AGENDA
CASCADE CHARTER TOWNSHIP
SPECIAL BOARD MEETING

Wednesday, October 14, 2026, 5:30 P.M.
Wisner Center, 2870 Jacksmith Ave SE, Grand Rapids, MI 49546

Expected Meeting Procedures

- During public comments you may speak on any item not noted on the agenda for a public hearing.
- Please limit comments to 3 minutes per person and the Board may or may not choose to respond.
- Please limit your comments to a specific issue.
- Please turn OFF cellular phones.
- In accordance with the ADA, any accommodation request should be directed to the Township at 616-949-1500.

Article 1. **Call to Order (Roll Call)**

Article 2. **Pledge of Allegiance**

Article 3. **Approval of Agenda**

Article 4. **Public Comments – Any comments, agenda item or not. (Limit comments to 3 minutes)**

Article 5. **New Business**
a. Facilities Study Work session

Article 6. **Public Comments – Any comments, agenda item or not. (Limit comments to 3 minutes)**

Article 7. **Adjournment**

Cascade Charter Township

Special Board Meeting – Facility Study

October 14th, 2026

Staff Memo / Discussion Guide

Facility Study Overview – phase I

- Provide an assessment of current buildings
- Identify deficiencies and opportunities
- Evaluate with a focus on long-term community needs
- Offer interim solutions for consideration
- Deliver a planning document to spur discussion and guide priorities

Agenda

Introduction	5 minutes	Brian Wilson
Study review	15 minutes	Bill LaDitka
Discussion	30 minutes	ALL (Q&A, priority review)
Wrap up / next steps	10 minutes	Jade

Goals

- Generate discussion & build consensus
- Prioritize needs
- Identify immediate projects for further study / design development
- Assign target timeline for future projects to include in CIP

Discussion Questions

Do current facilities align with and support community goals?

How can we create operational efficiencies with facilities?

What facility improvements are a fiscally sound use of resources?

How can facility changes help improve election procedures?

How does facility location impact services for residents?

Is additional programming for residents a priority?

What current opportunities are there that may affect implementation timelines?

What funding sources are available?

Potential Next Steps

1. Continue design & development of selected projects
2. Schedule additional meetings for continued discussion (if needed)
3. Potential Board Action at future meeting



Cascade Charter Township

Facilities Strategic Master Plan

September 2026

intersect Design. Strategy. Architecture. wendel Five Bugles Design

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Color Key

- General
- Parks & Facilities
- Township Administration
- Wisner Center & Meeting Space
- Fire & Emergency Services

Planning Consultant Team

The planning process was lead by Intersect Studio with support from Wendel / Five Bugles Design for the Fire & Emergency Services analysis. Intersect is an experiential design firm of Architects, Interior Designers, Planners and Brand champions who specialize in engaging and rallying teams. Our process helps communities, companies and organizations align their physical spaces with their mission, goals and intent, both indoors and out. Utilizing deep engagement and collaboration, we guide groups in the development of strategies for change and support them along each step of the magical journey to a better tomorrow. ***Let's Intersect!***

intersect

Intersect is a team of planners, architects, interior designers, and experiential thinkers. We believe the best outcomes are created with people, not delivered to them. We do this through a proven process that brings together diverse ideas, experiences, and talents to imagine—and ultimately determine—the appropriate direction with our clients.

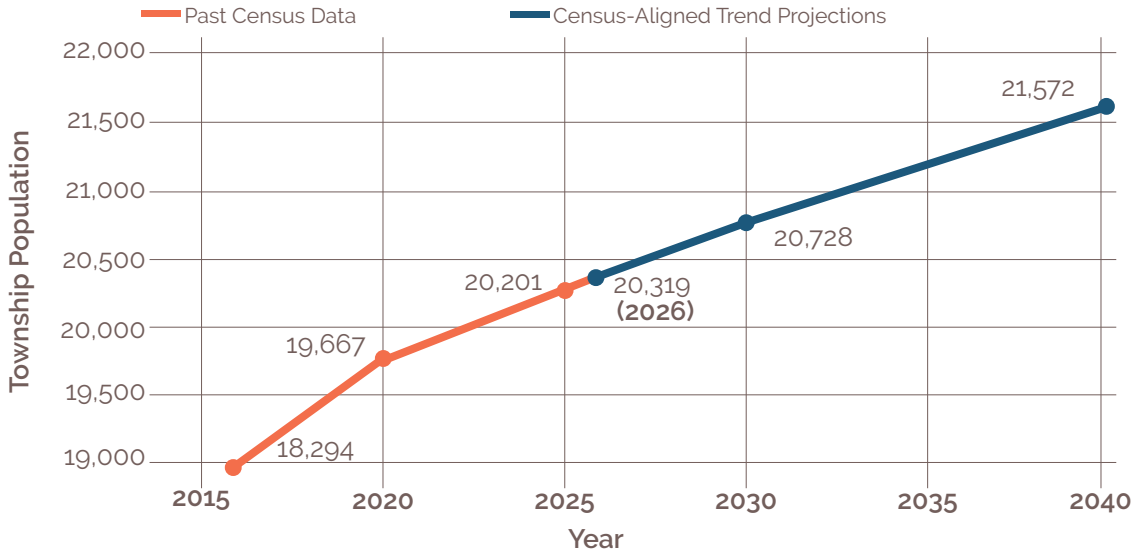
wendel

Five Bugles Design

Wendel, home of the award winning Five Bugles Design Team, is a national architecture, engineering, energy efficiency and construction management firm that delivers customized solutions and turnkey projects in innovative ways. Our team provides planning and design services solely to the public safety service industry. We understand that emergency service buildings are truly a unique building type. Our focused design team is comprised of members whom, both collectively and individually, are among the most experienced fire station design professionals in the United States.

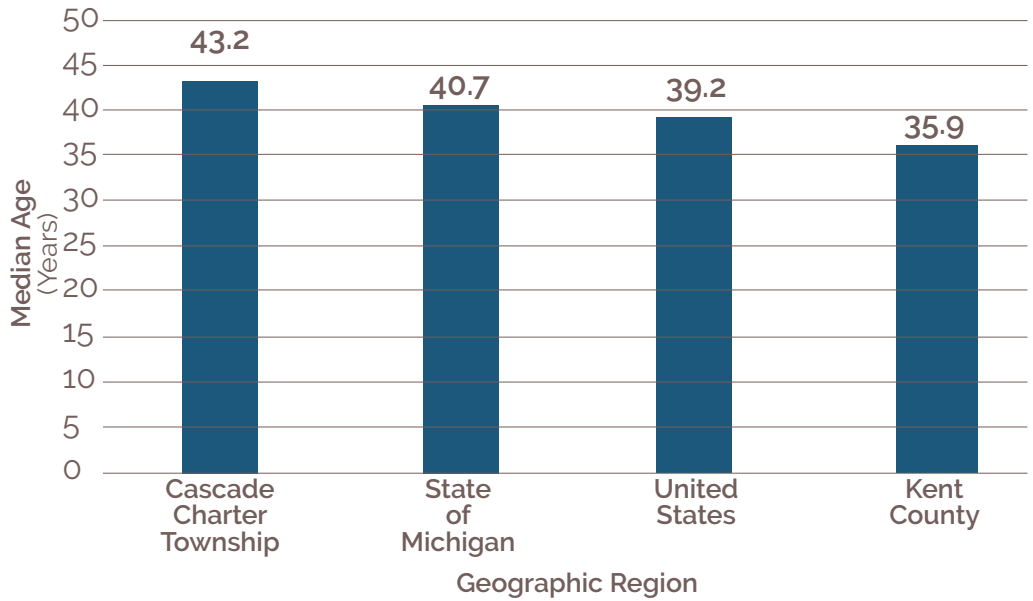
Cascade Charter Township Population Growth & Projections

(Source: US Census Data)



Cascade Township Median Age Comparison

(Source: US Census 2025)



Cascade Township Demographics

Based on past and current data, Cascade Township has experienced a relatively controlled but steady continued population growth of about 1% annually, creating an increasing need to plan for expanded township services, infrastructure, and community amenities. This upward trend suggests that the demand on township services will continue to increase, which may drive additional staffing.

Cascade Township has a notably older population than many of its surrounding communities. The Township's median age was 43.2 years in 2025, with approximately 18.8% of Cascade residents age 65 or older. Park & Library senior programming is highly utilized, demonstrating strong demand for services and activities that support older residents. As the population continues to age in place, there is an opportunity to continue to expand services to provide connection, recreation, and wellness for all ages.



Referenced Cascade Township Studies

Sept 2015	**Cascade Charter Township Facility Master Plan & Administrative Office Design Study** Fishbeck, Thompson, Carr & Huber, Inc.
Sept 2022	**Cascade Township Strategic Plan** McKenna
2023-2027	**Cascade Township 5-Year Parks Master Plan** Troyer Group
July 2024	**Cascade Township Master Plan** McKenna
2024	**Cascade Township Recreation Park 2024 Master Plan** Troyer Group, Nativedge
2025 - 2028	**Cascade Township Fire Department: Strategic Plan** Cascade Township Fire Department

Current Township Full Time Staffing:

Fire & Emergency Services:	(23) Total (18) Fire Suppression (5) Admin
Township Administration:	(15) Total (4) Finance/Accounting (1.5) Clerk (3) Planning (6.5) Manager
Building Services:	(13.5) Staff
Parks & Facilities:	(8.5) Staff
Total Full Time Employees:	**(60) Staff**

Master Plan Introduction

The goal of this plan is to provide information for Cascade Township to utilize in making decisions about Township facilities. As the requirements for Township services evolve over time and buildings age, new investments are required to support the delivery of the Services required by Township Residents. This document provides the spaces, function, flow and programmatic needs as identified by Township staff. This study explored a number of ways to provide facilities to meet the requisite needs, and presents the findings. While a specific final recommendation is not provided, the document brings clarity to the top potential solution directions to guide further study.

The study included four groups: Fire/ Emergency Services, Parks/ Facilities, Township Administration/ Board Meeting, and general Community Meeting spaces. The planning process considered community needs, expectations of future service, local development, existing facility conditions, the Township's social fabric goals and environmental factors. The studies noted on the previous page provided critical insight into the desires of Township Residents and previously established goals.

While facilities require significant capital investment, the good news is that these investments provide return over many decades. While this document is not a detailed implementation plan for individual buildings, it is a guide to communicate options based on priorities and needs. The conceptual plans presented in this document are general test fit plans to explore the spaces and flow requested by the Township's team members involved in the study. The plans demonstrate the approximate type of facility required. As Township Leaders decide on direction and timing, more detailed due diligence studies for specific facilities will be a required next step.

Master Plan Priorities:

- **Existing Facilities Assessment:** Understanding current conditions, functionality & limitations
- **Define Space Needs:** Define space requirements, workflows and future growth
- **Fire and Emergency Services Evaluation:** Assess response coverage, station locations & facility needs
- **Scenario Analysis:** Explore renovation, expansion & new facility options to meet the current and future needs
- **Budget Direction:** Provide order of magnitude cost information to support decision making
- **Implementation Strategy:** Provide a clear path forward to guide decision making on future investments



The Master Plan Process

The Master Plan process was designed as a collaborative, data-based progression from understanding the Township's needs to studying options and presenting the actionable options for the Township Board to work with the Administration Team to decide on the direction for its future facilities. The design team began with research on previous studies to understand the current Township goals and strategies for the future. Many of these studies included good information about Township resident goals and desires.

A Discovery Workshop was facilitated with Township leadership to tap into the Township's organizational culture, management approach, service delivery, goals, and vision. These conversations helped identify the key questions to investigate and established the framework for the building and site space programming and analysis that followed.

Individual workgroup space programming sessions translated broader organizational goals into specific operational and space requirements. Discussions with department leaders and staff examined workflows, staffing, space needs, adjacencies, and future requirements. Fire Department programming also addressed staffing, apparatus, deployment, and functional operations, providing a detailed basis for evaluating current and future needs.

The process then moved into facility and service assessment. Existing documentation was reviewed and facilities were evaluated for condition, utilization, staffing alignment, operational efficiency, and future growth. Fire and Emergency Services deployment and coverage were analyzed to understand response time and needs, station locations, service gaps, and future capacity needs. Together, these findings established an data-based understanding of existing deficiencies and opportunities.

Based on this analysis, the consultant team worked with the Township's team to explore facility and site scenarios, including: renovations, additions, new facilities, alternative locations, and deployment strategies. Options were considered against operational requirements, service needs, stakeholder feedback, feasibility, and order-of-magnitude costs to understand their broader strategic implications.

An options review provided an opportunity to validate the analysis, discuss the implications of alternative approaches, and identify strategies for further development. Stakeholder feedback informed the refinement and prioritization of recommendations.

The final phase focused on defining the strategic implications of each scenario to support the Township in defining their priorities for township service delivery, value to the community, budget, and implementation. The options which present opportunity to be considered by Township leadership are presented in this document.

A magnitude of cost range has been assigned to each scenario as well as a strategic summary to provide the Township with the high level data required for a comparison of options. The resulting document provides a series of options that the Township can choose from to align facility investments with overall organizational priorities and long-term community needs and goals. The goal of this document is to support data-driven discussions to finalize a strategic prioritization of facility investment. Almost every scenario will likely require additional due diligence analysis to be performed before final specific direction can be reached. This topic is addressed at the end of each of the planning group sections.

Township Team

The planning consultant team would like to thank the following Township staff & stakeholders who provided direct feedback and data as part of the planning process. Their passion to serve the Board of Trustees, Elected Officials and the Residents of the community was evident in all of our interactions. This is a highly functioning and dedicated team that the community can be proud of:

Jade Smith, Township Manager
Chief Adam Magers, Fire Chief
Brian Wilson, Building Official
Dan Zwick, Parks & Facilities Director
Susan Slater, Clerk
Michelle Alberts, Deputy Clerk
Lorna Nenciarini, Finance & Budget Director
Katie Murawski, Director of Human Resources
Aric Thorne, Township Engineer
Lulu Brown, Regional Manager, Kent District Library - Cascade Branch

Master Plan Scope:

The following areas of study were included in the Master Plan Scope:

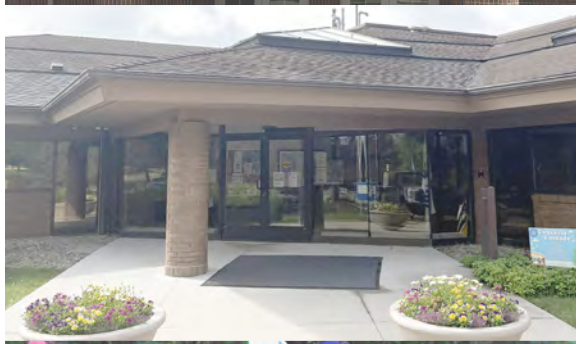
- Township Administration Offices
- Fire and Emergency Services: Deployment, Coverage & Fire Stations #1 & #2
- Wisner Center: Meeting space for the Township Board
- Parks Maintenance Facilities

Cascade Township's Solutions Objectives:

- Fiscally Responsible
- Efficient Service Delivery
- Forward Looking
- Functional
- Flexible
- Community Centered









Executive Summary: Overview of Findings

The following is an overview of the findings from the Master Plan process:

Two strategic investment options: Investment in facilities could either serve the Township for many decades to come by fully investing in the needs identified in this study. Or for more budget friendly approach, provide shorter term solutions that will more temporarily improve key challenges with smaller investments.

Parks: Current Facilities do not align with the service needs today and will not support the robust community goals for Parks and Recreation that have been identified as a priority. The ongoing investments to improve parks & trail maintenance, expand park land and increase recreational programming within the Township will continue to put more strain on the Parks Team due to inadequate facilities. The current facility is a former animal barn which was converted to provide for very basic maintenance services for the Township. Continued expansion of or investment in this facility does not seem prudent. There are several locations for a new facility that could serve the Township in various ways. For implementation strategy, see pages 30-31.

Admin/Township Hall: The current building has served the Township as an interim location since 2019, but is at capacity and will not accommodate future growth. It does not provide for the current needs of the team in many ways. The site is at maximum capacity and parking is already limited. An addition to the current building was explored, but this scenario has many barriers to success. A key priority established during the planning process is to unite the Board meeting space with the Administration offices on the same site due to the current team inefficiencies experienced with these two areas being on separate sites, ideally as a singular Township Hall. Dedicated, secure storage and convenient access to election equipment is also an essential function for the Township Clerk. Incorporating appropriate storage and work space within a new Township facility would improve organization, security, and improve the Township's ability to efficiently manage increasing election-related demands. The future of the Administration offices is likely at a new location. This report provides several scenarios including building acquisition/ renovation and new facility options. For implementation strategy, see pages 51-53.

Meeting Spaces / Wisner Center: The Wisner center is a modern and flexible meeting space, but is overburdened with high demand between the Township, the Library & public use. The current utilization rate of over 90% indicates a strong need for additional meeting spaces. Due to high turnover of events within the space, the Parks department dedicates significant time and effort for setup & reconfiguration from the public Board/ Committee Business meeting space to other use scenarios and then back. Creating a new dedicated Board meeting space associated with the Administration offices would free up the Wisner Center for more community use/ event activities. See pages 57-58 for strategic scenario options.

Executive Summary: Findings

Fire & Emergency Services: Stations 1 & 2 provide strong coverage for about 2/3rds of the Township and are well located to remain part of the Department's long-term deployment network. As has been identified in the past, Station 2 requires some capital investment to maintain the quality of the building. However, this report supports this investment as the current Station 2 location is premium and the facility is serviceable. Station 2 can also serve as a location for an identified need of a satellite Sheriff's substation. The portion of the Township South and West of the Airport is currently under-served and requires additional resources to meet standards. This report provides several ways this gap in coverage could be addressed. See page 60 for full report.

Facility Analysis and Location Options

This report has a series of sections which explore each of the four key Departments/use groups noted above. Parks and Township Administration sections are broken down into three distinct parts as follows:

Needs Defined:

- Existing Facility Evaluations
- The program of spaces and functional needs
- Layout scenarios/ test fit plans to confirm the overall building area need, where appropriate (See Concept Plans in **Appendix D**)

Scenario Options Analysis:
This section provides a series of site/ building location options with key issues listed for each location.

Implementation Strategy:
The final section provides a summary of the site options for ease of comparison. The final page includes information to support analysis, decision making and identification of next steps.

The **Fire & Emergency Services** analysis is an extensive document full of technical information located at the end of this report, which includes its own table of contents. An excerpt of the report summary is provided on the following pages.

The **Wisner Center** and other Township owned facilities have been analyzed as meeting spaces. General analysis & recommendations have been provided in that section.

Fire & Emergency Services Study Summary

Cascade Township enters this planning period from a strong position. Fire Station 1 is a modern headquarters facility with the capacity to support Department-wide operations, while Station 2 remains serviceable and occupies an important location within the existing response network. The facility strategy identified through this study therefore does not require wholesale replacement of the current system. Instead, it provides a framework for extending that system as staffing, development, and emergency service needs change.

The Central Support–Satellite Response model provides the basis for that growth. By maintaining specialized support functions at Station 1, future response stations can remain compact and focused on the personnel and apparatus assigned to them. This approach makes better use of the Township's existing investment while reducing unnecessary duplication in future facilities.

The next opportunities are different in both purpose and timing. GIS Site 1 presents the stronger current case for expanded deployment, but the Township can test that need through a Day Engine before committing to permanent construction. Station 2 can remain in service while its condition is managed and the surrounding municipal property is planned for its eventual replacement. GIS Site 2 represents a longer-term opportunity, where preserving a viable property today may be more important than determining when or what to build.

Taken together, the recommendations allow Cascade Township to make incremental decisions without losing long-term options. Maintenance, site preservation, due diligence, operational deployment, and capital construction can occur on separate timelines. Major investments can then be made when response performance, staffing, facility condition, development, and lifecycle value demonstrate that they are warranted.

The appendices that follow provide the technical documentation supporting the study, including the GIS response and coverage analysis, detailed fire station space program, existing conditions documentation, and conceptual planning exhibits. These materials are intended to serve as a reference as individual recommendations advance into future planning, budgeting, design, and implementation.


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CASCADE TOWNSHIP FIRE DEPARTMENT
EXECUTIVE STRATEGY: PRESERVE → DEPLOY → TRANSITION
A phased, condition-driven approach to strengthen response today and build for tomorrow.
1
PRESERVE & PREPARE
Protect assets. Reduce uncertainty.
Maintain what serves us well today, complete key planning and due diligence, and preserve future options.
KEY ACTIONS
Maintain Station 1 as the Central Support Hub.
Maintain Station 2 and address priority maintenance needs.
Complete Station 2 structural/resilience evaluation.
Master plan the Station 2 / Public Parks and Facilities campus.
Advance due diligence for 5191 Kraft Avenue SE (GIS Site 1).
Preserve 4570 Whitneyville Avenue SE (GIS Site 2).
Establish local response performance measures and begin tracking.
INVESTMENT LEVEL: LOW TO MODERATE
Focus on preservation, planning, and information gathering.
2
DEPLOY & EVALUATE
Test before you build.
Place resources closer to the risk area using an interim deployment and measure real-world performance.
KEY ACTIONS
Deploy Day Engine at GIS Site 1 from commercial (interim) space when staffing and resources allow.
Measure performance: response times, utilization, simultaneous incidents, staffing, aid interaction, and intervention time.
Refine deployment model, staffing needs, and operational procedures based on data.
Use experience and performance data to inform the business case for permanent Station 3.
INVESTMENT LEVEL: MODERATE
Interim deployment, data collection, and preparation for future construction.
3
TRANSITION WHEN TRIGGERED
Invest when the need is proven.
Make major capital investments when conditions demonstrate the need and the value.
KEY ACTIONS
Construct permanent Station 3 at Kraft Avenue when performance and staffing support it.
Renovate Station 2 if evaluation shows good lifecycle value; replace when replacement is the better long-term value.
Complete Public Parks and Facilities building and maintain Station 2 frontage for future fire service use.
Program Station 4 at Whitneyville Avenue only if growth and performance data justify action.
INVESTMENT LEVEL: HIGH (WHEN TRIGGERED)
Major capital projects aligned with demonstrated need and value.
CONDITION-DRIVEN DECISIONS
Response Performance
Staffing Readiness
Facility Condition
Lifecycle Economics
Development & Growth
Call Demand & Simultaneous Incidents
Aid Interaction
Intervention Time
CASCADE TOWNSHIP FIRE STATION LOCATION AND FACILITY STUDY
AUGUST 2026
wendelcompanies.com

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CASCADE TOWNSHIP FIRE DEPARTMENT

CENTRAL SUPPORT – SATELLITE RESPONSE

One Department. Centralized Support. Distributed Response.

THE STRATEGY

The Central Support–Satellite Response model organizes the Department's resources to maximize efficiency, reduce duplication, and improve emergency response throughout Cascade Township.

Fire Station 1 serves as the Central Support Hub for functions that benefit from scale, specialization, and proximity to multiple response companies.

Satellite stations focus on apparatus deployment, company operations, and crew readiness.

THE BENEFITS

- Improved response coverage where the risk is highest
- Avoids duplication of expensive specialized spaces and equipment
- Supports firefighter health, safety, and operational readiness
- Flexible and scalable as needs and resources evolve
- Strong community presence with right-sized local facilities

CENTRAL SUPPORT HUB

Fire Station 1 – Headquarters



CENTRALIZED FUNCTIONS

- Training
- Logistics & Supply
- Administration
- Equipment Support & Maintenance
- Decontamination (PPE & Equipment)
- Department Services

FUNCTION DISTRIBUTION

CENTRALIZED AT STATION 1
Functions that benefit from scale, expertise, and shared resources.

PROVIDED AT SATELLITES
Functions needed on-site for company operations and response readiness.

