
 - Easement agreements were required for the cut-through to the property to the north; these needed to be provided.
- Other minor issues could be resolved administratively.

Commission discussion:

In response to a question from Commissioner Brickner, Planning Consultant Tangari explained that the requirement for stacking spaces was based on the length of the car wash tunnel, which in this case was fairly lengthy. The car wash would need to provide 30 stacking spaces, split into 3 lanes. Most likely there would be an attendant to guide people into different lanes.

Commissioner Mantey suggested reviewing the stacking space requirement at a future study session.

Commissioner Trafelet asked if there was an easement signed by the neighbor to the north, where there appeared to be an escape route to Grand River.

Vice Chair Countegan asked the applicants to answer this question during their presentation.

Ghassan Abdelnour, GAV & Associates, Inc., 24001 Orchard Lake Road, Suite 180A, Farmington, and Jesse Parkinson, Greentech Engineering, 51147 Pontiac Trail, Wixom, were present on behalf of this application for site plan review and approval.

Mr. Abdelnour gave the following information:

- There would be no gas station associated with this site.
- The site had two access points, one from 10 Mile Road, and one to the north.
- There was an easement in place for the northern access.
- They were trying to meet all zoning requirements, and were proposing an attractive, modern car wash, with large windows so people can see some of the cars being washed. The facility would fit in with the area, which had several large dealerships.
- A high parapet would shield the rooftop equipment, and they were prepared to cover the units with metal if necessary.
- They would work with the Fire Department to provide the 50' turn radii.
- They were able to meet the City requirement for 30 cars in the stacking lane, with the three lane layout.
- Most of the landscaping requirements were met.

- The owner wanted to present an attractive building, and they were looking forward to getting the approvals and starting the construction process.

Mr. Parkinson added the following information:

- The owner was replacing everything from scratch, taking all the utilities up and meeting the grade at the property line. They were not, however, replacing the approaches and the frontage sidewalk, which were in good shape. Everything else was tear down and rebuild.
- There would be underground detention along the east property line, and they would be connecting to the sewer at the northeast corner.
- They would bring a fire hydrant across the road, if that was what the Fire Department required to get hydrant coverage for the building, and increase the radius on the entrances to allow fire truck maneuverability. Traffic would be one way in (east approach) and one way out (west approach) on the site.
- There would be vacuum cleaners along the west side of the building.

Vice Chair Countegan thanked the applicants for their extra attention to detail.

MOTION by Schwartz, support by Trafelet, that Site Plan 66-12-2021, dated January 14, 2022, submitted by Mustafa Gardi, be approved because it appears to meet all applicable requirements of the zoning chapter.

Motion carried unanimously by voice vote.

E. **SITE PLAN 51-1-2022**

LOCATION:	32200 W. Twelve Mile Rd.
PARCEL I.D.:	23-10-454-003
PROPOSAL:	Parking addition to existing place of worship in RA-2, One-Family Residential District
ACTION REQUESTED:	Site Plan Approval by Planning Commission
APPLICANT:	RCI Contracting Services, Mike Hall
OWNER:	Mooney Real Estate Holdings, St. Fabians Church

Referencing his February 3, 2022 letter, Planning Consultant Tangari gave the background and review for this application for site plan approval for a parking addition to an existing place of worship in an RA-2, One-Family Residential District, located at 32200 W. Twelve Mile Road. The proposal was for 13 additional parking spaces, with 8 of the spaces being barrier-free. The new parking area is in the front yard of the church.

Outstanding issues included:

- Parking within required front yard setback of 35 feet is not permitted; the applicants were proposing a 29.75' setback.
- Parking space widths need to be labeled.
- Landscaping plan is informationally deficient, as listed in the review letter.
- Tree replacement plan is required.
- Not clear whether lighting is proposed; if it is, a photometric plan is required.

Commissioner Mantey asked if the parking was diagonal on both sides, would the parking be compliant with the setback requirement?

Planning Consultant Tangari said this was a dead-end parking bay; diagonal parking spaces would probably not work in this case.

Vice Chair Countegan invited the applicant to make his presentation.