CONTAMINATION STRATEGY

ROUTINE DECONTAMINATION
Centralized at Station 1 for PPE processing, equipment cleaning, and restoration to service.

EMERGENCY GROSS DECON
Provided at satellite stations (gear dump + shower/mop sink) for situations when returning to Station 1 is impractical.

STATION 2
EXISTING



- Engine Company
- Crew Living & Sleeping
- Fitness
- Gear Dump & Emergency Decon
- Limited Storage

STATION 3
SITE 1 – KRAFT AVE



- Day Engine (Interim) / Engine Company (Future)
- Crew Living & Sleeping
- Fitness
- Gear Dump & Emergency Decon
- Limited Storage

STATION 4
SITE 2 – WHITNEYVILLE AVE



- Engine Company (Future)
- Crew Living & Sleeping
- Fitness
- Gear Dump & Emergency Decon
- Limited Storage

FUTURE SATELLITES
AS NEEDED



- Engine Company
- Crew Living & Sleeping
- Fitness
- Gear Dump & Emergency Decon
- Limited Storage

IMMEDIATE PRIORITY
Deploy Day Engine Now.
Build Permanent Station When Triggered.

LONG-TERM OPPORTUNITY
Preserve Now.
Build When Need is Proven.

FLEXIBLE & SCALABLE
Add Stations as Risk, Staffing, and Resources Warrant.

KEY PRINCIPLES

- Right facility, right size, right place
- Eliminate unnecessary duplication
- Improve response where needed most
- Preserve future options
- Invest when the need is proven

CASCADE TOWNSHIP FIRE STATION LOCATION AND FACILITY STUDY MAY 2025 wendelcompanies.com

The Cascade Vision

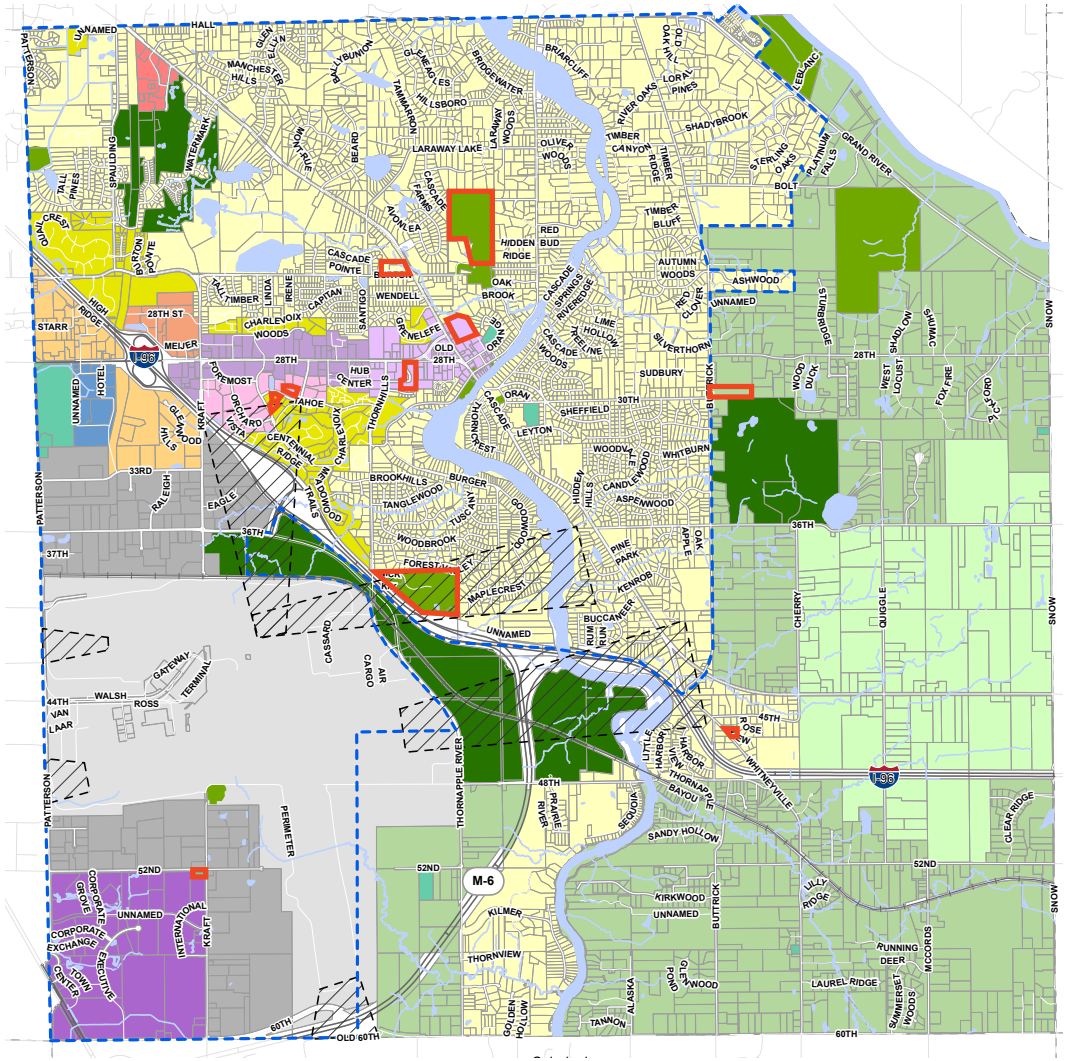
Create a connected, welcoming and forward-looking network of Township facilities that **support exceptional service**, strengthen community and **enhance the Village Character** of Cascade

Thoughtfully designed **places will support** the people who serve, make it easier for the **community** to access services, and create meaningful opportunities to **connect and gather**.

Flexible and responsive to change, these facilities should meet today's needs while continuing to **serve Cascade Well for generations** to come



Proposed Site Location Strategy



Cascade Twp. Future Land Use Plan

Sites studied in this Master Plan denoted with red outline

Basemap Source: Michigan Center for Geographic Information, Version 17a.
Data Source: County or Local Community Source. McKenna 2020.

The following key parameters were considered in the evaluation of potential locations for the Township Facilities.

- The Township's **Future Land Use Plan** indicates a strong desire to limit growth to the east side of the Township. This is reinforced with a utility growth boundary. This would suggest that new Township facilities are most desirable within the utility boundary.
- **Cascade Township's Strategic Plan** and **Master Plan** focus on the concept of developing a Village feel. Utilizing new Township facility investments to support this goal is an opportunity to reinforce the Township's identity, share infrastructure, and drive additional visitors to the downtown/Village for business, leisure, and events.
- The **Cascade Parks Master Plan** spotlights expanding parkland, pathways, programs, and services to provide more opportunities for recreation, social connection, and quality-of-life amenities for seniors and residents of all ages. The recent investments at Friendship Park adjacent to the Library is noted.
- Fire Site Strategy is based on GIS mapping of existing Fire Department locations and calls in order to assess current coverage based on emergency response times and determine gaps in coverage.
- While properties which are not currently owned by the Township were reviewed, very few met the criteria of the needed Township facilities. Ideally solutions for the Township facilities can be found while minimizing impacts to tax generating properties that can continue to generate Township revenue.



Parks & Facilities: Needs Defined

Strategic Plan Alignment

The needs analysis for the Parks Department is grounded in the priorities established through the Cascade Township 2022 Strategic Plan, 2023 Parks Master Plan & 2024 Community Master Plan, which reflect community priorities and needs identified via community engagement. The Strategic Plan establishes a framework for maintaining and expanding a diverse park and trail system and for developing and supporting parks and recreation programming that is diverse, widely distributed, fiscally responsible, and representative of community needs. These priorities provide the basis for evaluating the adequacy of existing Parks facilities and identifying future facility needs.

Evaluation of Existing Facilities

Through our existing facilities assessment, it became apparent that the existing Parks facility presents a significant constraint to the department's ability to effectively deliver or grow services in alignment with the Strategic Plan framework. The primary facility is undersized and dysfunctional in several key areas, including space configuration, storage capacity, and the lack of necessary infrastructure to support staff and daily operations. These deficiencies require staff to routinely dedicate significant portions of working time to logistical and operational tasks that could otherwise be directed toward service delivery. The resulting inefficiencies reduce the amount of staff capacity available for core responsibilities and limit the department's ability to increase the range and capacity of programming & services available to the community at current staffing levels.

The following pages present evaluations of the existing parks/ facilities buildings followed by the primary program space needs identified. A detailed program of spaces can be found in Appendix C.

Burton Park Facility Assessment

7,200 SF
Built: 1997 Partially Renovated: 2018

The existing structure is a 30 year old light-weight wood post & frame 'pole-barn' structure that was built as an animal barn. The building exterior envelope of metal siding has not been significantly renovated. The building is insulated & temperature controlled. The building functions as the primary facility for all Parks operations within the Township, including storage, fleet deployment, shop/repair, and staff support facilities. It also serves as a public restroom facility for the Park. Prior to considering any significant renovations, a detailed building analysis should be conducted to identify compliance with current building codes and potential hidden deterioration conditions.







Operational Challenges

- Building & parking is undersized to serve the number of staff and level of service & programming. Lacks ability to grow level of service/ team
- No meeting space that can accommodate all staff, 3 staff share 1 office, 1 restroom for all staff

Functional Issues

- Missing critical infrastructure - security, floor drains in garage, fueling stations, exhaust ventilation
- Missing critical equipment for operations - equipment/truck lifts, vehicle washing area, adequate indoor parking to warm plows in winter

Opportunities

- If a new facility is constructed, this building could be used for the large indoor storage needs of the Department.
- Houses public toilets & drinking fountain for the park
- Adding Community space to enhance Park use and utility for programming and events.

Cascade Twp Park Facility Assessment

1,860 SF
Built: 1993 Partially Renovated: 2004

The existing structure is a light-weight wood stick-framed structure on an unknown foundation type, with exterior wood/plywood siding & asphalt shingle roof. The building exterior envelope exhibits significant deterioration and rotting due to age & weather. Water infiltration to the interior due to deterioration is present. The building is not insulated or temperature controlled, and is used for storage of maintenance materials and equipment (mowers, etc) for use at Cascade Township Park. 2 staff are based out of this facility due to lack of space at Burton Park Facility. The building is at the end of its useful life without a major renovation, which is likely not feasible.







Operational Challenges

- Cold storage only, building is not temperature controlled
- No support facilities (office space, toilets) for staff.
- Water infiltration & leaking due to dilapidation of exterior & roof

Opportunities

- Cascade Township Park location is convenient for storage of equipment servicing the specific park and doesn't require travel or deployment.
- Location provides proximity to Parks programming (sports leagues, etc) which take place at Cascade Township Park

Community & Meeting Space Opportunities

Beyond core departmental service functions, a future Parks facility ideally would provide a flexible community meeting space for Parks-run programming/ activities, and other community uses. Depending on site selection, a multipurpose community space could provide a centrally located space for community events with proximity to existing Parks infrastructure, Parks staff support for setup/tear down, and generally alleviate demand on other community meeting spaces. Incorporating some of these shared-use functions has potential to increase the overall value and utilization of the investment to the community at large.

- Multipurpose Meeting/ Activity Space
- Indoor / Outdoor Space for Activities and Nature Programming
- Public Restrooms
- Public service area for Parks Staff/Coordinator

Defining Space Needs

The workgroup programming session clarified the following: current staffing, growth projections, roster of fleet & equipment, service delivery and deployment, tasks, and workflows for the Parks & Facilities team. These were documented & analyzed against the existing facilities to determine the following key programmatic space needs. See **Appendix C** for the complete Space Program document. While all of these items are needed, the list below highlights the most pressing needs:

- **Vehicle Maintenance Shop with Equipment Lifts**
- **Code compliant and environmentally safe Chemical Storage, Fueling Station & storm water retention**
- **Office spaces, toilet rooms, locker & shower facility for current staff**
- Meeting/break room to accommodate all staff for team meetings/ deployment
- Heated garage for cold-weather vehicle startup with code required exhaust system
- Growth space for future staff
- Additional Storage Capacity needed ~2,000 square feet

***Most pressing needs are in Bold**



Parks & Facilities: Scenario Analysis

Parks Scenario Planning

Based on data collected from the initial fact-finding & space needs analysis, and alignment with Township goals & solutions objectives, various scenario types were evaluated against a lens of future growth, function, community focus, efficient service delivery, and long-term value.



RENOVATION/EXPANSION

Renovation or Expansion of Existing Parks Facilities

Both existing Parks facilities are 30 years old & were not built to commercial construction and durability standards. Any significant investment to continue to modify, add on to, or upgrade these aging structures for human occupancy is not a recommended long-term solution. The Parks department is in urgent need of additional space for vehicle maintenance, storage of equipment indoors, and proper spaces for the team to conduct business, connect, deploy along with the support spaces for personal hygiene. Any minor modification to the existing Burton Park facility should be considered a shorter term solution. Larger investments should include further study to prove cost efficiencies.



REPLACE/RELOCATE

Replace / Relocate - New Build Facilities

A new purpose-built facility or facilities provides the opportunity to design for long-term use, durability, functionality, efficiency and growth. A new build allows for exploration of alternate site opportunities for improved access, deployment, and proximity to other Township parks & properties for team efficiency and enhanced public service. For the purposes of test fitting sites for new construction, a conceptual facility test fit plan was developed to communicate key adjacencies, circulation/flow, and overall space allocation. See **Appendix D** for The Floor Plan & Site Plan diagrams



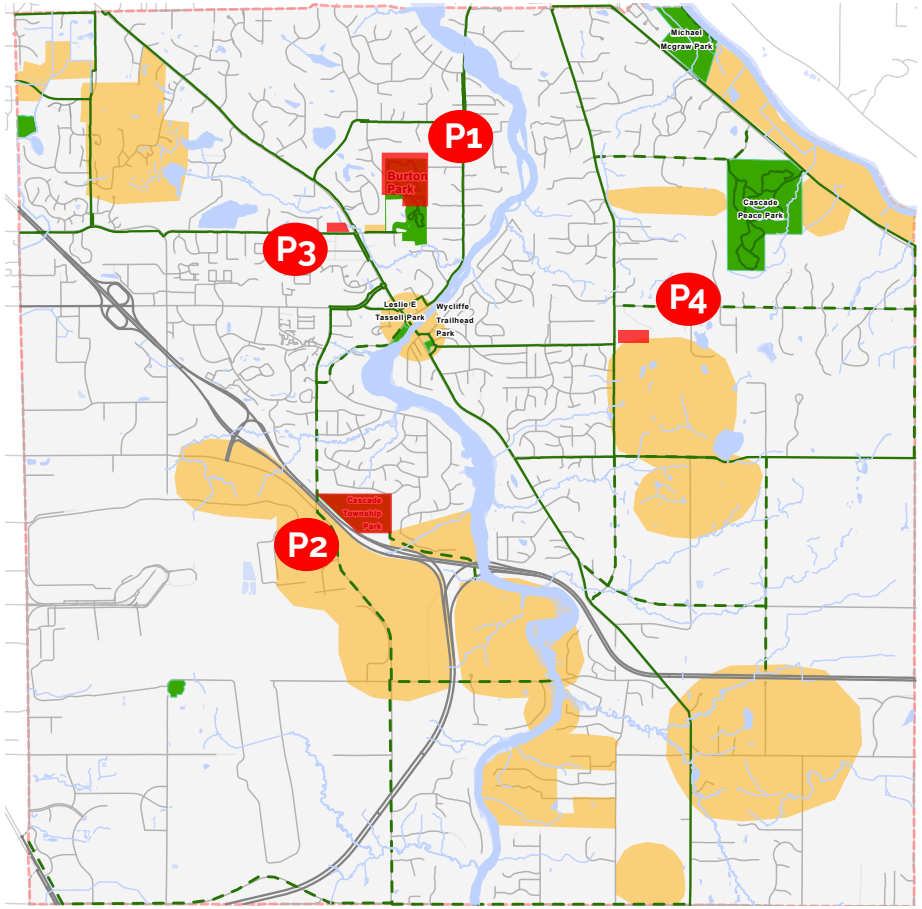
MULTI-SITE SOLUTIONS

Multi-site Deployment

Depending on the final location selected for the primary Parks facility, a small satellite storage and maintenance facility would be required at Cascade Recreation Park if the main facility is not located there. This is to support the heavy demand of recreational programming and maintenance needs of that park

Sites Studied:

Four sites were studied for this report. Three are currently owned by the Township. Site 3 is owned by the Board of Education, but may be available for acquisition.



Park and Greenspace Target Areas

Cascade Township, Kent County, MI

Basemap Source: Michigan Center for Geographic Information, Version 17a. Data Source: GVMC 2021. McKenna 2024.

MCKENNA

Site P1:

Cascade Burton Park

Burton St SE / Windcrest St SE

1. Renovate 7200 SF exist. bldg + 11,000 SF Addition

Site P2:

Cascade Township Park

Nick Kik Dr SE

2-A. New Build: Location near park Entry - Northwest Placement

2-B. New Build: Location at Rear of Park - Southeast Placement

Site P3:

Forest Hills School Site

6590 Cascade Road SE

3. New Build with Community Sports Fields

Site P4:

Cascade Twp Fire Station #2

2990 Buttrick Ave SE

4. New Build: Rear of Site behind Fire Station #2

Page:

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Site P1: Burton Park

Renovate Exist 7200 SF Bldg + 11,000 SF Addition



NOTES

- Zoning: R-1 (Special Use)
- Ownership: Cascade Twp
- No public water or sanitary currently available
- Driving Times:
  - (+/-) 1.5 mi - 3 min. drive
    - Wycliffe Trailhead
    - Virgil Nishimura Park
    - Tassell Park
  - (+/-) 2 mi - 5 min. drive
    - Wisner
    - Fire Station #1
    - Tahoe
  - (+/-) 2.5 mi - 6 min. drive
    - Fire Station #2
    - Cascade Rec Park
  - (+/-) 5 to 6 mi - 10 min. drive
    - Peace Park
    - Michael McGraw Park

- Proximity to Residential Neighbor is not ideal and the existing Building is not of commercial quality
- Adding a small building adjacent to the existing could help provide for some current maintenance needs in the short term (5 years range), but this reduces the ability for the current site area to provide for the site program needs
- Single point of access via residential cul-de-sac not ideal for emergency access or large truck deliveries.
- Limited space for expansion without impacting natural areas of Park. There is a desire to keep this Park more natural.
- Could utilize existing building for seasonal/additional storage if main facility is located elsewhere
- Rec park would require a small new maintenance building if this site is chosen

Site P2: Cascade Township Park

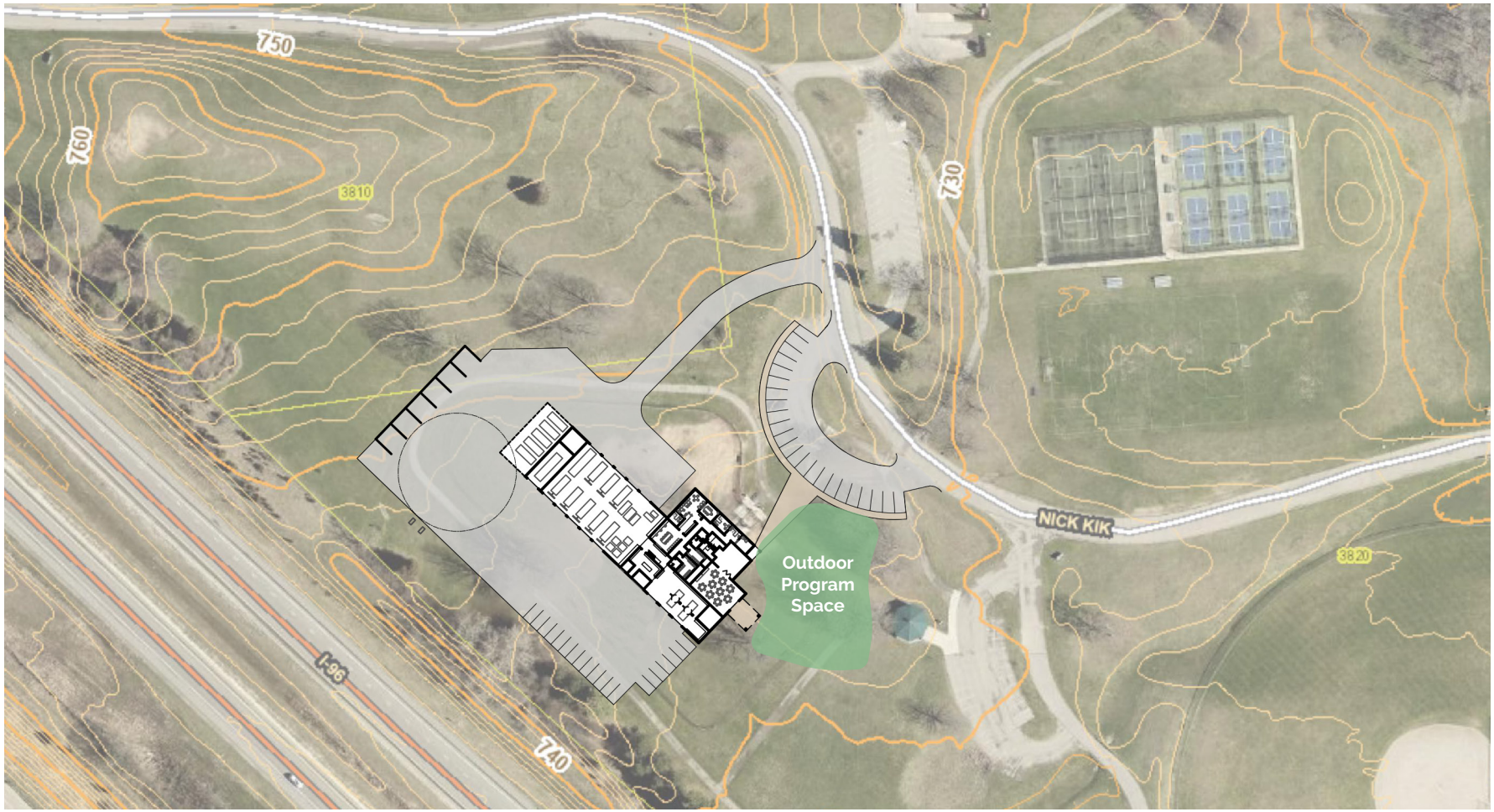


- Parcel 1 is technically owned by the County, but functions as part of the Park today.
- Single point of access to the site could cut off access in emergency scenario.
- Site offers best public visibility and access for a Community activity space for rec programming and access to rec coordinator's office
- Further analysis to prove cost effectiveness should be undertaken for any reuse/renovation of existing maintenance shed.