Michael Hall, RCI Contracting, 38169 Lantern Hill Court, Farmington Hills, was present on behalf of this application for site plan approval. Mr. Hall said tonight's plan was presented knowing they would need a variance, and therefore the plan itself was somewhat minimal. If the project moved forward they would submit a landscape plan, as well as a site plan showing parking lot lighting and drive access. The goal was to make the church and the rest of the building more accessible.

Commissioner Schwartz pointed out that the parking lot for the church was typically almost empty. Attendance at services of all denominations keeps dropping. There was available parking at the Farmington Players and at St. Fabian School during service times. Why was more parking needed?

Mr. Hall said that the need was for closer accessibility for barrier-free spaces. The way the campus was laid out, it was hundreds of feet from the parking area to the closest door of the church or the social hall. The goal was to increase accessibility for the members who needed that.

Vice Chair Countegan indicated he was ready for a motion.

MOTION by Schwartz, support by Trafelet, that Site Plan No. 51-1-2022, dated January 13, 2022, submitted by Mike Hall of RCI Contracting Services, be approved because it appears to meet all applicable requirements of the zoning chapter, subject to the following conditions:

1. Any necessary setback variances be granted by the Zoning Board of Appeals.
2. Lighting, landscape, and tree replacement plans be submitted for administrative review.

Motion discussion:

Commissioner Mantey noted that it was only in the last few years that the Planning Commission started giving approvals before applicants appeared before the Zoning Board of Appeals. In this instance, he would like to wait to decide until after the variance was heard and potentially granted, and see what kind of screening was required, if any. For tonight, he would not support the motion.

Vice Chair Countegan spoke to the importance of treating applicants equally in terms of process.

Commissioner Brickner said that he understood why the request was being made in terms of providing accessible parking spots close to the doors, and he would support the motion.

Motion carried 5-1 (Mantey opposed).

F. **SITE PLAN 52-1-2022**

LOCATION:	29975 Orchard Lake Rd.
PARCEL I.D.:	23-03-433-045
PROPOSAL:	Rear addition to an existing retail store in B-2, Community Business District
ACTION REQUESTED:	Site Plan Approval by Planning Commission
APPLICANT:	Jim Seba

OWNER: CLV Orchard, LLC

Referencing his February 8, 2022 letter, Planning Consultant Tangari gave the background and review for this request for site plan approval in order to construct a rear addition to an existing retail store in a B-2 Community Business District, located at 29975 Orchard Lake Road. The applicant was proposing a 1,400-square-foot addition to the rear of the existing 5,000-square-foot building. The purpose of the addition was storage.

Outstanding issues included:

- The proposed addition does not meet the required side setback to the north. The site was narrow, and the building itself was non-compliant. On its north setback, the addition was further from the line – 13.1' – than most of the building, but the requirement was for a 20' setback. A variance would be required.
- Parking spaces should be dimensioned
- Photometric plan is required
- Landscape plan is required. The applicant should confirm that the landscaping will not change, if that was the case.
- Pedestrian connection to public sidewalk not provided.

Jim Seba, 28818 Greening Street, Farmington Hills, was present on behalf of this application for site plan approval. Mr. Seba gave the following information:

- He had purchased this 1984 building in late 2014 – early 2015, in order to move their business from Southfield to Farmington Hills.
- The 75-foot wide site was narrow compared to the sites to the north and south, and the building was less than four feet from the north property line.
- Since purchasing the building, they had renovated the entire building and added a second story to provide more display windows for mannequins.
- Business was great and they had run out of room; the current retail space was not sufficient for the amount of business they were doing and they needed to expand again. The expansion was labeled storage, but it was really a new back room.
- He understood that he needed a variance for the north side setback.
- The entire site was paved. They were planning to remove 3 to 4 parking spaces to create additional back room space.
- The site had parking lot detention; some areas in the front and back took time to drain after a heavy downpour.
- Engineering plans could be provided if required.
- There was no alley in the back. Part of the agreement when the building was constructed in 1984 was that there had to be an easement for the residential neighbors in the back, and a wall was constructed between the commercial and residential properties.
- In response to the reviews, a photometric plan had been ordered and will be submitted with the plans for the permit.