NOTES

- Zoning: R-1 (Special Use)
- Parcel 1: Kent County
- Parcel 2: Cascade Township
- Voting Precinct: #5
- GRR Airport safety zone
- No public water or sanitary currently available
- Small Federal Wetland area
- Driving Times (Parcel 1):
  - ≈.5 mi less - 1 to 2 min. drive less than Parcel 2
- Driving Times (Parcel 2):
  - ≈2 mi - 5 min. drive
    - Wisner
    - Fire Station #1
    - Tassell Park
    - Tahoe
  - ≈2.5 mi - 6 min. drive
    - Wycliffe Trailhead
    - Virgil Nishimura Park
  - ≈3.5 mi - 10 min. drive
    - Burton Park
    - Fire Station #2
  - ≈6 mi - 13 min. drive
    - Peace Park
    - Michael McGraw Park

Scenario P2-A: New Build - Location 'B'



Scale: 1"=150'

- Easiest access to Thornapple River Drive for deployment & deliveries
- Site topography offers great potential to screen the service portion of the building from public view
- Best location for highly visible Community Meeting & Programming spaces
- Relocate & expand dog park at Southeast corner of park

Scenario P2-B: New Build - Location 'B'

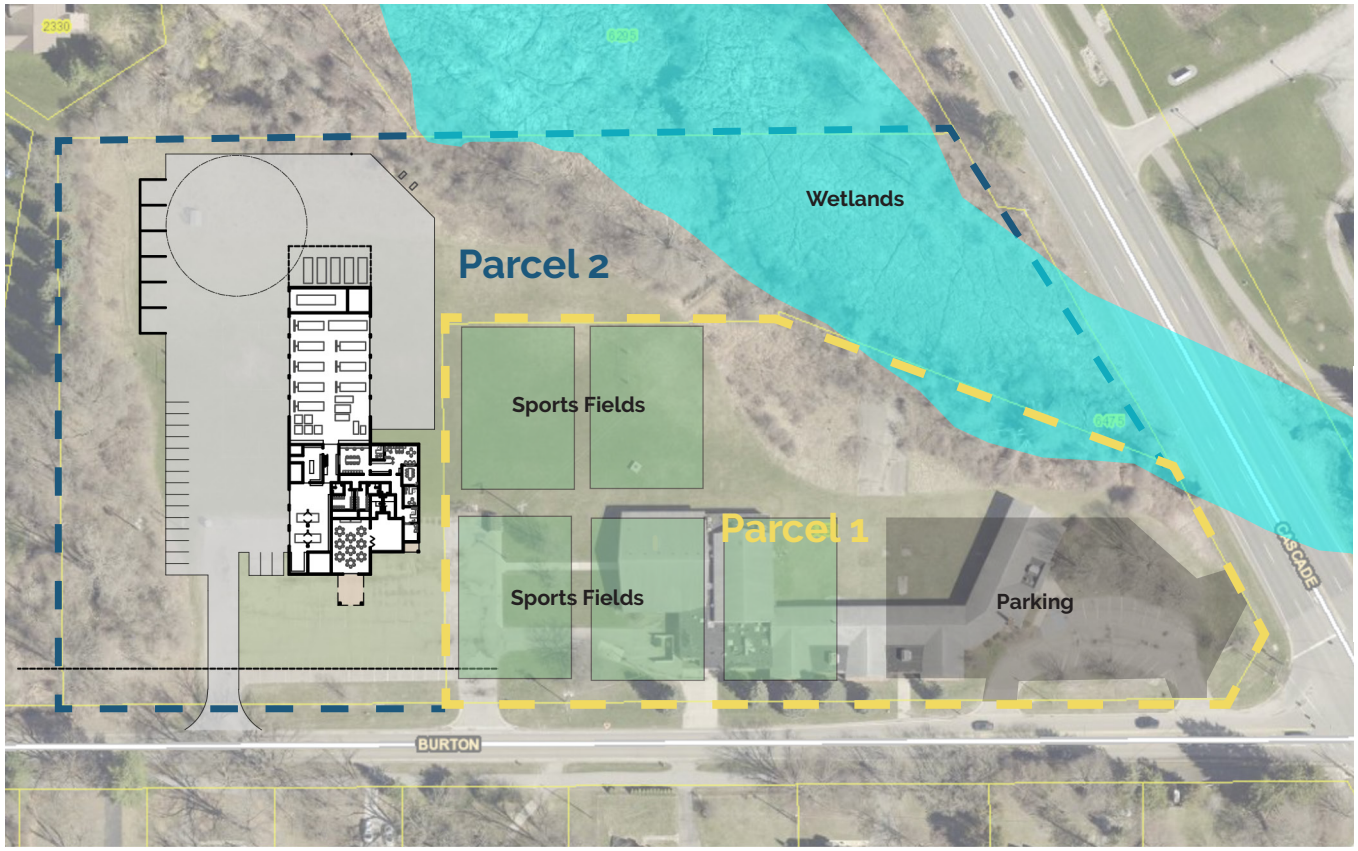


Scale: 1"=150'

- Maintenance & delivery vehicles will have to traverse length of the park to get to the facility, widen existing roads within the park for access.
- Location is tucked back & naturally screened
- Alternate location for Community Meeting & Programming spaces

Site P3: Forest Hills School Site - 6590 Cascade Rd SE

New Build + Community Sports Fields



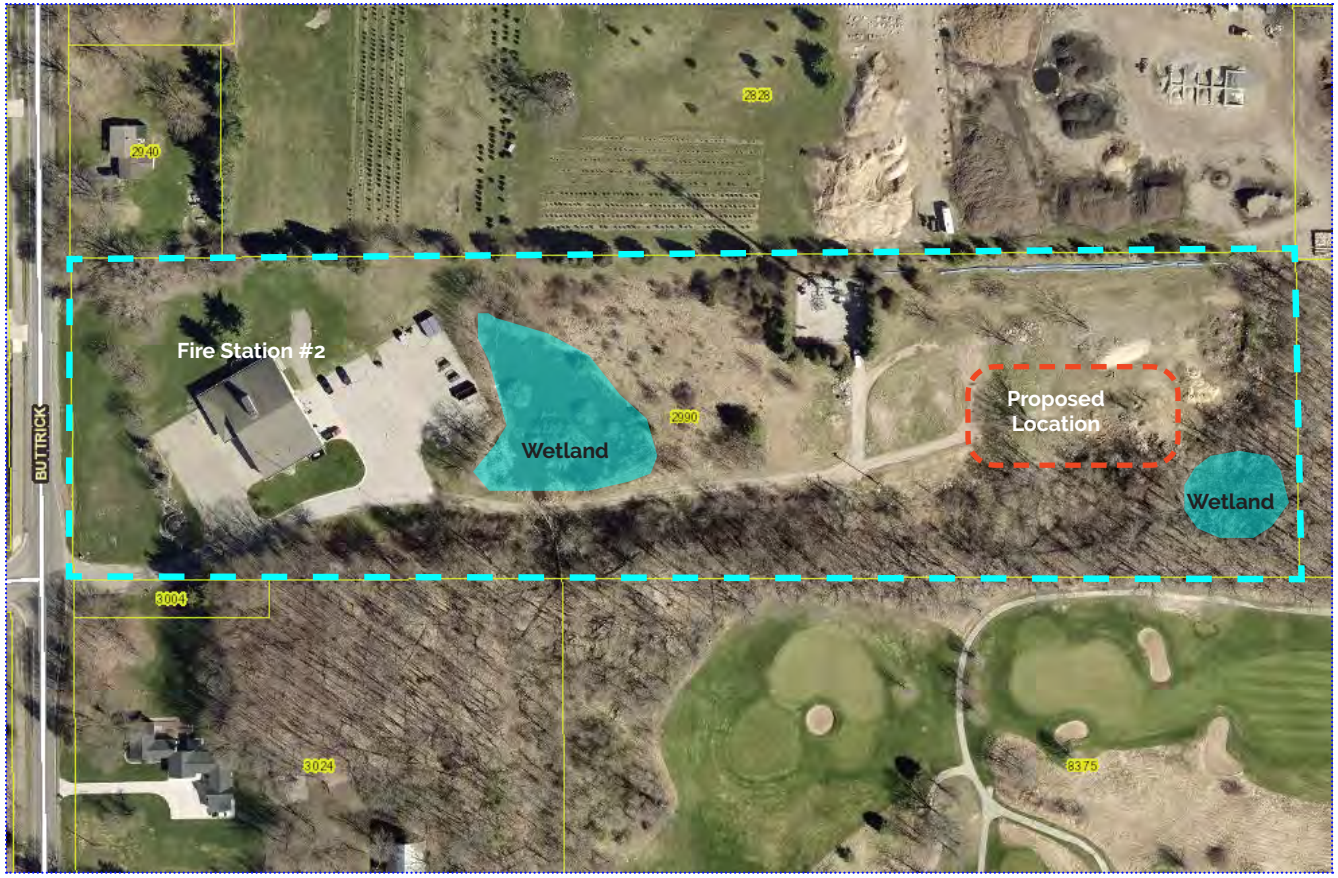
- Best driving proximity to all other Township properties.
- Good site access from multiple points
- Existing building not assessed - this study assumes it will be removed
- Parcels would need to be purchased.
- Significant portion of Parcel 2 covered by Wetlands
- Public Utility Connections
- Highly visible site
- Potential revenue & community partnership with Forest Hills School District that could be leveraged for support and maintenance of athletic fields
- Rec park would require a small new maintenance building if this site is chosen

NOTES

- Zoning: R-1 (Special Use)
- Ownership: Forest Hills P.S.
- Voting Precinct: Border of #1 & #2
- Public Water & Sanitary
- Federal Wetlands along Cascade Road
- Driving Times:
  - (+/-) 1.5 mi - 3 min. drive
    - Wycliffe Trailhead
    - Westdale Park
    - Tassell Park
  - (+/-) 2 mi - 5 min. drive
    - Wisner
    - Fire Station #1
    - Tahoe
  - (+/-) 2.5 mi - 6 min. drive
    - Burton Park
    - Fire Station #2
    - Cascade Rec Park
  - (+/-) 5 to 6 mi - 10 min. drive
    - Peace Park
    - Michael McGraw Park

Site P4: Fire Station #2 Site - 2990 Buttrick Ave SE

New Build



- Implications of increased traffic entering/exiting site @ 30th/Buttrick intersection is undesirable on top of Fire/Emergency traffic and the poor visibility in this area.
- Rear of Buttrick site is used by the Township for Recycling, raw materials & organic material storage - an alternate site would need to be identified.
- Lack of proximity to Cascade Village Center & other facilities is not ideal for deployment.
- Rec park would require a small new maintenance building if this site is chosen

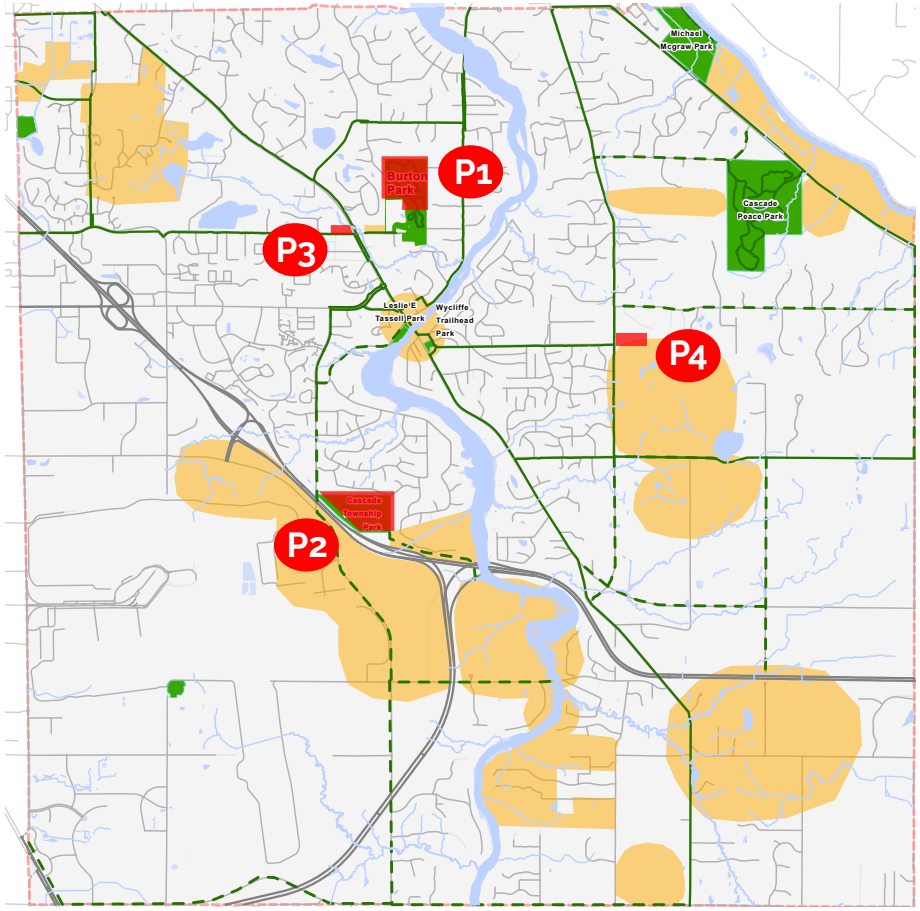
NOTES

- Zoning: Ag Rural Conservation
- Ownership: Cascade Township
- Voting Precinct: Border #3 & #4
- Public water available; no sanitary connection, outside utility boundary
- Federal Wetland Areas on Site
- Driving Times:
  - ≈2 mi - 4 min. drive
    - Wycliffe Trailhead Park
    - Westdale Park
    - Tassell Parks
  - ≈2.5 mi - 6 to 7 min. drive
    - Wisner
    - Fire Station #1
  - ≈3 mi - 5 min. drive
    - Peace Park
    - Michael McGraw Park
  - ≈3 mi - 8 min. drive
    - Burton Park via Windcrest
  - ≈4 mi - 8 min. drive
    - Cascade Rec Park
    - Tahoe



Parks & Facilities: Implementation Strategy

Magnitude of Cost



Park and Greenspace Target Areas
Cascade Township, Kent County, MI

Basemap Source: Michigan Center for Geographic Information, Version 17a
Data Source: GVMC 2021. McKenna 2024.

MCKENNA

Magnitude of Cost Key:

$	<$500,000
$$	$500,000 - $1.5m
$$$	$1.5m - $3m
$$$$	$3m - $6m
$$$$$	$6m - $10m
$$$$$$	$10m-$15m

Note: Ranges of cost are conceptual and are provided to support strategic decision making.

Site P1:

Cascade Burton Park

Burton St SE / Windcrest St SE

	Cost Scale:
1. Renovate 7200 SF exist. bldg + 11,000 SF Addition	**$$$**
1.B. Existing Facility to remain for Storage Only	**$**

Site P2:

Cascade Township Park

Nick Kik Dr SE

2-A. New Build: Location near park Entry - Northwest Placement	**$$$$$$**
2-B. New Build: Location at Rear of Park - Southeast Placement	**$$$$$$**
2-C. New Maintenance Shed	**$$**

Site P3:

Forest Hills School Site

6590 Cascade Road SE

3. New Build with Community Sports Fields	**$$$$$$**

Site P4:

Cascade Twp Fire Station #2

2990 Buttrick Ave SE

4. New Build: Rear of Site behind Fire Station #2	**$$$$**

Site Selection Guide

Below are the four sites studied as potential solutions for the Parks facility, along with the parameters and key analysis points for each option.

The sites are ranked for **Desirability** based on the ability of the proposed site/ solution to meet the needs identified in this master plan along with Township staff's feedback, with the 'Most Desirable' appearing to work best as a Long Term investment. If the goals, needs or timeline of investment are changed, the desirability of an option may also change.

Cascade Burton Park



Key Points:

- Parcel Is owned by Twp and will continue as a Park indefinitely
- Maintenance vehicle access through the residential neighborhood is not desirable
- The goal at this park is to prioritize nature over development. adding structures at this location is not desired
- Adding additional investment to the lower quality existing building does not seem prudent
- Small investments to expand the building could make sense if more time is needed until funding for the longer term facility is needed. (Ideally 5 years max)
- Ex building is good for the large storage needs for parks/ facilities that don't require frequent access
- A portion of the existing could serve as a pavilion/ activity space for park users w/ new facility elsewhere

Rank: Not as Desirable

Cascade Township Park



Key Points:

- Two options for locating the facility
- Coordination with Kent County for the use of location P2a is required
- Location offers a very good opportunity to provide an indoor activity space that connects to and supports rec programming
- Location would have minimal impact to a neighborhood
- The Park has ample space for current and proposed uses to accommodate this facility. Plenty of space for growth over time
- Facility can be served by municipal water and sewer

Rank: Both Locations Desirable

Forest Hills School Site



Key Points:

- Parcel is Not owned by Twp
- Great access. Site location is very desirable for maintenance deployment
- Site acquisition and building demolition costs need to be explored
- Could a partnership with the Schools to share the site and support the sports fields be an option?

Rank: Most Desirable

Cascade Twp Fire Station #2



Key Points:

- Parcel Is owned by Twp
- Site is currently used by parks for the temporary collection/ storage of bulk organic materials and other supplies
- Existing extent of wetlands may limit site use
- Site is outside of the Township utility growth boundary, suggesting development here is not desired
- This is a great site for Fire station 2. Need to ensure space for a distant future fire station 2 replacement on this site is preserved

Rank: Not Desirable

Strategic Questions/ Issues to be Considered

- Based on the Township's desire to provide programming for residents, what kind of space(s) is needed?
- Does the Township desire for Parks programming & community events to continue to grow in the type and frequency of offerings? Where is the best location within the Township for the Parks facilitated programs? Best location(s) for Community events? This is a key driver for determining the location of support facilities/ buildings.
- Due to the lack of opportunity at Wisner Center, does the Township desire to provide an indoor place(s) for residents to gather for their personal events or for more community organization events? How often might a space be used? What kind of space(s) is needed?
- In order to determine the solution direction for the Parks facility and the best location, consider the appropriate efficiency standard for the Parks Department to effectively deploy in all of the services they are asked to provide. Additional people/time versus more efficiency from facilities to provide for the range of daily activities that they perform. (Examples: warming trucks before use in winter conditions due to outdoor truck storage; lack of a dedicated service lift bay for vehicles adds time/ difficulty for service & routine maintenance, etc)

Due Diligence & Implementation Planning

Next Steps: Below are items to be considered as the evaluation and planning for facility improvements for Parks/ Facilities is considered:

Community Feedback: Consider engaging the community for feedback on gathering space use & types of spaces desired. This would better inform the best location for this function and the type of facility required to meet the needs.

New or expanded facility conceptual design and budgeting: The test fit plan presented in this planning document is not a formal building design. More detailed design work and analysis is required to provide direction for the actual required design and size of any new facilities. This includes site analysis, utility support investigation, more detailed impact analysis to neighbors and other surrounding uses, etc. This analysis would then permit a more robust budget analysis to determine the actual funding which would be required. Consider the annual escalation of costs in determining budgets based on the expected actual construction implementation timeline.



Township Administration

Needs Defined

Strategic Plan Alignment

A high priority identified through community engagement as part of Cascade's strategic plan is to create and develop a vibrant, connected Cascade Village that strengthens the Township's economic vitality and community identity. A civic presence in a downtown commercial hub can act as an anchor that transforms a purely business-driven district into a vibrant, multi-dimensional community center. While commercial spaces drive financial activity, civic institutions—such as Township Halls, Libraries, community centers, and public parks—help to provide the social fabric and stability necessary for long-term viability of development. The consultant team considered this directive and presents a few options which help to maximize this goal with a potential future Township Hall investment.

Evaluation of Existing Facilities

Due to the plans for new Fire Station 1 in 2020, the Township offices could no longer remain on that site. The current building used by the Township's administration team, Clerk, Treasurer and building department was purchased as a shorter term solution. It was remodeled at that time to meet the Township's operational needs and has served the community well. While the building is in satisfactory physical condition, this current evaluation revealed several key deficiencies from a functional perspective. The facility will not accommodate additional growth in staff or services, the building and site are both at capacity, there is insufficient space for the many daily meetings, all creating logistical & planning issues for both staff and visitors. Additional concerns include limited visibility and accessibility, inadequate parking for large vehicles, security and acoustic privacy deficiencies, inefficiencies during elections for the Clerk's office, and aging HVAC infrastructure. The building's layout and workflow does not permit the teams to do their best work. Some issues such as security, lack of meeting space, and limited capacity may be able to be solved in the short-term through minor renovations & investment in furniture solutions - especially if Parks Staff is able to permanently move to their own facility. The organization desires space for interns and capacity to add future staff. Ultimately, additional space and a revised layout is the key to addressing these operational challenges. Expanding the current building is not feasible given the constraints of the existing site. The following page presents evaluations of the existing Township office building followed by the primary program space needs identified. A detailed program of spaces can be found in **Appendix C.**

Workgroup Programming Sessions

Workgroup programming sessions were conducted with the following workgroups to clarify their current and future space needs and flow including: current staffing & anticipated growth, public service delivery flows and needs, tasks, and interdepartmental workflows:

- Township Management
- Finance / Treasurer
- Clerk
- Assessing
- Economic Development (DDA)
- Building Inspections
- Planning & Zoning
- Engineering

5920 Tahoe Ave SE Facility Assessment

12,300 SF

Built: 1985, Purchased & Renovated: 2020

The building is a one-story, slab on grade, masonry walled building with a sloped shingled roof. There are flat roofs on a penthouse mechanical area. The site is three acres of land with the building & parking lot. Building is in fair condition and is well-maintained. There are some ongoing maintenance issues with VAV boxes. The building does not have the appearance of a Civic building.



Overall Building Condition: Satisfactory



Operational Challenges

- Location is somewhat hidden, confusing to access, lacking visibility to the community, lack of parking for large vehicles
- Building is nearing capacity in its current state without alteration
- No space to accommodate Committee/Trustee Meetings at current footprint. Creates inefficiencies for Administrative staff.
- Lack of meeting space - current medium conference room over 90%+ utilized.
- Lack of capacity for elections equipment, storage or polling on site drives inefficiencies for public & elected officials

Functional Deficiencies

- Lack of security infrastructure at public service desks
- Acoustic engineering is missing. Excessive sound propagation causes lack of auditory privacy
- HVAC systems reaching end of life & will require replacement
- Current layout creates workflow inefficiencies for staff and visitors.



Assets / Opportunities

- Full Building Generator recently installed
- Opportunities to increase short-term capacity through furniture systems

Defining Space Needs & Priorities

Findings from the site tour, workshop and workgroup programming sessions were documented and analyzed to identify operational challenges, as-well-as opportunities for cross-department efficiencies that could be implemented. Industry standard square footages for workstations, offices & meeting rooms along with the planning team's deep workplace experience resulted in a program of spaces and a diagram of the flow of spaces to maximize function.

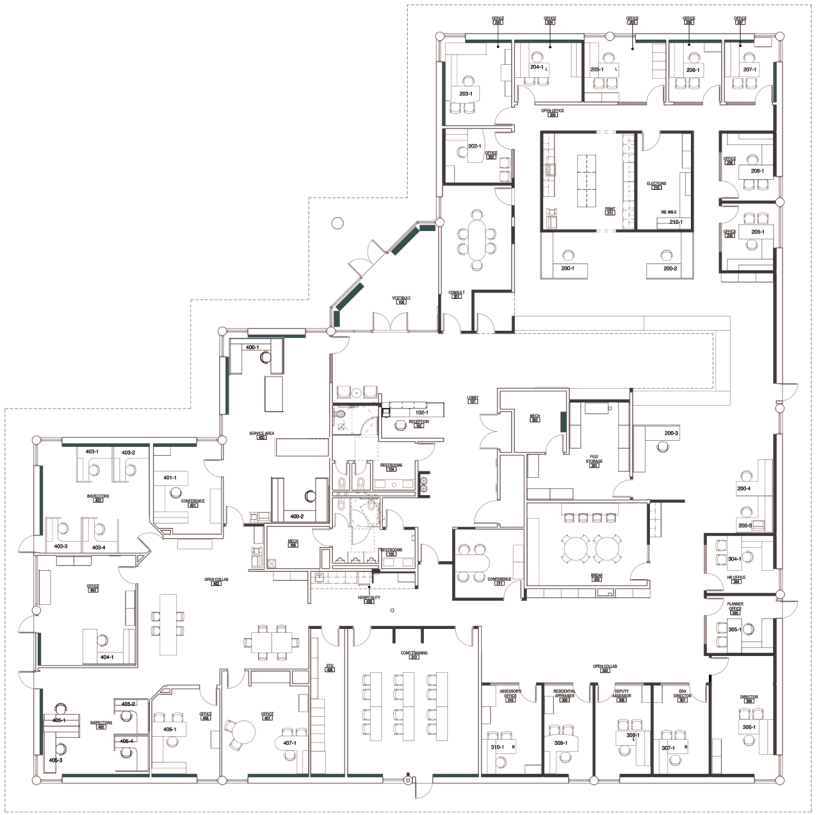
Formal Public meetings, Township Board business, polling equipment & storage archives for the Township are currently housed at the Wisner Center due to lack of space to accommodate them in the current facility.

The following key priority needs have been identified. See **Appendix C** for the complete Space Program document.

- Ideally for staff and elected official access, support and efficiency, the Public Meeting Space for Township Board & Committees would be adjacent to the admin team (same building preferred, or same site would be an improvement). Also ideal if the space and building (toilet rooms, lobby) could support larger community gather functions/ events
- Closed session meeting space adjacent to Board Meeting Space.
- Expanded dais seating for Township staff
- Storage space for polling equipment & activities proximal to Clerk staff for efficient management during Elections
- More functional and secure reception workstation & connection to staff spaces for support
- Security measures at public services desks (glazing, emergency call buttons) for all groups
- Improved flow and visibility of team within workgroups
- Focus rooms for those working in open stations for zoom calls and quiet focus work
- Additional Conference Room for 6-8 people to meet with public
- Additional small meeting spaces and less single user enclosed offices

(Space Needs & Priorities Continued)

- Additional workspace or hoteling stations for interns & seasonal staff
- Additional staff toilet rooms
- Additional visitor parking
- Parking that accommodates contractor trucks w/ trailers (Building Department visitors)



5920 Tahoe Ave SE - Existing Plan

12,300 SF

Scale: N.T.S.

Operational Logistics

As election requirements and early voting demands continue to place increased demands on local facilities, churches and schools may be increasingly limited or less willing to serve as polling locations. The Township currently relies heavily on the Wisner Center as its primary early voting location and on various private organizations due to lack of Township-owned alternative spaces. Incorporating a dedicated public meeting space within a new Township facility that can also function as a polling location would provide a Township-controlled alternative for election activities, alleviating pressure on the Wisner Center's resources.



Township Administration

Scenario Analysis

Based on data collected from the initial fact-finding & space needs analysis, and alignment with Township goals & solutions objectives, various scenario types were considered against a lens of future growth, function, community focus, efficient service delivery, and long-term value.



RENOVATE



EXPAND

Renovation or Expansion of Existing Administration Office Building

The existing Administration Building site does not have capacity for expansion The site is also largely land locked except for a small area to the south adjacent to a vacant parcel. Expansion in this direction was studied in Option T1. Please see the following pages for details.

An existing office building on the same street as the current Admin Building was studied for acquisition and renovation, Option T2. This site and building can accommodate the program. However, this building is twice the area required fro the Township Hall space needs. About 17,000sf of space would be unallocated if purchased. This could help fill the need for community meeting spaces and potentially a future Senior Center, but even these added program spaces do not require that much space.

Replace & Relocate - New Township Hall



REPLACE/RELOCATE

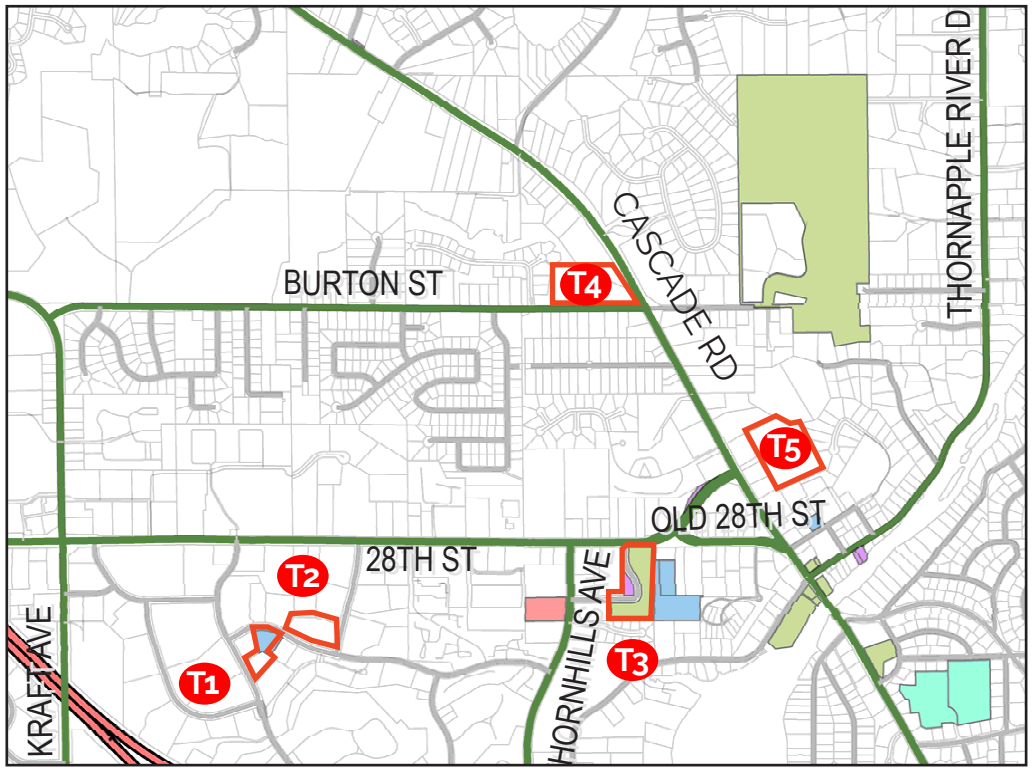
A new purpose-built Township Hall could incorporate a dedicated Board Meeting Space with the Administration offices and provide space for the elected officials and the high need of voter equipment storage and set up space. A new facility provides the opportunity to design for long-term use, durability, functionality, efficiency and growth. A new facility presents the Township with an opportunity to support many of the most important community goals presented in the 2024 Master Plan, the Parks Master Plan and the Strategic Plan. Option T3-A studied an opportunity to merge these key priorities, including:

- Create a Downtown 'Village' feel
- Develop the public domain following Village Design standards
- Utilize infill development to maximize the use of land within the utility boundary
- Create a Community Gathering Space
- Accommodate the growing community
- Use existing Township owned land more efficiently

For the purposes of test fitting sites for new construction, a conceptual facility plan was developed to communicate key adjacencies, circulation/flow, and overall space allocation. See **Appendix D** for a diagrammatic Concept Floor Plan.

Sites Studied

Five sites were studied for this report. Only Site 3 is owned by the Township. Other sites were identified as vacant, for sale, or identified in previous Township planning studies for future development.



© Cascade Township

Legend

Township Owned Parcels

TYPE

- ADMIN
- CEMETERY
- FIRE
- PARK
- VACANT

Site T1: — Page:

Current Facility + Adjacent Vacant Parcel — 41

5920 Tahoe Drive SE

3030 Charlevoix Drive SE

1. Renovate existing building + 5,000 SF Addition — 42

Site T2:

Existing Office Building for Sale — 43

2959 Lucerne Drive SE

2. Purchase + Renovate Existing Building

Site T3:

Cascade Township - Library Adjacent — 44

Jacksmith Ave SE / Thornbrook St SE

3-A. New Build: Location adjacent to Library w/ gathering Space — 45

3-B. New Build: Location at West end of Site — 46

Site T4:

Forest Hills School Site — 47

6590 Cascade Road SE

4. New Build: Shared Campus with Parks Facility

Site T5:

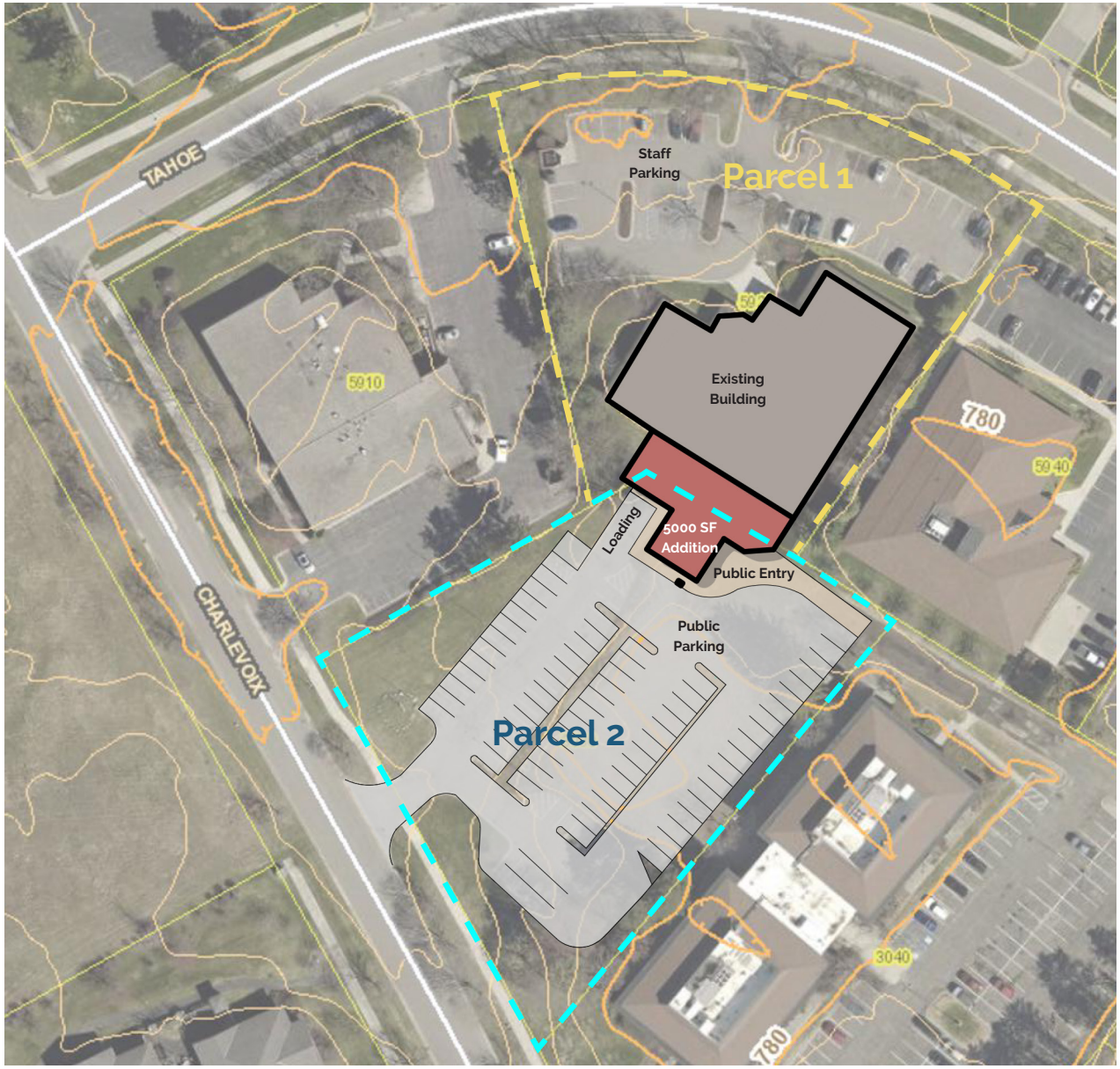
Cascade Retail Center — 48

6797 Cascade Rd SE

5. Purchase/Occupy Existing Building or New Build with the Shopping Plaza as it is further developed as part of the Township Village Master plan

Site T1: 5920 Tahoe Drive SE + 3030 Charlevoix Dr SE

Renovate Existing Building + 5000 SF Addition



Scale: 1"=100'

NOTES

- Zoning: Pud-39 Centennial Park
- Parcel 1 Ownership: Township
- Parcel 2 Ownership: Private
- Voting Precinct: #5
- Future Land use designated as Community Residential

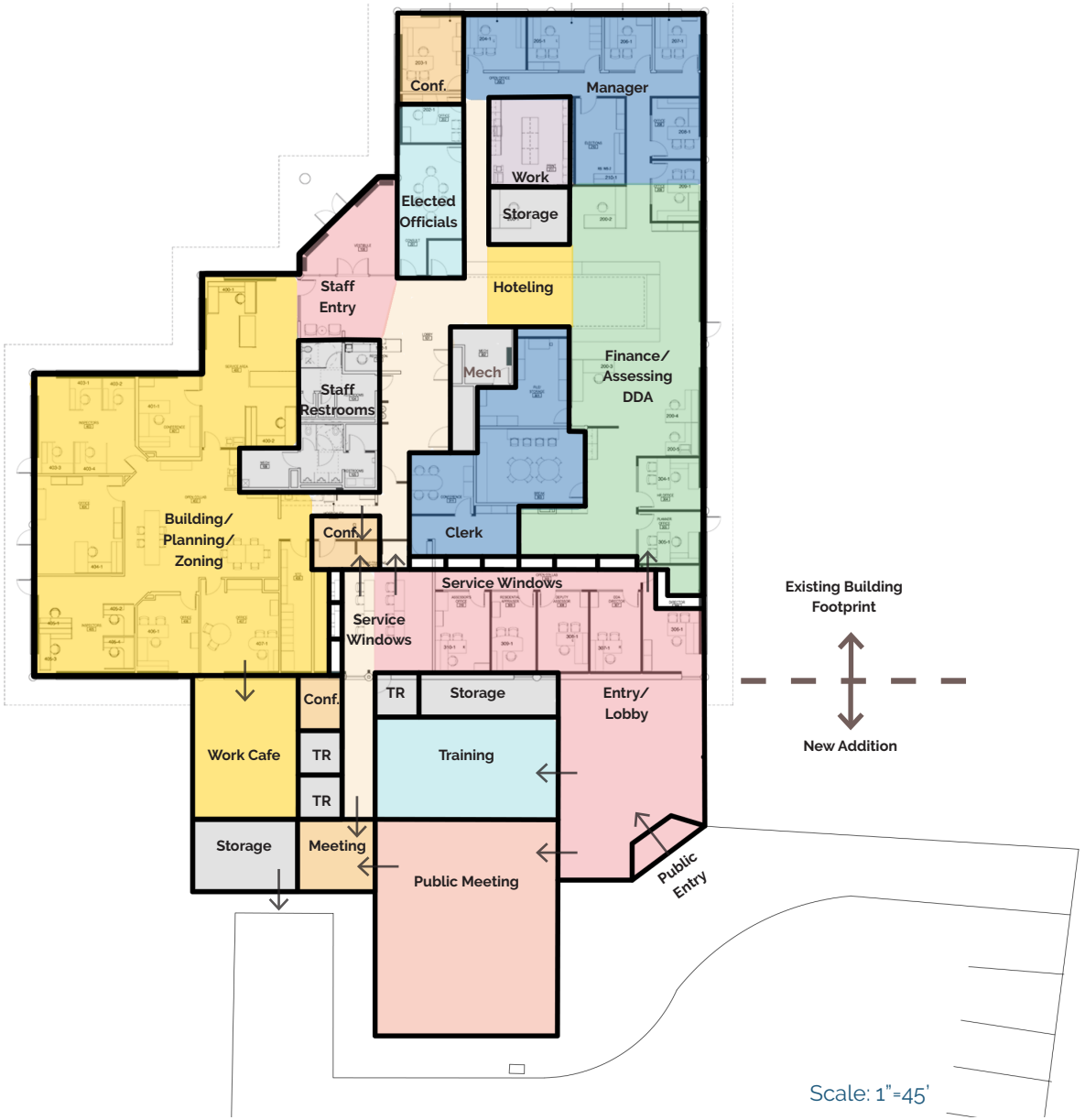
- Existing Lot is not large enough to expand building footprint.
- Scenario involves purchase of existing vacant adjacent lot to allow for an addition to the existing building.
- Shape and constraints of the expanded site will continue to limit options for any additional modifications or future growth.
- The site location is on the outskirts of the Township's Commercial center in an area that is identified as more Residential leaning land use moving forward.
- Public and staff parking was separated. May cause confusion for public.
- Additional site technically accommodates the required program of space and site needs, but the building flow is not ideal

Site T1: 5920 Tahoe Drive SE + 3030 Charlevoix Dr SE

Concept Plan: Renovate Existing Building + 5000 SF Addition

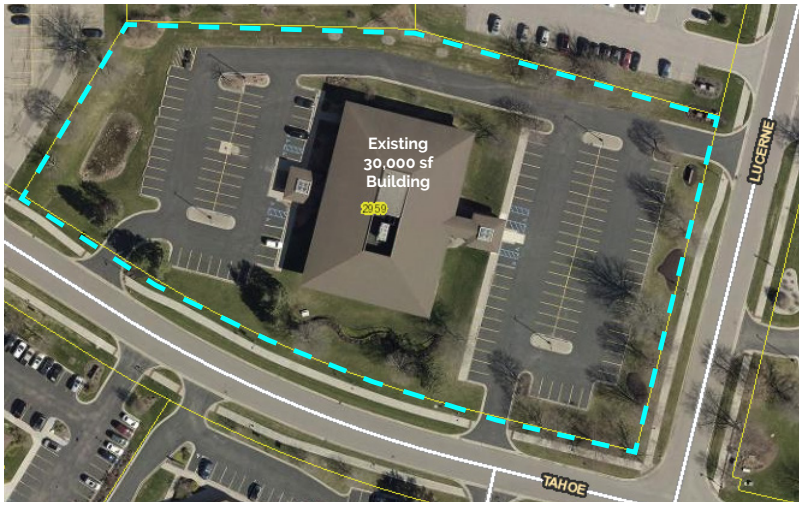
17,300 SF total

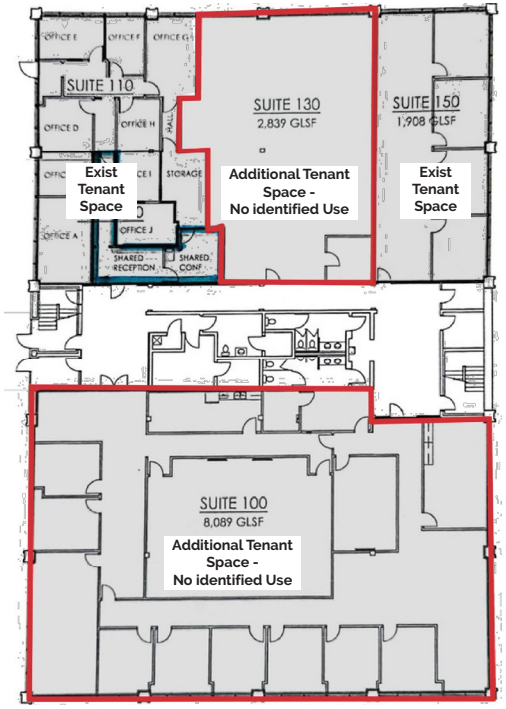
- The interior of the existing facility would require a significant modification, causing team displacement during construction
- Due to the limited width of the adjacent parcel that physically touches the existing parcel, a layout that actually works for the required flow and function would be highly challenging to achieve
- The resultant building would be land locked without opportunity for further future growth



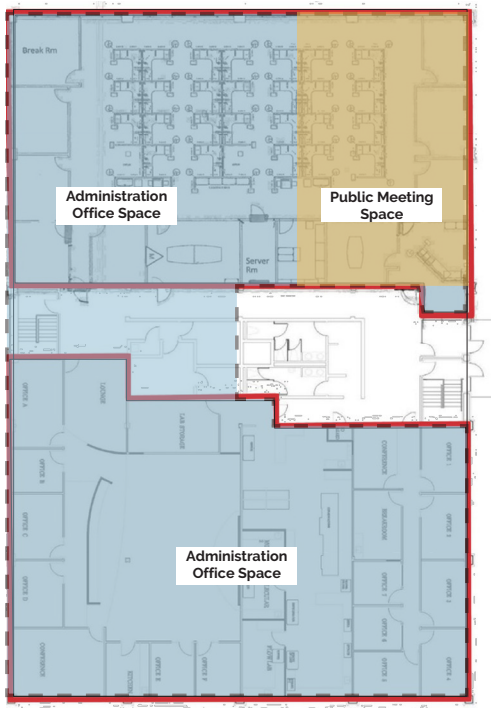
Site T2: 2959 Lucerne Drive SE

Renovate Existing Building





LOWER LEVEL 17,600 SF



UPPER LEVEL 17,600 SF

Scale: N.T.S.