In response to a question from Commissioner Brickner, Planning Consultant Tangari said he believed there was a variance for the existing north setback. The site had received several variances over time.

Commissioner Trafelet pointed out the cars parked on the southern side of the building. The site was narrow, and the Fire Marshal specifically did not want parking in that area.

Mr. Seba explained that the cars belonged to Dubin Cleaners who used that space for loading and unloading, even though he had talked to them about stopping that practice. With the proposed addition, there will be a loading/unloading space at the rear of the building.

Commissioner Trafelet suggested sealing the side door after the new area was completed. Parking in that area was a concern for the Fire Marshal, especially given the length of the building.

City Attorney Schulz said the appropriate authority to make sure there was no parking on the south side of the building was the ZBA, who could attach that as a condition for granting a variance.

Vice Chair Countegan indicated he was ready to entertain a motion.

MOTION by Varga, support by Trafelet, that Site Plan No. 52-1-2022, dated January 18, 2022, submitted by Jim Seba, be approved because it appears to meet all applicable requirements of the zoning chapter, subject to the following conditions:

1. All necessary setback variances be granted by the Zoning Board of Appeals.
2. All issues identified in the Fire Marshal's letter be addressed administratively.

Commissioner Mantey said that he would support this motion in this instance, even though the motion was subject to the applicant obtaining a variance.

Commissioner Brickner said the record should be clear that the Planning Commission did not have authority to grant variances. A motion for approval subject to the applicant receiving a variance meant the motion was conditioned on the ZBA's authority to grant the variance, which decision was strictly up to the ZBA.

Motion carried unanimously by voice vote.

Vice Chair Countegan called a short break at 9:26 pm, and reconvened the meeting at 9:31 pm.

PLANNING COMMISSION ANNUAL REPORT

Vice Chair Countegan thanked the Planning Office for their work on the annual report.

MOTION by Brickner, support by Trafelet, to accept the Planning Commission 2021 Annual Report.

Motion carried unanimously by voice vote.

ELECTION OF OFFICERS

MOTION by Trafelet, support by Mantey, to elect Dale Countegan as Commission Chair.

Motion carried unanimously by voice vote.

MOTION by Brickner, support by Varga, to elect John Trafelet as Commission Vice Chair.

Motion carried unanimously by voice vote.

MOTION by Trafelet, support by Mantey, to elect Marissa Varga as Commission Secretary.

Motion carried unanimously by voice vote.

APPROVAL OF MINUTES January 20, 2022
 January 27, 2022

MOTION by Brickner, support by Varga, to approve the January 20, 2022 Planning Commission meeting minutes as submitted.

Motion carried unanimously by voice vote.

MOTION by Brickner, support by Varga, to approve the January 27, 2022 Planning Commission meeting minutes as submitted.

Motion carried unanimously by voice vote.

PUBLIC COMMENT

None.

COMMISSIONERS' COMMENTS

Commissioner Mantey addressed the issue of the Commission voting to approve site plans conditioned on variances being granted; perhaps this could be discussed during a study session.

Referring to the January 24, 2022 City Council Study Session minutes regarding *Permanent Outdoor Seating For Restaurants*, as provided to the Commission this evening, Staff Planner Perdonik said this issue would likely be the subject of a study session and/or a draft ordinance.

Commissioner Trafelet addressed the Accrual Reports provided to the Commission regarding the cost of repairs and other work that needed to be done at the Costick Center and The Hawk. He felt the Costick Center was in such dire straits that it might be most cost efficient to demolish it, and suggested including this as a recommendation in the CIP narrative.

Vice Chair Countegan asked staff to generate language reflecting this suggestion prior to the CIP public hearing.

Staff Liaison Perdonik noted that as of this evening, it appeared that one site plan for an addition to an industrial building just north of Grand River Avenue, east of Drake Road will be on the March agenda, and that the public hearing will be held on the Capital Improvement Plan.

The March meeting date was set for March 24, 2022.

ADJOURNMENT

MOTION by Trafelet, support by Turner, to adjourn the meeting at 9:48 p.m.

MOTION carried unanimously by voice vote.

Respectfully Submitted,
John Trafelet
Planning Commission Secretary

/cem