NOTES

- Zoning: Pud-39 Centennial Park
- Ownership: Privately Owned
- Voting Precinct: #5
- Existing Building: 30,000 sf, 2 occupied suites on Lower Level

- Property is currently listed for sale or lease.
- The site location is on the outskirts of the Town's Commercial center in an area that is identified as a Residential land use moving forward.
- Property is large enough to accommodate future expansion & features a significant increase in parking.
- Site has significant grade change, each level has accessible walkout to grade, but existence of elevator for accessible access between floors is not confirmed.
- Existing building was not evaluated but appears to be a modern commercial office in relatively good condition.
- The lower level could be leased to generate revenue for the Township if appropriate tenants could be identified
- The building and site provide long term growth for space needs. Space should be evaluated depending on the identified use

Site T3: Cascade Library Adjacent Site - Thornbrook/ Jacksmith (Village Drive)

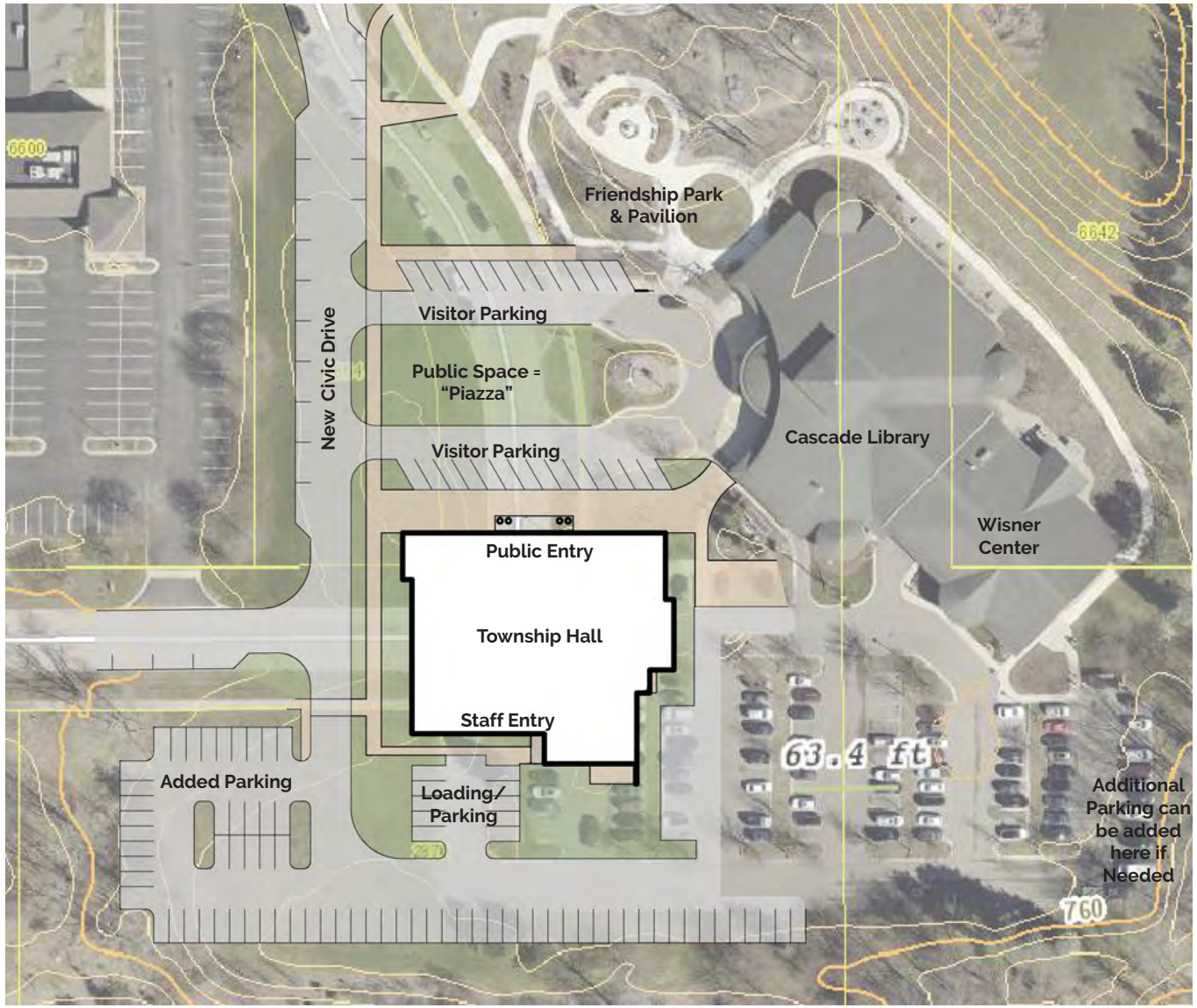


NOTES

- Zoning: PUD-36 Noto
- Ownership: Cascade Township
- Voting Precinct: #5
- Falls within designated Cascade Village Zone

- Property already owned by Township
- Area is adjacent to the 'Upper Village' zone as identified in Cascade planning for further development of the Cascade Village Vision
- Proximity to other Township facilities - Library, Wisner Center, Friendship Park, Fire Station #1 - Uniquely reinforces the Civic Center of the Township/ Village
- Location supports Township goals of infill development & centralized walkable infrastructure

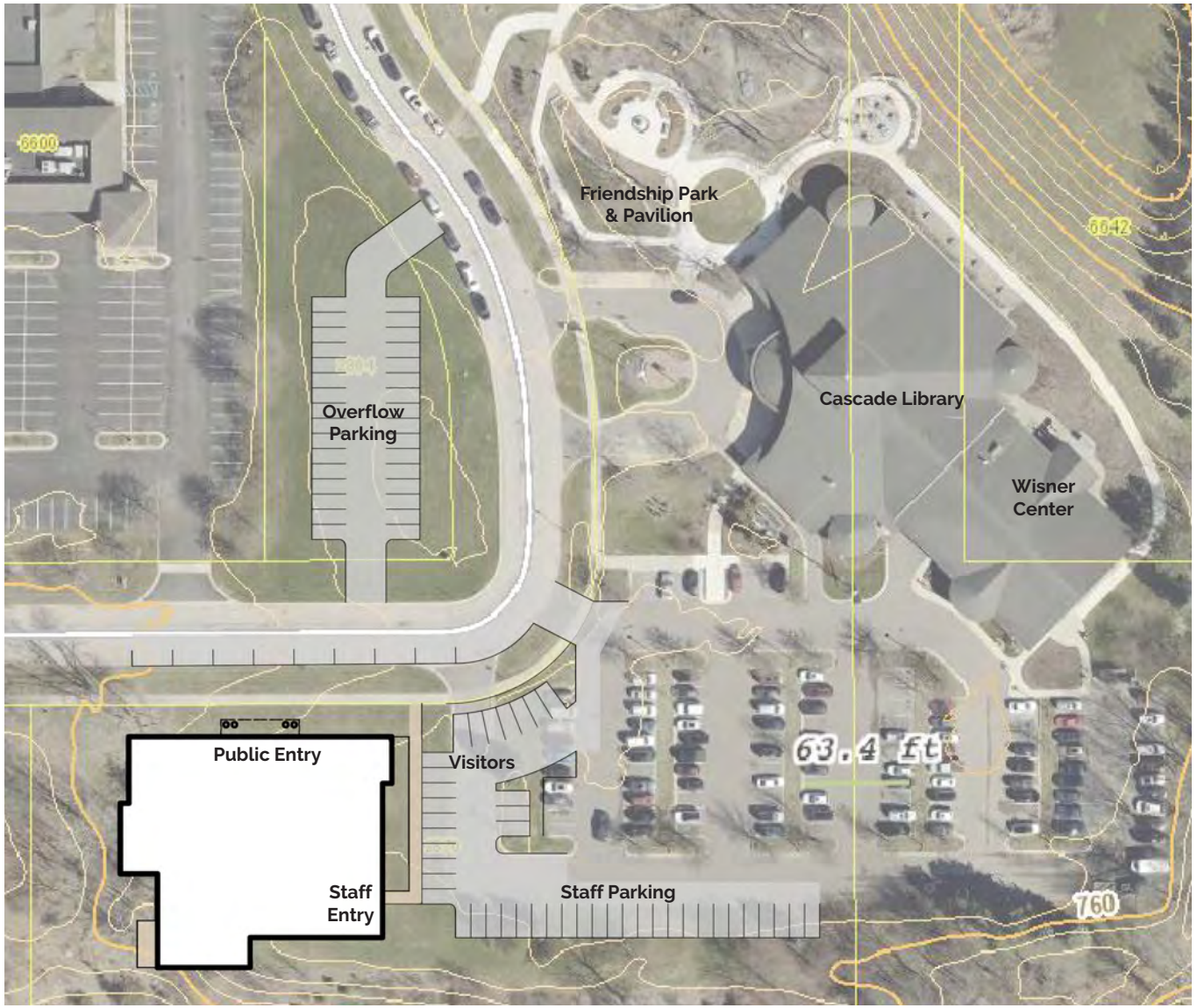
Scenario T3-A: New Build + 'Town Square' Plaza



Scale: 1"=100'

- Proximity to Cascade Library and Wisner Center creates a spatial relationship and visual connection between the buildings - creating a Township 'campus'.
- Relocation of street & creation of Public space & Town Square provides a new 'heart' of the Upper Village that can expand on the amenities of Friendship Park and surrounding buildings.
- The oval drive around the public space could be closed off for events to increase available space. Example = farmer's markets, vendor fairs, food truck rallies, etc.
- Rework of Jacksmith Road would be required to create the public square.
- Surface parking lots are visually removed behind the buildings for a more pedestrian-friendly urban infrastructure while still prioritizing vehicle access.
- Site offers opportunity for building expansion in the future

Scenario T3-B: New Build - Location 'B'

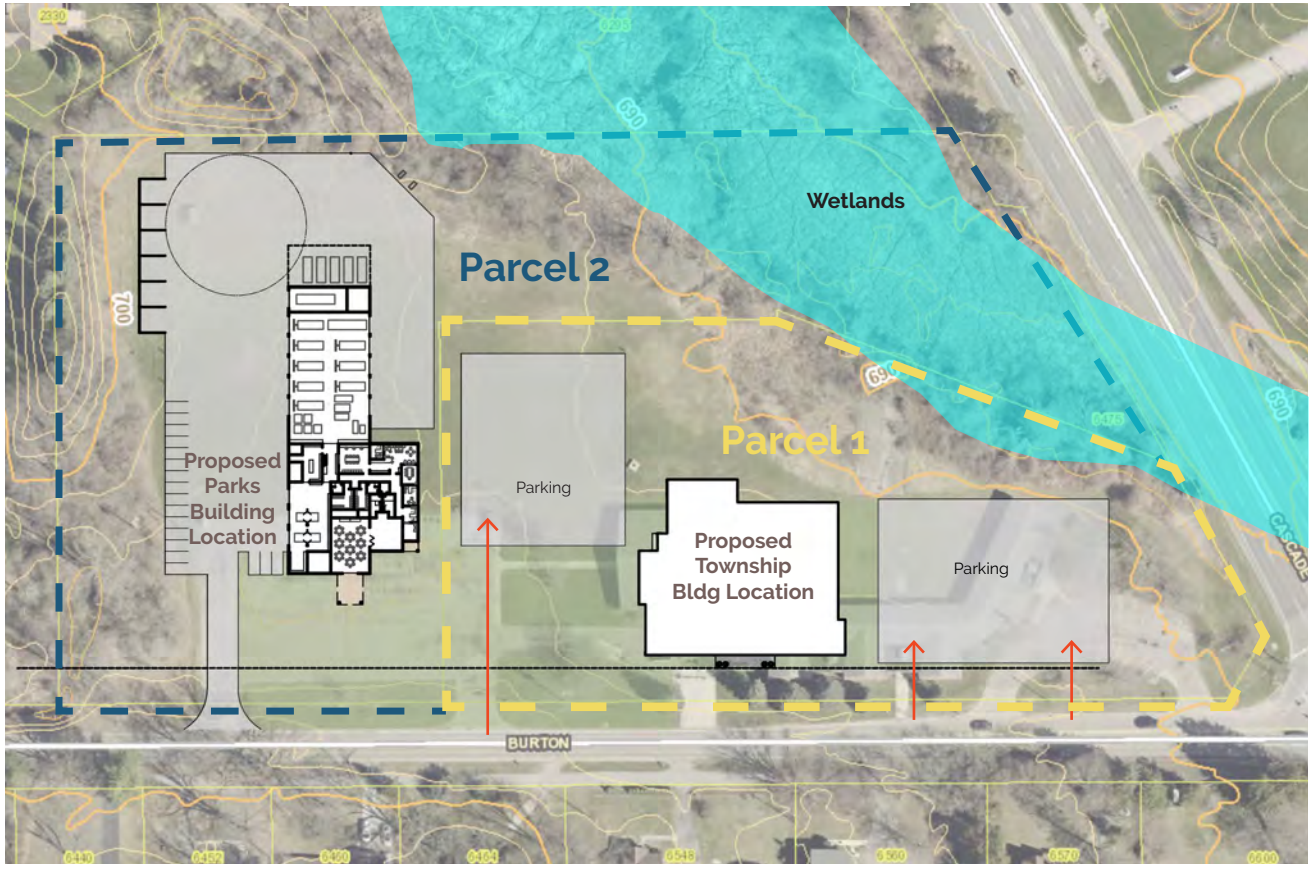


Scale: 1"=100'

- Proximity to Cascade Library and Wisner Center is still beneficial, but not visually connected as part of an urban fabric.
- Vehicle parking is prioritized over pedestrian access & walkability.

Site T4: Forest Hills School Site - 6590 Cascade Rd SE

New Build: Shared Campus with Parks Facility



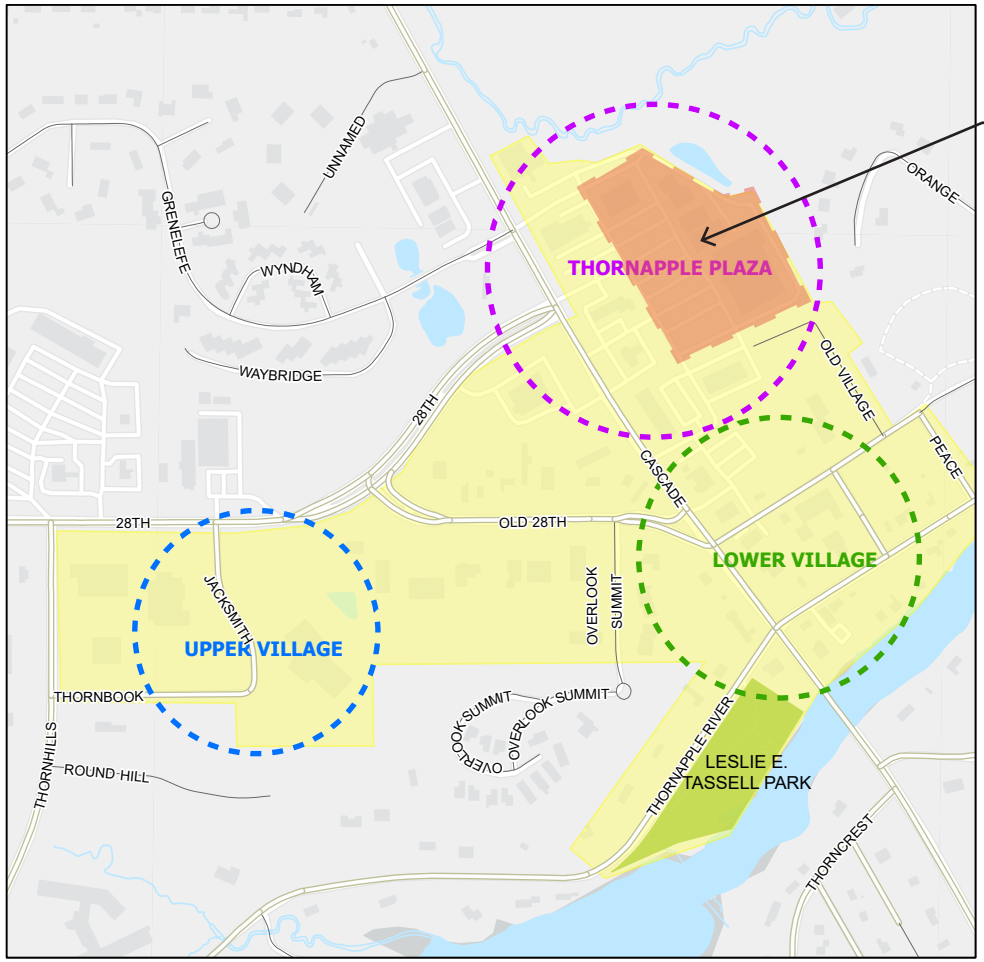
NOTES

- Zoning: R-1 (Special Use)
- Ownership: Forest Hills P.S.
- Voting Precinct: Border of #1 & #2
- Public Water & Sanitary
- Federal Wetlands along Cascade Road

- Site owned by School Board. Parcels would need to be acquired.
- Good site access from multiple points & highly visible
- The Existing building condition not assessed as part of Master plan Scope - reportedly in poor condition
- This property could adequately service as a Township campus to fit both Parks and Administrative facilities for a Township 'hub'. But the sports fields would not fit as desired in the Parks only scenario
- The site location is in a designated residential land use area - placing Town Hall here does not reinforce the development of the downtown 'Village' as a commercial & civic center

Site P5: Cascade Retail Center - 6707 Cascade Rd SE

Future Development at Cascade Village



Cascade Village Area - 2022 Strategic Plan

Cascade Charter Township, Kent County, Michigan

Data Source: Michigan Geographic Data Library 2022. Grand Valley Metropolitan Council REGIS 2022. McKenna 2022.

MCKENNA

NOTES

- Zoning: PUD-19 - Thornapple Center
- Ownership: Privately Owned
- Voting Precinct: Border of #1 & #2
- Public Water & Sanitary

- A "parcel" for development does not currently exist. Planning and negotiations with the property owner could be extensive
- Thornapple Center is identified within the Cascade Village Future Land Use & 2022 Township Master Plan as a key area for possible redevelopment into a mixed-use town center with commercial, residential, business & other amenities.
- Cascade Township could build or buy office space within the future development to regain a dynamic presence in the center of Village life and activity.



Township Administration
Implementation Strategy

Strategic Questions to be Considered

- Is the benefit of combining the Township's primary Business Meeting space and the Administration team and Elected Official's offices into the same facility a key decision driver?
- Is the benefit of a Township Hall as a Civic building in a location that supports the Village Concept and enhances a public gathering space a key decision driver?
- Is it important for the Township Hall to be a symbol of the values and direction of the community and to serve as a support space for community events / activities?
- Based on Township age demographics, are spaces needed for expansion of senior programming?

Due Diligence & Implementation Planning

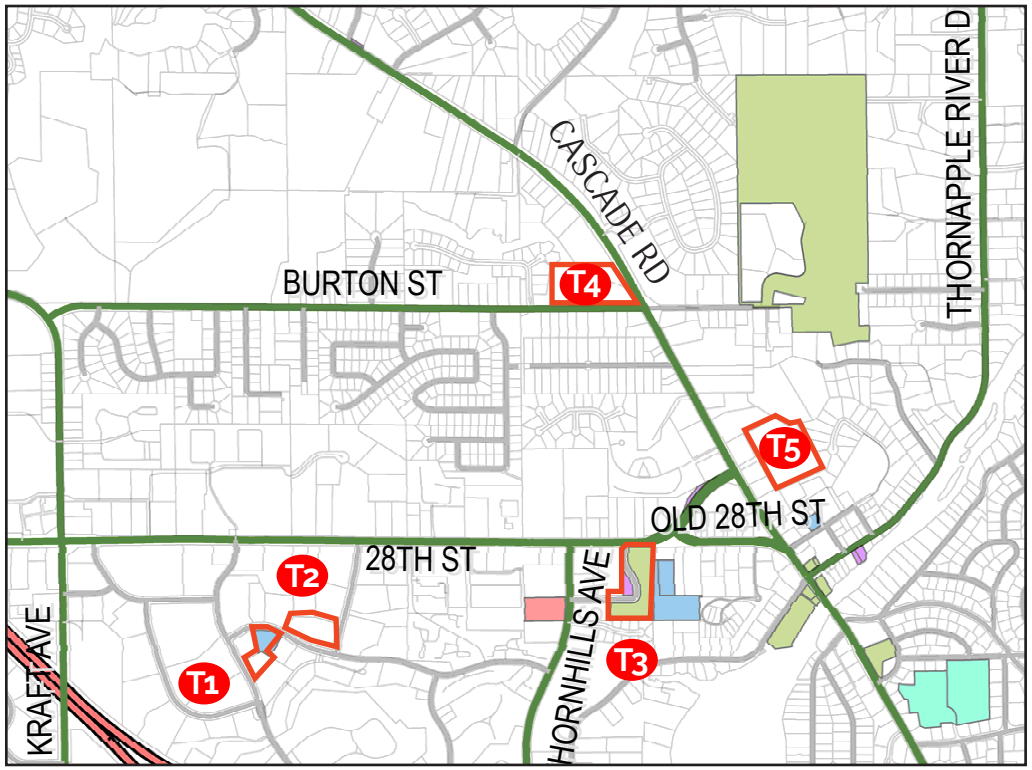
Below are items to be studied as the planning & evaluation for facility improvements for Township Hall is considered:

Community Feedback: Consider engaging the community to seek feedback regarding community use meeting spaces, spaces and activities for seniors, programming for parks and recreation, the display of history, and outdoor community events that a new community gathering place might need to support.

New or expanded facility conceptual design and budgeting: The test fit plan presented in this planning document is not a formal building design. More detailed design work and analysis is required to provide direction for the actual required design and size of any new facilities. This includes site analysis, utility support investigation, more detailed impact analysis to neighbors and other surrounding uses, etc. This analysis would then permit a more robust budget analysis to determine the actual funding which would be required. Consider the annual escalation of costs in determining budgets based on the expected actual construction implementation timeline.

Master Plan Direction and Phasing: This master plan is a tool for discussion and valuation of the many options available to the Township to ultimately decide on a direction and incorporate that direction into the Township's Strategic Action Plan. The goal is to decide on a clear roadmap for future capital investment in Township facilities. This planning study is intended to provide enough information to allow the Township and its stakeholders to establish priorities and identify next steps while recognizing that implementation may occur over varying timeframes. High-priority needs may warrant near-term action, while other projects - or components of projects - may be phased over five, ten, or more years. The longer the timeframe for implementation, the more likely the plan will evolve based on changing needs, community growth and available funding. Additional studies and analysis are likely needed to arrive at a final direction.

Magnitude of Cost



© Cascade Township

Magnitude of Cost Key:

$	<$500,000
$$	$500,000 - $1.5m
$$$	$1.5m - $3m
$$$$	$3m - $6m
$$$$$	$6m - $10m
$$$$$$	$10m-$15m

Note: Ranges of cost are conceptual and are provided to support strategic decision making.

Legend

Township Owned Parcels

TYPE

- ADMIN
- CEMETERY
- FIRE
- PARK
- VACANT

Site T1:

Current Facility + Adjacent Vacant Parcel

5920 Tahoe Drive SE

3030 Charlevoix Drive SE

1. Renovate exist. Building + 5,000 SF Addition — **$$$$$**

Site T2:

Existing Office Building for Sale

2959 Lucerne Drive SE

2. Purchase + Renovate Existing Building — **$$$$**

Site T3:

Cascade Township - Library Adjacent

Jacksmith Ave SE / Thornbrook St SE

3-A. New Build: Location adjacent to Library + New Town Square — **$$$$$$**

3-B. New Build: Location at West end of Site — **$$$$$$**

Site T4:

Forest Hills School Site

6590 Cascade Road SE

4. New Build: Shared Campus with Parks Facility — **$$$$$$**

Site T5:

Cascade Retail Center

6797 Cascade Rd SE

5. Purchase/Occupy Existing Building or New Build with the Shopping Plaza as it is further developed as part of the Township Village Master plan — **Varies**

Cost Scale:

Site Selection Guide

Below are the five sites studied as potential solutions for Township Administration facility, with the parameters and key analysis points for each option.

The sites are ranked for **Desirability** based on the ability of the proposed site/ solution to meet the needs identified in this master plan along with Township staff's feedback, with the 'Most Desirable' appearing to work best as a Long Term investment. If the goals, needs or timeline of investment are changed, the desirability of an option may also change.

Current Facility + Adjacent Parcel

5920 Tahoe Drive SE & 3030 Charlevoix Drive SE



Key Points:

- The extensive renovation required to flip how the building functions is likely not worth the investment based on the long term site limitations
- The resultant layout is likely not to be as serviceable as other options
- The adjacent site is not currently controlled by the Township, further investigation is required
- With a small investment in furniture and minor physical tweaks, this facility may continue to serve the Township in the short term (5 years max)
- With the desire for more residential development within the utility boundary, the adjacent site seems to serve the Township better for a multifamily use
- This location does not add to the Village feel and the building is not Civic Architecture

Rank: Not Desirable

Existing Office Building for Sale

2959 Lucerne Drive SE



Key Points:

- Property acquisition required
- Existing building has enough space to accommodate all of the current program and future growth
- Building requires extensive renovation to meet current needs
- A facility analysis has not yet been performed. Condition unknown
- The building has double the area required for the current program, the entire lower level would be unused (no specific use has been identified as part of this study). However, this space would need to be heated & maintained
- Potentially a lower cost than building new, but the acquisition cost is high as compared to the amount of space that is needed

Rank: Questionable: Requires further study

Cascade Twp - Library Adjacent - A

Jacksmith Ave SE / Thornbrook St SE



Key Points:

- No property acquisition required
- Sale of existing Tahoe Admin building would generate revenue
- New building can be designed to be exactly what is needed
- New investment reinforces existing Library investments and enhances Jacksmith as a Civic Drive
- New "piazza" gathering space in front of proposed Township Hall and Library becomes a great expansion of Friendship Park for Community events
- The building facilities can help support community events (staging, toilet rooms, meeting room use)
- Requires a section of Street relocation

Rank: Desirable

Cascade Twp - Library Adjacent - B

Jacksmith Ave SE / Thornbrook St SE



Key Points:

- No property acquisition required
- Sale of existing Tahoe Admin building would generate revenue
- New building can be designed to be exactly what is needed
- The site likely prevents much future expansion due to grade change to west and south
- Building positioned with property lines to west and south prevents ideal access
- Wisner Center parking lot can expand to the East if additional parking is needed

Rank: Somewhat Desirable

Forest Hills School Site

6590 Cascade Road SE



Key Points:

- Property acquisition Required
- Site has sufficient space for the program in the short and long term
- New building can be designed to be exactly what is needed
- Site could provide some efficiencies with Parks team if both located on this site together.
- The site is not large enough for Parks, Township Hall **and** Sports Fields, which diminishes the value of this location option for Parks
- Site location investment does not support Village planning goals

Rank: Somewhat Desirable

Village Square - Mixed Use Redevelopment Site

6590 Cascade Road SE



Key Points:

- This is an intriguing option, but would likely require an extensive effort and time to resolve. If this option is desirable in concept for the long term of Cascade (transformational for the next 100 years+), then a medium term solution (10 years?) May be required while this planning effort unfolds.
- The resulting benefit of this public - private effort are many: maximizes both investments, creates a true Village Center, transforms a property previously identified as requiring change to fit the Township's vision, etc

Rank: Not Ranked



Wisner Center & Township Meeting Space

Strategic Plan Alignment

The framework for analyzing meeting spaces was established through an assessment of the Township's existing meeting and community spaces, with the understanding that the Township has identified the expansion of senior and adult programming as a priority. Currently, the Wisner Center serves as the location for all Township public board and committee meetings, daily Library programs, and as the primary indoor facility for a significant portion of Parks programming (weekly mahjong, euchre, etc.) This level of utilization creates significant operational demands for Parks staff to accommodate the frequent changeovers between Township programs, Library activities, and private or public use throughout the day. The continued and intensive use of the Wisner Center demonstrates a need for additional dedicated community space at a variety of scales within the Township to provide greater capacity and flexibility for senior and adult programming, while also accommodating a broader range of community and private events.

Evaluation of Existing Facilities

Overall, the Wisner Center is in good condition and provides the necessary amenities, technology, and functionality expected of a modern meeting facility, and functions effectively. The primary challenge is the high demand placed on the single space to support a broad range of uses. As reported by many individuals from different groups, the single space is not able to accommodate the needed volume and frequency of meetings and events for the Township, Library, Parks, Elections, and other public and rental uses. The Parks Department currently manages all reservations, as well as the setup and tear down of furniture and meeting spaces between events. With multiple meetings and rentals often occurring each day, the frequent turnover requires a significant amount of staff time and effort from the Parks team.

See the following page for additional information on the facility evaluation of Wisner Center, and some possible scenarios to alleviate the operational strain.

Although not formally included in the scope of the Master plan, two additional Township-owned properties - the Historic Township Hall at 2839 Thornapple River Drive, and a former residence with historic value located at 2781 Orange Street SE were also considered for their potential use to service the community. Recommendations are provided for further study.

Community Survey/ Engagement: It is recommended that community needs and desires for meeting spaces be studied/ surveyed in detail in order to inform decisions on the future use of the Wisner Center and the proposed community use spaces as noted throughout this planning document.

Wisner Center Facility Assessment

6,725 SF; 3500 SF Meeting Room

Built: 2006; Interior Refresh: 2025

The building is 2-story, masonry walled building attached to the Cascade Library. Building interior feels modern, is well-maintained and appears to meet accessibility requirements. Township dais seats 9 people and is secured behind a mobile partition when not in use. Meeting Room subdivides into smaller rooms of 360 sf, 800 sf & 1860 sf. Maximum capacity is 274 persons. Amenities include a catering kitchen, recently updated tech & AV, public restrooms & pre-function lobby w/ benches. Township elections & meetings have first priority for use of the space. Township archival storage & elections equipment are stored in the basement. Ideally, the Wisner could be more available to support community events, meetings and activities including additional Library programming.







Overall Building Condition: Good

Operational Challenges

- Overall lack of community meeting space - Wisner Center Utilization rate exceeds 90%: Township (30%), Library (60%) and Public (up to 10%). Township first right of refusal limits other uses to the Community.
- Event setup/tear down managed by Township Parks & Facilities - high turnover of use between various entities requires significant labor time, travel time & coordination, often multiple times in a day.
- Designated location for early voting creates schedule disruptions.
- Audio/Visual systems are not available for use by public due to lack of staff ability to provide support & oversight
- High Utilization rate limits public use

Opportunities

- Large, functional & flexible space could be used full-time for community, senior & library programming if the Township were to find an alternate meeting space. The building could be expanded to provide additional meeting rooms

New Board Meeting Space at Township Hall

- Study of Township needs & efficiencies support the development of a dedicated large meeting space for Township Boards & Committee Meetings at, or adjacent to, a Township Hall.
- Creates a hub for Township activities with direct adjacency for Township staff and Elected Officials
- Dedicated Township use/meeting type allows minimal setup/tear down between meetings.
- Provides an opportunity to add a Closed Session meeting room
- Study further: Cascade Library indicated that they could utilize Wisner Center full time for senior, community & library programming. They would coordinate reservations and meeting setup.



New Community Activity Space at Parks Building

- Community feedback has consistently expressed desire for space for the expanding Parks/Community Programming
- Depending on the resolution for the Parks facility, if a new facility is created, having an indoor activity/ event space would provides for ease of setup/ tear down & programming support for Parks staff
- Space could be rented by public as an indoor 'picnic' space for events
- Community Meeting space could be separated as stand-alone building, depending on site selection.
- Combining Parks Building w/ Community Space increases value to the Community & alignment with Township goals & strategic priorities.

Historic Township Hall & History Museum

- Prominent Lower Village location adjacent to Virgil Nishimura Westdale urban park space and Tassell Park
- Continue to preserve and maintain Historic building
- Historic buildings are often a logical fit to display historic artifacts.
- Further cost analysis may be considered to position the building as a rentable space for small-scale events & meetings to increase the building's civic use and promote public engagement.
- Consider relocation of some museum exhibits to other Township locations (Cascade Library, Township Hall) to enhance their visibility and exposure to the public and bring historical context to other civic buildings.

The Stone House (2781 Orange St SE)

- Strategic location at the boundary between the Lower Village and Thornapple Plaza village zones as identified in the Cascade Strategic Plan. As Cascade Village & Thornapple Plaza development is implemented, community-focused building use opportunities may emerge.
- Assets: Location, yard space, parking lot on site, historic building appears in good condition and historically well preserved. (Not included in Master plan facility assessment.)
- The site's steep frontage and significant building setback diminishes its street-level presence and limits the ability for engagement and access from pedestrian foot traffic and the public right-of-way.
- Further cost analysis may be considered to bring the building into compliance with ADA accessibility.
- Continue to preserve and maintain this building for its historic merits.
- Consider sale / partial sale with restrictions if no use is identified. Encourage uses that are in alignment with the Strategic Village plan.









Cascade Township
Fire & Emergency Services

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*All Infographics created by artificial Intelligence platform(s).

Executive Summary

Cascade Township retained Intersect Studios and Wendel | Five Bugles Design | Mitchell Associates to evaluate the current and future facility needs of the Cascade Township Fire Department. The study considered the Department's existing facilities, geographic deployment, staffing and apparatus needs, future response locations, site feasibility, facility alternatives, conceptual planning, and long-term implementation. The resulting strategy is intended to guide future decisions rather than establish a fixed construction schedule.

Cascade Township enters this planning period from a strong position. Fire Station 1 is a modern headquarters facility capable of supporting Department-wide administration, training, logistics, equipment processing, firefighter health and wellness, and decontamination. Fire Station 2 remains serviceable and occupies an important response location east of the Thornapple River. The study, therefore, does not identify a need to replace or reorganize the existing station network. Instead, the opportunity is to build upon that network as staffing, development, and emergency service needs change.

The GIS deployment analysis confirms that the existing two-station system provides effective coverage across much of the established community. The principal geographic gap occurs in the southern and southwestern portion of the Township, including the airport and industrial corridor. Although this area generates fewer incidents than the residential core, it contains substantial daytime employment, large industrial occupancies, airport-related operations, and facilities where the time required to reach an emergency after apparatus arrival may be significant. GIS Site 1, centered on the Kraft Avenue/airport industrial corridor, provides the greatest opportunity to improve this coverage. GIS Site 2, along the Whitneyville Avenue corridor, provides a more localized benefit and is better understood as a longer-term opportunity associated with future residential development, system redundancy, and community growth.

A central finding of the study is that expansion of emergency response capability does not require construction of a conventional full-service fire station at every location. The recommended Central Support–Satellite Response model uses Station 1 as the Department's central support hub while Station 2 and future stations concentrate on the personnel, apparatus, crew accommodations, company operations, health and safety features, and building systems required to maintain response readiness. Training, logistics, major equipment support, administration, PPE processing, and routine post-incident decontamination can remain centralized at Station 1. This approach allows future satellite facilities to remain compact, reduces unnecessary duplication, and directs capital investment toward the primary purpose of additional stations—placing emergency response resources where they are needed.

Fire Station 2 can continue serving the Department while identified maintenance needs are addressed. Roof and building-envelope deficiencies, drainage, exterior deterioration, aging finishes, and selected building systems warrant attention, but the existing approximately 8,500-square-foot footprint also contains underutilized space that may support functional improvements without expansion. Because the building was originally developed for another municipal use and later adapted for fire operations, significant reinvestment should be preceded by a structural and resilience evaluation. The long-term decision between renovation and replacement should be based on the useful service life, operational capability, resilience, and lifecycle value created by the investment rather than building age or initial construction cost alone.

The study also identifies an opportunity to coordinate the future of Station 2 with the Township's Public Parks and Facilities needs. The existing Station 2 frontage and direct roadway access should be protected for long-term emergency response use. A new Parks and Facilities building can potentially be located farther into the municipal property while Station 2 remains operational. When replacement is eventually warranted, the existing station can be removed and a purpose-built satellite station constructed in approximately the same advantageous response location. A coordinated campus master plan should precede significant new construction so that circulation, utilities, stormwater infrastructure, parking, and future development do not compromise this strategy.

For GIS Site 1, the Township-owned property at 5191 Kraft Avenue SE appears to be a favorable candidate for a future Station 3. Its approximately two-acre size, corner configuration, dual roadway frontage, and surrounding industrial and commercial uses support continued evaluation. Site due diligence is still required, particularly for topography, grading, drainage, utilities, stormwater, environmental conditions, and apparatus access. The study does not recommend waiting for a permanent building before improving deployment. A Day Engine operating from leased commercial or industrial space can place a company closer to the airport and industrial corridor when staffing permits. This provides an immediate operational benefit while allowing the Township to measure response improvement, utilization, incident patterns, staffing impacts, mutual-aid interaction, and intervention time before committing to permanent construction.

The Township-owned property at 4570 Whitneyville Avenue SE should be preserved as a potential future Station 4 site. The approximately 1.74-acre property remains a reasonable long-term candidate, but its topography, irregular configuration, single roadway frontage, usable development area, and residential surroundings create greater uncertainty than the Kraft Avenue property. Because the deployment analysis does not identify Station 4 as a current need, the appropriate action is to preserve the property, complete sufficient due diligence to confirm its viability, and monitor future development and response performance rather than advance a building project prematurely.

The recommended implementation strategy is therefore condition-driven rather than calendar-driven. It begins by preserving existing assets and future options: maintain Station 1 as the Central Support Hub; maintain Station 2 while addressing priority needs; evaluate Station 2's structural and resilience capabilities; master plan the Station 2/Public Parks and Facilities property; advance due diligence at Kraft Avenue; preserve and evaluate Whitneyville Avenue; and establish locally meaningful response-performance measures. As staffing permits, the Township can then deploy and evaluate the Site 1 Day Engine. Permanent Station 3, replacement Station 2, and eventual Station 4 should proceed when documented response performance, utilization, staffing, development, facility condition, and lifecycle economics demonstrate the need for those investments.

Taken together, the study provides Cascade Township with a framework for incremental investment without losing long-term options. It preserves the strengths of the existing system, makes deliberate use of the Township's recent investment in Station 1, improves response before requiring permanent construction where practical, protects strategically located properties, and establishes measurable triggers for future capital decisions. The result is a scalable fire facility system in which major investments can be made when operational need and lifecycle value are demonstrated rather than simply because a predetermined date has been reached.



Figure 1 Executive Summary

1. Introduction

Cascade Township retained Wendel | Five Bugles Design | Mitchell Associates to evaluate the current and future facility needs of the Cascade Township Fire Department as part of the Township's broader Municipal Facility Space Needs Assessment. The study examines the Department's existing facilities, geographic deployment, anticipated staffing and operational needs, and opportunities for future capital investment.

The work began with two existing fire stations that present very different planning conditions. Fire Station 1, completed in 2022, is a modern headquarters facility with substantial administrative, training, operational, and support capabilities. Fire Station 2 occupies an important response location but operates from a building originally developed for Building and Grounds use as well as apparatus storage for paid-call firefighters. Its condition, configuration, and remaining appropriate service life are therefore important considerations in the Township's long-range facility planning.

The study also considers where future emergency response resources may be needed. GIS travel-time modeling was combined with incident history, residential and daytime population patterns, roadway access, field observations, and mutual and automatic aid considerations. This work identifies two areas for continued planning: the airport and industrial corridor associated with GIS Site 1 and the southeastern Township associated with GIS Site 2. The two areas present different conditions and should not be assumed to require the same response or investment timeline.

Facility planning was developed in parallel with the deployment analysis. Rather than assuming that each fire station must operate as a complete, stand-alone facility, the study considers how existing Department resources can support a distributed station network. This led to the Central Support–Satellite Response framework evaluated throughout the report. Under this approach, specialized Department-wide functions can remain at Station 1 while other stations concentrate on the personnel, apparatus, and daily functions required to maintain response readiness.

The resulting study is intended as a planning tool rather than a fixed construction program. Some actions can be taken in the near term; others depend on future staffing, development, facility condition, response performance, and available funding. The objective is to identify those distinctions now so that the Township can preserve useful assets and strategic properties while making larger capital commitments when the need is demonstrated.

Scope of Study

The principal components of the study include:

- Fire Service Deployment Analysis — Review the geographic performance of the existing station network using GIS travel-time modeling, incident distribution, residential and daytime population patterns, roadway access, and mutual and automatic aid. Evaluate potential future deployment areas and interim response strategies.
- Space Needs Analysis — Establish planning-level facility requirements based on staffing, apparatus, operational workflow, firefighter health and safety, and the appropriate distribution of functions between headquarters and satellite response stations.
- Existing Conditions Assessment — Review Stations 1 and 2 to understand their present capabilities, physical conditions, operational limitations, and appropriate roles within the long-term facility system.
- Site Feasibility — Conduct a planning-level review of Township-owned properties associated with GIS Sites 1 and 2 and identify physical or operational conditions requiring additional investigation before development.
- Facility Alternatives — Consider practical strategies for maintaining, renovating, or replacing Station 2; expanding response capability at GIS Site 1; preserving GIS Site 2 for future use; and coordinating Fire Department needs with Public Parks and Facilities planning.
- Conceptual and Capital Planning — Translate the preferred strategies into conceptual facility and site approaches and establish planning-level cost ranges for future budgeting.
- Implementation Strategy — Identify near-term actions, longer-term investments, and measurable conditions that can guide the timing of future staffing and facility decisions.

Community Profile

Cascade Township encompasses approximately 35 square miles in southeastern Kent County and is home to more than 20,000 residents. The community includes established residential neighborhoods, major employment centers, commercial corridors, rural areas, and extensive natural resources. Interstate 96, M-6, the 28th Street corridor, and Gerald R. Ford International Airport provide regional connections that have contributed to continued commercial, industrial, and employment growth.

Township planning emphasizes managed growth while protecting established neighborhoods, farmland, natural resources, parks, and the character of Cascade Village. Future development is expected to include redevelopment and infill as well as continued investment around existing commercial, transportation, and employment centers.

These patterns create a varied emergency service environment. Residential neighborhoods coexist with manufacturing and distribution facilities, healthcare and senior-care occupancies, schools, hotels, commercial development, hazardous-material users, and airport-related operations. The Township's rivers, wetlands, lakes, woodlands, and rolling terrain add water rescue, flooding, severe-weather, and wildland-interface considerations.

This study does not constitute a comprehensive Community Risk Assessment. These characteristics are considered only to the extent that they influence fire station deployment, facility needs, and long-range planning. A more detailed assessment of community risk is identified later in the report as a potential future planning effort.

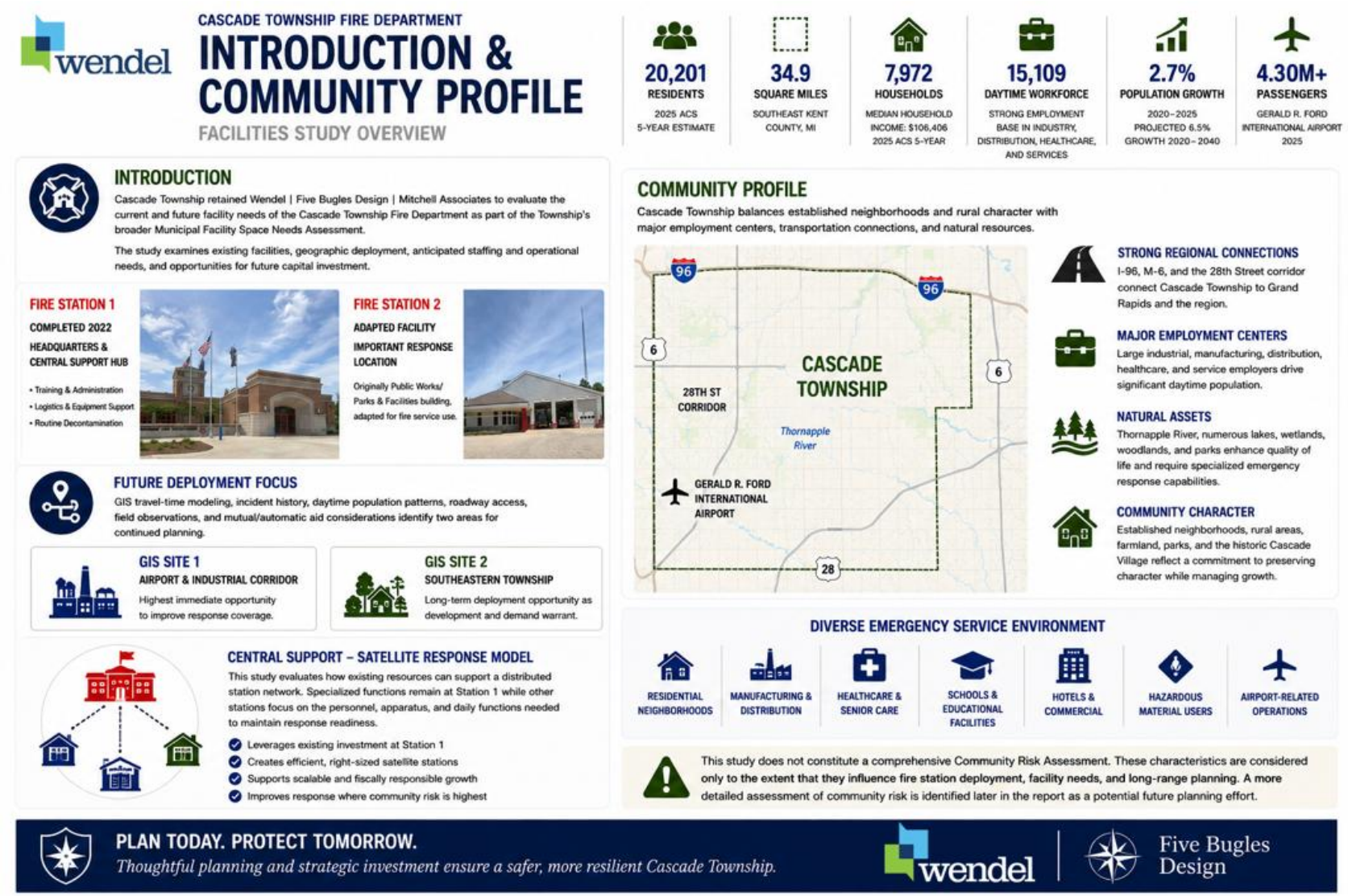


Figure 2 Introduction and Community Profile Infographic

Fire Department Overview

Established in 1942 as an all-volunteer organization, the Cascade Township Fire Department has evolved into a combination department providing fire suppression, emergency medical services, rescue, hazardous materials response, fire prevention, public education, and community risk reduction.

The Department currently operates from two stations. Station 1 serves as headquarters and provides the majority of the Department's centralized administrative and support functions. Station 2 provides important coverage east of the Thornapple River. Six personnel are assigned to daily on-duty staffing across the two stations, with paid-on-call firefighters supplementing response, training, and special events. Daily staffing may be reduced to five personnel at two stations due to long term leave or vacancies. This is a common occurrence, approximately 250 per year.

Current Staffing

- One Fire Chief
- Deputy Fire Chief
- Fire Marshal
- Fire Inspector
- Three Shift Captains
- Twelve career Firefighter/Paramedics or Firefighter/EMTs
- Approximately twenty-five paid-on-call firefighters
- Six personnel assigned to daily on-duty staffing across the two stations
-

The Department is also evaluating changes in emergency medical service delivery, including implementation of a fire-based BLS transport program. Future staffing associated with that program and with geographic expansion of the response system will influence the timing and requirements of future facility investments.

Apparatus

The Department's current fleet includes:

- Four Class A fire engines
- One water tender
- One rescue boat
- Two wildland/brush response units
- One EMS response vehicle
- Two utility/support vehicles
- Four command and administrative vehicles

Cascade Township has an established apparatus replacement program that rotates frontline equipment into secondary or reserve service and schedules replacement or refurbishment as equipment reaches appropriate lifecycle milestones. The program provides a sound basis for long-range fleet planning, and this study does not identify a need for significant changes to that strategy. Accordingly, the apparatus considerations in this facility study are primarily related to accommodation rather than to fleet expansion. Future stations should provide appropriate bay dimensions, circulation, equipment storage, and flexibility for reasonable changes in vehicle size and configuration.

2. Fire Service Deployment Analysis

The deployment analysis evaluates how effectively Cascade Township's existing fire stations serve the community and where future resources may provide additional operational benefit. GIS travel-time modeling was used to establish baseline coverage from Stations 1 and 2 and to compare potential future response locations. Historical incidents, residential and daytime population patterns, roadway access, field observations, and mutual and automatic aid were considered alongside the GIS results.

NFPA response objectives provide a useful reference for evaluating deployment; however, they should not be interpreted as the sole measure of local service performance. For purposes of the GIS analysis, the term response time refers specifically to apparatus travel time and does not include call processing or turnout time. More importantly, travel time does not account for the additional time that may be required after arrival to reach and begin operating at the actual point of an emergency.

Existing Station Coverage

Cascade Township's existing two-station deployment provides effective coverage across much of the established community. Station 1 serves the central and western portions of the Township, while Station 2 provides important coverage east of the Thornapple River. Interstate 96, M-6, the Thornapple River, Gerald R. Ford International Airport, and the Township's arterial roadway network influence travel paths and create localized response constraints.

Incident data from 2021 through 2026 include more than 13,000 emergency responses. The greatest concentration occurs within the established residential and commercial areas surrounding Station 1 and through the central portion of the Township. A secondary concentration is evident within the Station 2 service area, reflecting the residential neighborhoods and continued development east of the Thornapple River.

A third, less concentrated pattern occurs around the airport and southern industrial corridor. Although this area generates fewer incidents than the residential core, its operating environment is different. Large manufacturing and distribution facilities, airport-related businesses, industrial processes, and significant employment concentrations can result in incidents requiring greater access time, additional personnel, specialized resources, or more complex operations.

Residential and daytime population mapping adds important context. Population is concentrated primarily in the northern, central, and eastern residential areas during non-work hours. During the workday, the airport and industrial corridor experiences a substantial population increase as employees enter the area, while portions of the eastern residential area lose population. Many companies in the area run second and third shifts, raising the after-hours population in the area. Emergency service planning should therefore consider where people are located throughout the day rather than relying on residential population alone.

Travel Time and Intervention Time

The GIS analysis measures apparatus travel time. For many emergencies, arrival at the property closely approximates arrival at the incident. That relationship may be considerably different in a large industrial occupancy.

After apparatus arrival, crews may need to position equipment, establish command, identify an appropriate entrance, enter the building, locate the patient or hazard, and move personnel and equipment through a substantial building footprint. The actual time required to begin intervention may therefore extend well beyond the travel time shown on a GIS map.

This distinction was reinforced during the project site visit when Station 1 responded to a medical emergency at an industrial facility. More than 15 minutes elapsed before responders reached the patient's location. That observation should not be interpreted as a statistical measure of system performance, but it illustrates how building size, access, and interior travel can affect the time between dispatch and meaningful intervention.

For this reason, the airport and industrial corridor should be evaluated not only in terms of call frequency or travel time, but also in terms of the operational complexity associated with the occupancies being served.

GIS Coverage Findings

The GIS analysis confirms that the existing two-station system remains fundamentally sound. The current locations provide strong coverage to most established residential and commercial areas and should remain part of the Department's long-term deployment network.

The principal geographic gap occurs in the southern and southwestern portion of the Township. This area experiences comparatively longer travel times from existing Cascade stations and includes the airport, industrial development, and a substantial daytime employment population.

Alternative response locations were modeled to determine where an additional Cascade Township company could provide the greatest operational benefit. GIS Site 1, within the Kraft Avenue/airport industrial corridor, provides the greatest improvement to the southern response gap and places resources closer to the airport and major employment centers. GIS Site 2, within the Whitneyville Avenue corridor, improves coverage within the southeastern Township but provides a more localized benefit because Stations 1 and 2 retain reasonable roadway access to much of this area.

GIS Site 1 – Kraft Avenue / Airport Industrial Corridor provides the greatest improvement to the southern response gap and places resources closer to the airport and industrial employment

GIS Site 2 – Whitneyville Avenue Corridor improves coverage within the southeastern Township but provides a more localized benefit because Stations 1 and 2 retain reasonable roadway access to much of this area.

The two locations therefore address different needs. Site 1 represents a current deployment opportunity associated with response performance and the operating characteristics of the airport/industrial corridor. Site 2 represents a longer-term opportunity associated primarily with future residential development, system redundancy, and continued community growth.

Mutual and Automatic Aid

Mutual and automatic aid remain important components of Cascade Township's emergency response system. Neighboring companies can contribute personnel, apparatus, specialized resources, and move-up coverage, particularly during structure fires, simultaneous incidents, and events that exceed the capabilities of the initial Cascade response.

GIS modeling demonstrates the geographic value of this regional network, but modeled proximity should not be confused with assured response capability. Actual aid performance depends upon staffing, unit availability, dispatch procedures, incident type, communications, and the applicable agreements between jurisdictions.

For that reason, regional resources should complement rather than replace strategically located Cascade Township companies. This distinction is particularly relevant to GIS Site 1. A locally deployed engine could improve the reliability and speed of the first-arriving response, while mutual and automatic aid would continue to provide the additional resources required for larger or more complex incidents.

Cascade Township should continue reviewing actual aid given and received, response times, unit availability, staffing, dispatch practices, and communications interoperability as part of its broader operational planning.

Future Deployment Priorities

GIS Site 1 – Kraft Avenue / Airport Industrial Corridor

GIS Site 1 represents the stronger near-term opportunity for expanded deployment. It addresses the portion of the Township with the greatest identified travel-time gap while placing a company closer to major employers, industrial facilities, airport-related operations, and Interstate 96.

Field observations also indicate that response into this area can be affected by major intersections, peak employment traffic, and limited freeway access points. These conditions reinforce the importance of evaluating actual apparatus movement rather than relying solely on geographic distance.

The Township-owned property at 5191 Kraft Avenue SE provides an additional planning advantage. Its suitability for permanent station development is evaluated separately in Section 5.

GIS Site 2 – Whitneyville Avenue Corridor

GIS Site 2 would improve response to the southeastern portion of the Township and provide additional redundancy as residential development continues. At present, however, the roadway network allows the two existing stations to reach much of this area reasonably well.

Construction of a station at Site 2 is therefore not identified as a current need. The Township's ownership of property at 4570 Whitneyville Avenue SE nevertheless provides an opportunity to preserve a strategically located site while future growth and service demand are monitored.

Interim Deployment Strategy – GIS Site 1 Day Engine

Improving response within GIS Site 1 does not require immediate construction of a permanent fire station. Because the population and activity within the airport and industrial corridor increase substantially during the workday, Cascade Township could initially deploy an engine company during periods of greatest demand.

Under this concept, a **Day Engine** would operate from leased or subleased commercial, industrial, or flex space within or near the Site 1 response area. The facility would serve primarily as a deployment point and would require apparatus accommodation, basic crew workspace, restroom and break facilities, communications and IT, security, and limited operational storage. Sleeping quarters and other spaces associated with continuous occupancy would not initially be required.

Fire Station 1 would continue to provide training, logistics, equipment support, and routine post-incident decontamination. The commercial location would require only limited contamination-control provisions for situations in which the company cannot execute the normal return-to-Station-1 procedure.

The Day Engine provides two advantages. First, it places the response resource closer to the identified service area without requiring immediate investment in a permanent building. Second, it creates an opportunity to test the deployment using actual operating data.

The Department could monitor response improvement, company utilization, incident distribution, simultaneous calls, mutual and automatic aid interaction, staffing impacts, and intervention times within selected large occupancies. This information could then inform the hours of deployment, staffing model, and eventual program for a permanent Station 3.

If operating experience and documented service conditions demonstrate the need for expanded coverage, the Day Engine could transition to longer hours or continuous staffing and ultimately to a purpose-built satellite station.

Community-Specific Response Benchmarks

The Township should consider supplementing national response objectives with locally developed performance measures that reflect Cascade's different operating environments.

Traditional first-arriving travel measures remain useful for evaluating general geographic coverage. For selected large or complex occupancies, additional measures such as total intervention time, effective response force, specialized-resource arrival, or other operational indicators may provide a more meaningful picture of service performance.

Local benchmarks would also provide objective triggers for future investment. Response performance, company utilization, simultaneous incidents, development, daytime population, mutual-aid reliance, and other measurable conditions can be monitored over time to help determine when additional staffing or permanent facilities are warranted.

This approach allows future station decisions to be based on demonstrated operating conditions rather than on travel-time modeling alone.

Future Community Risk Assessment

The deployment analysis identified several conditions that warrant more detailed evaluation than is appropriate within the scope of this facilities study, particularly within the airport and industrial corridor.

Cascade Township should consider completing a Community Risk Assessment or similar operational planning effort in the future. The assessment could be completed internally by the Fire Department or through a separate professional study and could examine major occupancies, hazardous materials, daytime and transient populations, simultaneous incidents, effective response force, mutual and automatic aid performance, and intervention time within selected complex facilities.

Such an assessment is not a prerequisite to the facility strategies identified in this study. Rather, it would provide additional information to validate and refine staffing, deployment hours, locally adopted performance measures, and the timing of future permanent facilities.

Deployment Summary

Cascade Township's existing station locations remain appropriate and should form the foundation of the long-term response network. Station 1 serves the central and western Township, while Station 2 retains an important role east of the Thornapple River. Neither station should be relocated based on the findings of this study.

GIS Site 1 represents the next priority for expanded deployment. A Day Engine provides a practical means of improving coverage and gathering operating data before committing to a permanent Station 3. The Township-owned Kraft Avenue property should be retained and further evaluated for that eventual use.

GIS Site 2 represents a longer-term opportunity. The Whitneyville Avenue property should be preserved while the Township monitors residential development, emergency demand, staffing, and response performance.

The resulting strategy is incremental: maintain the existing network, deploy toward Site 1 when staffing permits, measure the results, construct permanent facilities when justified, and preserve Site 2 for future need. This deployment framework provides the basis for the space and facility analysis that follows.

3. Space Needs Analysis

The Space Needs Analysis translates the Department's operational requirements into a planning-level building program. It considers staffing, apparatus, daily station activities, firefighter health and safety, and the role each facility serves within the overall response system. The intent is not to reproduce the functions of Fire Station 1 at every location, but to determine what is actually required to support an assigned company.

Station 1 changes that equation. Completed in 2022, it already provides the Department's primary administrative, training, logistics, equipment-support, wellness, and decontamination functions. Those capabilities can support personnel assigned elsewhere in the system. Station 2 and future stations can therefore be smaller and more focused on response operations.

This approach forms the basis of the **Central Support–Satellite Response** model used throughout the study. Station 1 remains the headquarters and support hub. Satellite stations provide the apparatus, crew accommodations, company work areas, health and safety features, and building systems needed for reliable response without duplicating specialized functions that are more efficiently maintained at one location.

The detailed space program is provided in Appendix B and serves as the basis for evaluating improvements to Station 2 and the future satellite concepts developed later in the report.

Programming Process

Programming began with the Department's operations rather than a predetermined building size or conventional list of fire station rooms. Existing facilities were reviewed with Fire Department personnel to understand staffing, apparatus, equipment, daily activities, response movement, and the distribution of support functions between Stations 1 and 2.

Individual functions were then evaluated according to where they need to occur. Some must remain immediately available to an assigned company; others can be shared across the Department. This distinction is particularly important as Cascade considers additional response locations. Repeating specialized spaces at every station would add construction area, equipment, maintenance, and operating cost without necessarily improving emergency response.

The program also recognizes that a fire station will likely outlast today's staffing model and technology. Reasonable flexibility is therefore appropriate, but flexibility should not be confused with building unused space in anticipation of an uncertain future. Where possible, adaptable rooms, shared functions, and site-planning provisions for future change are preferred to speculative building area.

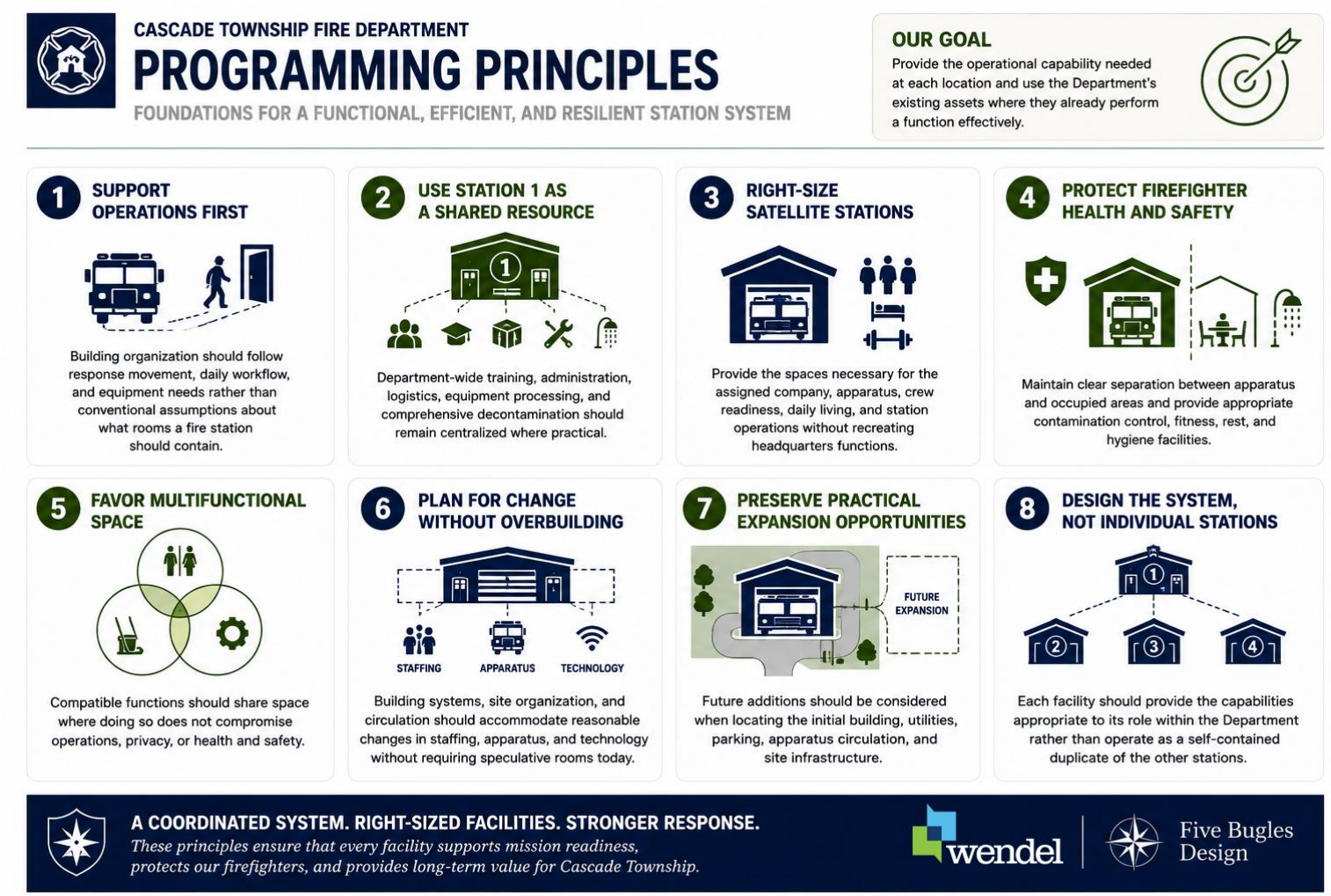


Figure 3 Programming Principles Infographic

The programming principles shown in Figure 3 establish the framework for evaluating space needs throughout the study. Collectively, they emphasize an operations-first approach that makes deliberate use of Station 1 as a shared Department resource while right-sizing satellite facilities around the personnel, apparatus, and daily functions that must occur at each response location. The principles also prioritize firefighter health and safety, multifunctional space, adaptability, and practical opportunities for future expansion without constructing space before it is needed. Most importantly, the program considers the fire station network as a coordinated system rather than a collection of independent buildings. Each facility is intended to provide the capabilities appropriate to its operational role, allowing Cascade Township to use existing assets effectively, limit unnecessary duplication, and preserve flexibility as staffing, apparatus, technology, and service demands change.

Staffing and Apparatus Planning

The Department currently staffs five personnel daily across Stations 1 and 2, supplemented by paid-on-call personnel. Future changes in EMS delivery, career staffing, and geographic deployment will affect facility requirements, but the study does not anticipate a fundamental restructuring of the existing station network.

As discussed in Section 2, GIS Site 1 represents the next logical location for an additional engine company. GIS Site 2 is a longer-term deployment opportunity that may become appropriate as development and service demand increase. The space program therefore anticipates satellite facilities capable of supporting an engine company while allowing the staffing model to evolve over time.

A daytime deployment does not require the same building program as a continuously occupied station. A Day Engine can initially operate with apparatus accommodation, basic crew work and break space, restroom facilities, communications, and limited operational storage. If the company later transitions to 24-hour staffing, a permanent station would add the living, sleeping, fitness, and support functions appropriate to continuous occupancy.

Cascade's existing apparatus replacement program is adequate for current planning purposes. Facility requirements are therefore driven more by accommodating assigned apparatus than by anticipated fleet expansion. Apparatus bays and sites should provide appropriate clearance, circulation, equipment storage, and flexibility for reasonable changes in vehicle size and configuration over the life of the facility.

Functional Space Requirements

Future satellite stations should be organized around a limited number of functional needs.

Apparatus and Response Operations

The apparatus area is the operational center of a satellite station. It should accommodate assigned vehicles, immediately accessible response equipment, EMS supplies, and the movement required to place a company in service quickly. Bay dimensions and site circulation should allow reasonable flexibility for future apparatus changes without substantially oversizing the facility.

Crew Readiness and Living

Crew spaces should reflect the actual staffing and occupancy of the station. A continuously staffed satellite may require a kitchen and dining area, dayroom, individual sleeping accommodations, restrooms, showers, fitness space, and limited personal storage. A daytime facility can begin with substantially fewer living functions. The emphasis should be on durable, efficient spaces that support personnel without adding functions already available elsewhere in the Department.

Company Operations

Each satellite requires a place for company-level work, report writing, communications, and routine station administration. These functions can often share space. Larger meetings, Department administration, records, and other headquarters activities should remain at Station 1.

Company Training

Routine company training can occur throughout the station rather than in a dedicated classroom. Apparatus bays, exterior areas, stairs, circulation spaces, and other building elements can support compatible drills. Formal instruction, specialized training, and larger Department activities remain at Station 1.

Logistics and Storage

Satellite stations need enough supplies and equipment to remain operational between resupply cycles, but they do not require independent inventories of every Department resource. Bulk supplies, reserve equipment, specialized maintenance, and inventory management should remain centralized.

Building and Site Support

Each facility requires reliable mechanical, electrical, communications, security, emergency power, janitorial, parking, and site infrastructure. Site planning should prioritize apparatus response, safe separation between emergency and routine vehicle movements, and continued operation during utility interruptions and severe weather.

Contamination Control and Emergency Gross Decontamination

Routine post-incident decontamination should remain centralized at Station 1, where personnel, PPE, and equipment can be processed and the company restored to service using the Department's primary decontamination resources. Satellite stations do not need to reproduce that infrastructure.

They do, however, need a safe contingency when a crew cannot reasonably return directly to Station 1. Each satellite should provide a gear-dump area where contaminated PPE and equipment can be isolated from occupied spaces pending transport to headquarters. Personnel should also have access to emergency gross decontamination before entering the clean portion of the station.

This capability does not require a dedicated decontamination room. In a small-footprint satellite, an apparatus-adjacent restroom can serve the purpose through a shower wand located at the mop or utility sink. During normal operations, the space functions as a restroom and utility area. Following an unusual contamination event, it provides a simple means of gross decontaminating a firefighter before entering the living environment.

The arrangement reflects the broader programming philosophy: provide the capability required for an exception without constructing a specialized room that sits largely unused.

Station 1 – Central Support Hub

No significant expansion of Station 1 is identified at this time. Its existing administrative, training, logistics, equipment-support, PPE-processing, decontamination, fitness, and crew facilities provide the infrastructure needed to support a distributed station system. As additional companies are added, the Department should periodically review the capacity of these shared functions. Logistics and storage, PPE and equipment processing, decontamination throughput, training use, and administrative growth are particularly important because increased satellite staffing will eventually increase demand at headquarters even if the satellite buildings themselves remain small. The intent is to protect the investment already made in Station 1 and allow it to continue doing the work for which it is well equipped.

Satellite Response Stations

Station 2, a permanent Station 3, and an eventual Station 4 should follow a common operating philosophy without necessarily becoming identical buildings. Each should be sized around its assigned personnel, apparatus, site, and expected occupancy. Consistency can still provide value. Common apparatus-bay dimensions, building systems, crew-space standards, contamination-control practices, technology infrastructure, materials, and furnishings can simplify future design, maintenance, and operations. Standardization should focus on systems and principles rather than forcing different sites and staffing models into one fixed prototype. The resulting program intentionally places less building area at the satellite stations and greater reliance on shared Department resources. That tradeoff is practical because Station 1 already contains the specialized infrastructure. It allows future capital investment to concentrate on the primary reason for adding another station: putting an emergency response company in the location where it is needed.

4. Existing Conditions Assessment

The existing conditions assessment considers the current capabilities and limitations of Cascade Township's two fire stations and their appropriate roles within the long-term facility strategy. The two buildings are fundamentally different. Station 1 is a recently completed, purpose-built headquarters facility. Station 2 is an older municipal building adapted over time for Fire Department operations.

Accordingly, the planning question for Station 1 is primarily one of preserving its capacity to support future growth. For Station 2, the question is how much additional investment is appropriate before replacement becomes the better long-term choice.

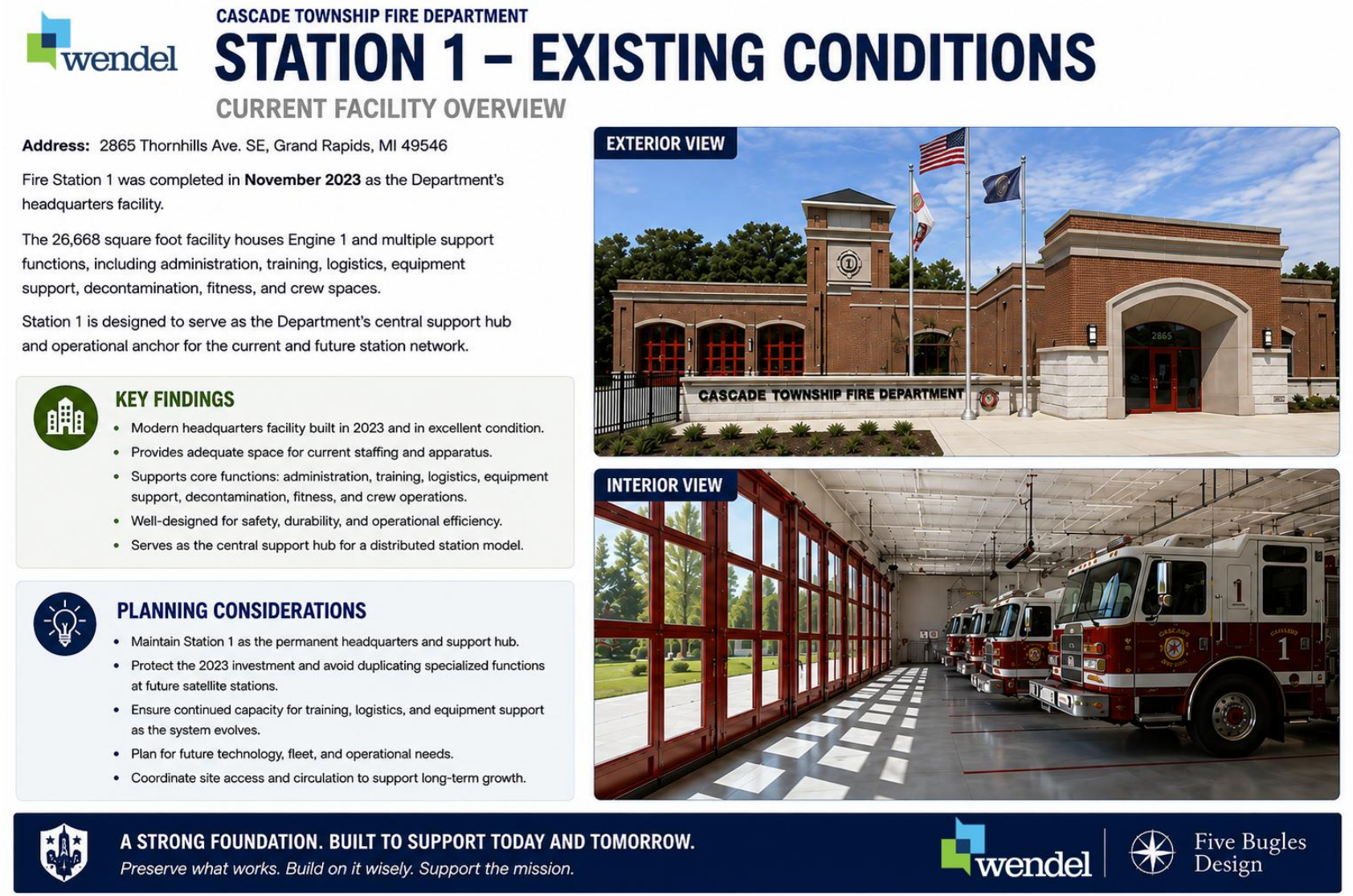


Figure 4 Station 1 Existing Conditions Infographic

Fire Station 1 – Headquarters

Fire Station 1 was completed in 2022 as the Department's headquarters and primary operational support facility. The station combines emergency response, administration, training, crew accommodations, equipment support, firefighter health and wellness, and community functions within a purpose-built public safety facility.

A four-bay apparatus area is supported by EMS and equipment storage, SCBA functions, turnout gear storage, apparatus support, laundry and extractor facilities, and other operational spaces. Administrative areas include offices, conference and training space, work areas, records storage, and accommodations for future organizational growth.

Crew areas include individual sleeping rooms, officer and watch functions, kitchen and dining space, dayroom, fitness, restrooms, showers, and laundry. Public, administrative, living, and apparatus functions are organized as distinct areas while maintaining efficient response circulation.

Station 1 also includes a community tornado shelter designed to ICC 500 criteria. In addition to its daily Fire Department role, this feature provides a resilient community asset during severe weather.

The facility is in good condition, and no significant building expansion is identified through this study.

Station 1 – Future Support Capacity

Station 1's importance extends beyond the response company assigned there. Its training, administration, logistics, equipment processing, and comprehensive decontamination capabilities allow it to support personnel operating from other stations.

As discussed in Section 3, these shared functions are fundamental to the Central Support–Satellite Response model. Their presence at Station 1 reduces the amount of specialized space and equipment required at Station 2 and future satellite stations.

The Department should periodically review the capacity of these functions as staffing and the station network expand. Logistics and storage, PPE and equipment processing, decontamination throughput, training use, and administrative space are the areas most likely to experience increased demand as additional companies are added.

No immediate expansion is recommended. The priority is to protect Station 1's ability to continue performing its headquarters and support role as the rest of the system develops.

Station 2 Assessment

Based on the visual assessment, Station 2 can continue to serve the Department while identified maintenance needs are addressed. Roof and envelope work, drainage corrections, exterior repairs, selected building-system improvements, and targeted interior modifications can preserve the facility and improve daily operations. The existing 8,500-square-foot footprint also provides opportunities for reconfiguration. Underutilized areas should be tested against the satellite station program before expansion is considered. The larger question is one of lifecycle investment. A comprehensive renovation could correct many physical and functional deficiencies, but it would remain an investment in a building originally designed for another municipal use. Replacement would require greater initial capital but would provide the opportunity to design specifically for emergency response, resilience, current health and safety practices, and long-term operations.

Section 6 evaluates those choices in greater detail. For purposes of the existing conditions assessment, the principal findings are:

- Station 1 is a modern facility with adequate current capacity and no identified need for significant expansion.
- Station 1 should continue serving as the Department's headquarters and shared support facility.
- Station 2 remains serviceable and occupies an important response location.
- Identified Station 2 maintenance and envelope deficiencies should be addressed if the building remains in use.
- The Station 2 footprint provides opportunities for functional reconfiguration before expansion is considered.
- Significant renovation should be preceded by structural and resilience evaluation.
- Future Station 2 investment should be evaluated on the useful service life and operational capability it creates, not simply on whether the existing building can be renovated.

5. Site Feasibility

The deployment analysis identified two areas where additional fire service coverage may be appropriate over time. Cascade Township owns property near each of these areas: 5191 Kraft Avenue SE near GIS Site 1 and 4570 Whitneyville Avenue SE near GIS Site 2. Both properties were reviewed at a planning level to determine whether they appear capable of supporting a future satellite fire station. This review considers parcel size and configuration, roadway access, topography, surrounding land use, apparent development constraints, and compatibility with the space program developed in Section 3. It is intended to identify whether either property presents an obvious limitation that would preclude continued consideration; it is not a substitute for detailed site investigation or civil engineering. Before either property advances into design, appropriate due diligence should include boundary and topographic survey, easement review, utility verification, zoning and land-use requirements, geotechnical investigation, environmental and wetland review, stormwater requirements, and roadway access approvals as applicable.

GIS Site 1 – 5191 Kraft Avenue SE

The Township-owned property at 5191 Kraft Avenue SE is located within the preferred GIS Site 1 deployment area identified in Section 2. Parcel information reviewed for this study identifies the property as approximately 2.0 acres. The site occupies the northwest corner of Kraft Avenue and 52nd Street within an established industrial and commercial area. Because the deployment analysis has already established the operational value of this area, the purpose of this review is to determine whether the property itself appears suitable for future station development.

Site Configuration and Development Potential

At approximately two acres, the property appears large enough to accommodate further study for a compact single-company satellite station. The parcel is currently wooded and undeveloped, and no existing structures are apparent within the primary development area. The corner configuration is a significant advantage.

Frontage on both Kraft Avenue and 52nd Street provides options for organizing emergency apparatus access separately from employee and visitor traffic. Depending on final roadway approvals, the site may allow apparatus and routine station traffic to use different access points or street frontages.

The surrounding industrial and commercial uses are also generally compatible with fire station operations. Apparatus movements, emergency warning devices, exterior lighting, and generator operation would present fewer potential conflicts here than at a site surrounded primarily by residential development.

The compact satellite program developed in Section 3 reduces the land area required and appears generally compatible with the parcel. Final feasibility will depend on how much of the gross site can be efficiently developed after grading, drainage, setbacks, stormwater management, and access requirements are established.

Topography and Drainage

Available contour information indicates grade change across the property. This condition does not appear to preclude development, but it may reduce the amount of land readily available for the station, apparatus apron, parking, and circulation.

Grade is particularly important for fire station development. Apparatus floors, aprons, and response drives require controlled slopes, and substantial earthwork or retaining conditions can quickly affect site efficiency and project cost.

A topographic survey and preliminary grading and drainage study should therefore be completed before a building location or development envelope is established.

Apparatus Access

The property's two-road frontage provides useful flexibility for apparatus ingress and egress. Final access planning should evaluate sight distance, turning movements, roadway geometry, traffic volumes, median restrictions, and peak-period conditions.

Weekday traffic deserves particular attention because the surrounding employment concentration produces the greatest activity during the same hours when a Site 1 deployment may provide its greatest benefit. The preferred arrangement should allow an engine to enter the roadway network with as few movements and delays as practical.

The potential need for emergency warning devices, signal preemption, or other traffic-control measures should be evaluated during subsequent traffic and civil engineering work.

Future Flexibility

Initial site planning should preserve a practical expansion area without unnecessarily enlarging the first phase of construction. Utilities, parking, stormwater facilities, and site circulation should be located so that reasonable future changes in staffing or apparatus assignment are not precluded.

The approximately two-acre parcel should not, however, be assumed to provide unlimited expansion capacity. The initial station and foreseeable future needs should be tested together when the site development envelope is established.

Additional Site Investigation

In addition to the general due diligence identified at the beginning of this section, further evaluation of the Kraft Avenue property should focus on:

- usable development area;
- grading and drainage;
- apparatus access from Kraft Avenue and/or 52nd Street;
- utility availability and capacity;
- stormwater requirements; and
- environmental or other site constraints that may affect development.

Planning-Level Assessment

Based on the information available for this study, 5191 Kraft Avenue SE appears to be a favorable candidate for a future satellite fire station. The property is located within the preferred deployment area, contains approximately two acres, has two roadway frontages, and is surrounded by compatible industrial and commercial uses.

GIS Site 2 – 4570 Whitneyville Avenue SE

The Township-owned property at 4570 Whitneyville Avenue SE is located near GIS Site 2 in southeastern Cascade Township. Parcel information reviewed for this study identifies the property as approximately **1.74 acres**. The site is undeveloped and wooded, with frontage on Whitneyville Avenue and predominantly low-density residential development nearby.

As established in Section 2, GIS Site 2 is a longer-term deployment opportunity rather than a current station priority. The immediate planning question is therefore whether the property should remain available for possible future public safety use.

Site Configuration and Development Potential

The 1.74-acre parcel appears large enough to warrant continued evaluation for a compact satellite station, but its usable development area may be considerably smaller than the gross parcel area.

The property has an irregular configuration, significant tree cover, and apparent grade change. These conditions will influence the placement of a future building, apparatus apron, access drive, parking, stormwater facilities, and required setbacks.

The compact satellite program developed in Section 3 improves the potential viability of the property. Even so, the program should eventually be tested against a surveyed development envelope before the site is designated as the future Station 4 location.

Topography and Drainage

Topography appears to be the property's most significant physical constraint. Available contour information indicates meaningful elevation change across the site.

A fire station requires relatively level apparatus floors, aprons, maneuvering areas, and access drives. Depending on the actual grades, development could require substantial earthwork, retaining walls, longer access drives, or other civil improvements. These conditions could reduce usable area and increase development cost.

The wooded site may also contain established drainage patterns that are not evident from aerial imagery. A topographic survey and preliminary civil analysis are therefore particularly important for this property.

Apparatus Access

Whitneyville Avenue provides the primary roadway frontage. Unlike the Kraft Avenue property, there is no apparent second public street frontage that could readily provide an alternate access point or separate routine vehicle traffic from emergency apparatus movements.

Future evaluation should consider sight distance, roadway speed, driveway grade, turning movements, and the ability of apparatus to safely enter Whitneyville Avenue in either direction. The relationship between roadway elevation and the potential building site will also be important because excessive driveway grades are undesirable for emergency apparatus.

Surrounding Land Use

The residential setting requires greater attention than the industrial context at Kraft Avenue. A fire station can be compatible with a residential neighborhood, but emergency apparatus movements, warning devices, exterior lighting, and generator operation should be considered when establishing the development envelope.

Building placement, apparatus apron orientation, site lighting, landscaping, and buffering should minimize unnecessary impacts on neighboring properties. Existing vegetation may provide opportunities to retain visual separation where site development allows.

The surrounding residential use does not preclude a fire station, but it does add a design consideration that should be addressed if the property advances.

Future Flexibility

Given the parcel's size, irregular configuration, and apparent grade change, significant future expansion should not be assumed.

The first question is whether the site can efficiently accommodate the anticipated satellite program and required apparatus circulation, parking, stormwater, and support functions. If feasibility is confirmed, future planning should protect that development envelope from incompatible uses.

Because Station 4 is a long-term possibility, a detailed building program is not necessary today. The facility should ultimately be programmed around the staffing, apparatus, and service model in place when the operational need is established.

Additional Site Investigation

Further evaluation of the Whitneyville Avenue property should place particular emphasis on:

- boundary and topographic survey;
- usable development area;
- driveway grade and apparatus access;
- roadway sight distance;
- stormwater and drainage;
- utility availability;
- grading and potential retaining requirements; and
- buffering from adjacent residential properties.

Environmental, wetland, geotechnical, zoning, and other development requirements should also be verified before the property is designated for future station construction.

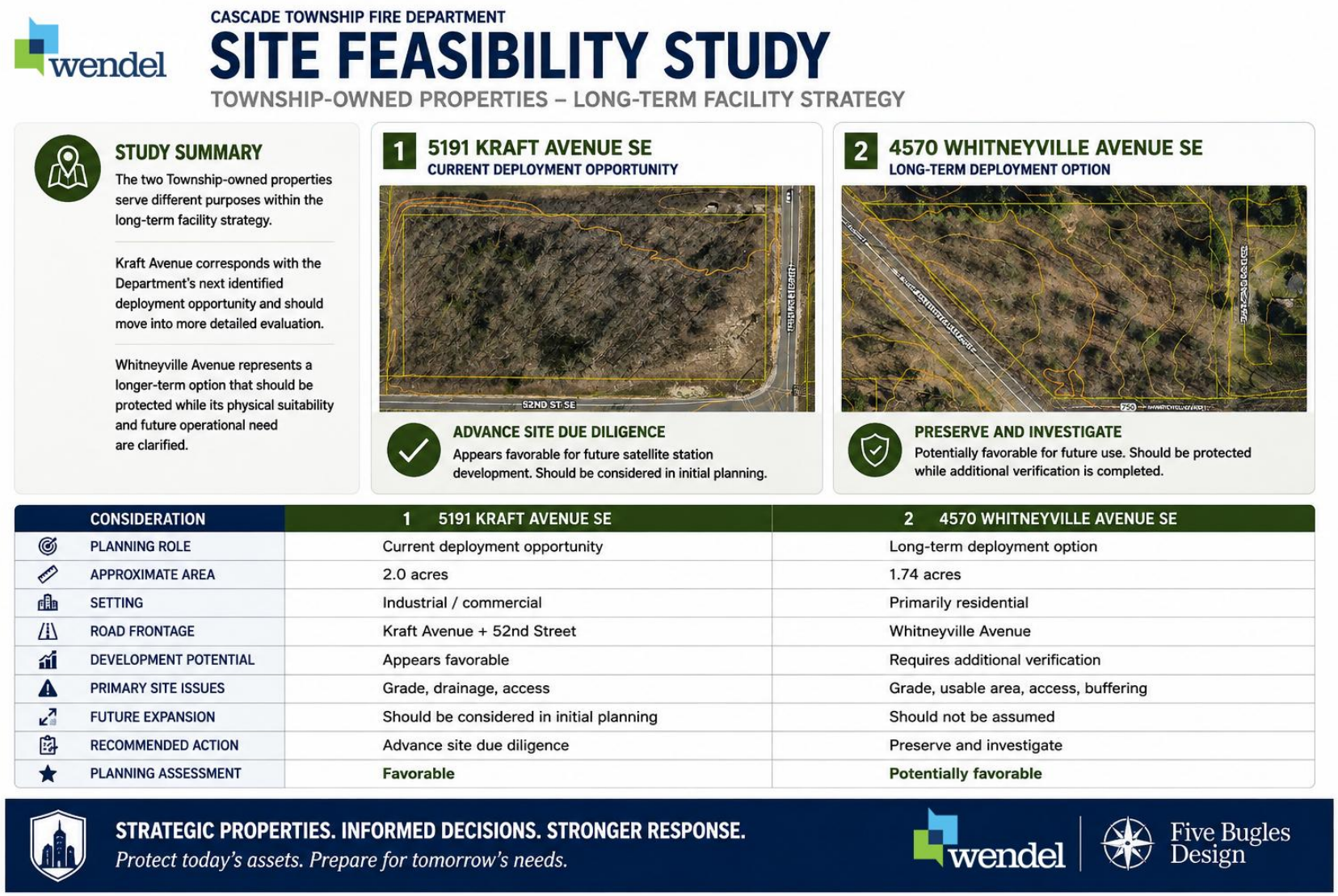


Figure 5 Site Feasibility Study Infographic

Planning-Level Assessment

Based on the information available, 4570 Whitneyville Avenue SE remains a reasonable candidate for future fire service use, but its development potential is less certain than the Kraft Avenue property. Township ownership and its location near the GIS Site 2 response area make the property worth retaining, while topography, parcel configuration, access, and residential surroundings require additional investigation.

6. Facility Alternatives

The preceding sections establish the Department's deployment priorities, space requirements, existing facility conditions, and preliminary site feasibility. The following alternatives consider how Cascade Township can respond to those findings through a combination of near-term actions and longer-term capital investment.

The alternatives are not mutually exclusive. Several address different needs or different points in time and may be implemented together. For example, the Township may maintain Station 2 while initiating a Day Engine deployment at GIS Site 1, preserve the Whitneyville Avenue property for future use, and ultimately replace Station 2 as part of a coordinated municipal campus plan. The alternatives should therefore be viewed as components of a phased strategy rather than as competing projects from which a single option must be selected.

Alternative A – Maintain Existing Fire Station 2

Under this alternative, Cascade Township would continue operating Fire Station 2 in its current configuration while completing the maintenance, repairs, and targeted improvements necessary to keep the facility safe and serviceable. No comprehensive renovation or significant expansion would be undertaken.

This represents the lowest initial capital commitment of the Station 2 alternatives and allows the Department to continue using an established response location while other priorities advance. Near-term work should concentrate on the roof and building envelope, drainage, exterior repairs, aging finishes, building systems, and selected operational improvements identified in the existing conditions assessment.

Limited interior modifications may also be appropriate where relatively modest investment improves daily operations or firefighter health and safety. The existing building contains underutilized areas that may provide opportunities for these changes without increasing the building footprint.

The limitation of this approach is equally clear. Maintenance preserves the building but does not change its underlying characteristics as a facility adapted from another municipal use. Functional limitations and questions regarding long-term resilience remain, and larger building-system investments will become more difficult to justify as the facility ages.

Assessment

Maintaining Station 2 is a practical near-term strategy and allows the Township to direct resources toward other priorities, including deployment at GIS Site 1. It should be viewed as a managed extension of the building's useful fire-service life rather than a permanent resolution of its long-term facility needs.

Alternative B – Renovate Fire Station 2

This alternative would retain the existing Station 2 structure while completing a more comprehensive renovation to better support contemporary career staffing and its long-term role as a satellite response station.

Renovation would address the building envelope and maintenance issues identified in Section 4 while reorganizing the interior around the space program developed in Section 3. Existing underutilized areas provide opportunities to improve crew living and sleeping accommodations, company operations, fitness, storage, contamination control, and other daily functions without assuming that significant additional square footage is required.

The principal advantage of renovation is the ability to reuse a substantial existing municipal asset while maintaining a proven response location. Depending on the final scope, renovation could provide a meaningful improvement in daily operations at a lower initial cost than complete replacement.

The central question is how much useful service life the investment would create. Improvements to layout, finishes, mechanical systems, and health and safety features can substantially improve the building, but renovation does not automatically provide the structural resilience or continuity-of-operations characteristics of a purpose-built emergency response facility.

Before committing to a comprehensive renovation, the Township should complete the structural and resilience evaluation recommended in Section 4. That work should establish what improvements are practical and allow the renovation investment to be compared with the expected remaining service life and performance of the resulting facility.

Assessment

Renovation is a viable alternative if further evaluation demonstrates that the existing structure can economically support the satellite program and provide an appropriate additional service life. The decision should be based on the value of the resulting facility rather than renovation cost alone.

Alternative C – Replace Fire Station 2

Alternative C would replace the existing Station 2 with a purpose-built satellite response station at the current response location. The new facility would be sized according to the program developed in Section 3 rather than by the approximately 8,500-square-foot footprint of the existing building.

Replacement provides the opportunity to organize the facility around emergency response from the outset. Apparatus circulation, crew response paths, clean and contaminated zones, living areas, emergency power, mechanical systems, security, and structural performance could be coordinated as part of a single design rather than adapted to an existing configuration.

A new station would also provide a full building lifecycle and allow the Township to incorporate the resilience and continuity-of-operations measures appropriate to an emergency response facility. Common planning principles and building systems developed for Station 2 could subsequently inform future satellite stations without requiring the buildings themselves to be identical.

The principal disadvantages are capital cost and implementation. Maintaining response coverage during demolition and construction would require careful phasing or temporary accommodations. These issues should be addressed as part of future conceptual design and campus planning.

Assessment: Replacement requires the greatest near-term investment of the Station 2 alternatives but provides the strongest long-term facility solution. It should be advanced when the cost, condition, and limitations of continued investment in the existing building no longer provide reasonable value compared with a purpose-built replacement.

Alternative D – Construct Fire Station 3

Alternative D would establish a permanent satellite station within GIS Site 1. As established in Section 2, this area represents the strongest opportunity to improve deployment within the southern airport and industrial corridor. Section 5 further identifies the Township-owned property at 5191 Kraft Avenue SE as a favorable candidate for continued site evaluation.

A permanent Station 3 would be designed around the satellite program developed in Section 3 and initially support a single engine company. Site planning should allow reasonable flexibility for future staffing or apparatus changes without requiring speculative building area in the initial project.

The primary question associated with this alternative is not whether a permanent station could improve deployment, but when permanent construction becomes appropriate.

The Day Engine concept provides an intermediate step. A company can initially operate from leased commercial or industrial space during the periods when additional coverage provides the greatest benefit. This allows the Township to improve deployment before committing to a permanent building and provides actual operating data regarding response performance, company utilization, staffing, simultaneous incidents, and interaction with mutual and automatic aid.

If those results demonstrate the value of continued or expanded coverage, the Township can move toward a permanent Station 3 with greater confidence in the staffing model and facility program. The Kraft Avenue property can be preserved and advanced through site due diligence while the Day Engine is operating.

This sequence separates two decisions that are often made simultaneously: the decision to deploy an engine company and the decision to construct a fire station.

Assessment

A permanent Station 3 represents the logical long-term facility response to the deployment opportunity identified at GIS Site 1. The Township does not need to construct it immediately. The preferred approach is to preserve and validate the Kraft Avenue property, deploy a Day Engine as staffing permits, monitor performance, and advance permanent construction when operating experience supports the investment.

Alternative E – Eventual Fire Station 4

Alternative E preserves the opportunity for a future satellite station within GIS Site 2. The Township-owned property at 4570 Whitneyville Avenue SE is located within the desired response area and, as discussed in Section 5, remains a reasonable candidate for future fire service use subject to additional site evaluation.

Unlike GIS Site 1, the current analysis does not identify an immediate need to deploy an additional company in this area. Stations 1 and 2 retain reasonable roadway access to much of the southeastern Township, and the operational benefit of Site 2 is more closely associated with future residential development, system redundancy, and changing service demand.

The principal value of this alternative is therefore land preservation rather than construction. Township ownership allows Cascade to retain a strategically located property before future development limits available options or increases acquisition costs.

The site should remain available for potential public safety use while its physical feasibility is confirmed. No detailed building program or construction schedule is necessary at this time. If future response performance, development, staffing, or emergency demand establish the need for another company, the station can then be programmed around the conditions that exist at that time.

Assessment

Station 4 is a long-term option, not a current capital project. The Township should preserve and further evaluate the Whitneyville Avenue property while monitoring the conditions that could eventually justify deployment to GIS Site 2.

Alternative F – Public Parks and Facilities / Station 2 Campus Strategy

Alternative F coordinates the long-term needs of Fire Station 2 with the Township's need for additional Public Parks and Facilities space. Rather than treating those requirements as competing uses of the existing property, the site can be planned as a municipal campus in which each function occupies the location best suited to its operational needs.

The existing Station 2 location near the roadway is particularly valuable to the Fire Department. Direct access to the public street supports emergency response and maintains a station location already integrated into the Department's deployment system. That frontage should remain reserved for fire service use.

Public Parks and Facilities operations do not require the same immediate relationship to the roadway. Subject to site planning and operational requirements, a new storage or operations building could be located farther into the municipal property. This would address current Parks and Facilities needs without requiring the Fire Department to vacate Station 2 prematurely.

The sequence would be straightforward:

- Prepare a master plan for the entire municipal property.
- Reserve the existing Station 2 frontage, apparatus access, and sufficient area for a future replacement station.
- Locate and construct the new Public Parks and Facilities building farther into the property.
- Continue operating Station 2 while completing appropriate maintenance and targeted improvements.
- Replace Station 2 when facility condition, lifecycle cost, or operational requirements indicate that further investment in the existing building is no longer warranted.
- When that transition occurs, the existing Station 2 building can be removed and a purpose-built satellite station constructed in approximately the same advantageous response location.
- The campus master plan should be completed before significant Parks and Facilities construction occurs. Building placement, internal roads, utilities, stormwater infrastructure, parking, and future expansion should be coordinated so that near-term development does not constrain the future fire station.

This approach also avoids constructing a replacement fire station simply because another Township department needs space. Each investment can proceed according to its own operational need and capital timeline.

Assessment

Alternative F provides the strongest framework for coordinating the long-term use of the Station 2 municipal property. It addresses Public Parks and Facilities needs while allowing Station 2 to remain operational through an appropriate service life and, most importantly, preserves the prime response location for an eventual purpose-built replacement station.

Relationship Between Alternatives

The alternatives described above address different needs and planning horizons and should not be considered mutually exclusive.

A reasonable implementation strategy could incorporate several of them. The Township could maintain Station 2 in the near term under Alternative A, initiate the Site 1 deployment strategy described in Alternative D, preserve the Whitneyville Avenue property under Alternative E, and implement the campus strategy in Alternative F. Station 2 could then transition from maintenance to replacement when conditions warrant.

Renovation under Alternative B remains available if further structural and resilience evaluation demonstrates that substantial reinvestment in the existing building provides better long-term value than replacement.

This approach allows Cascade Township to make decisions as conditions become clearer rather than committing today to a fixed sequence of major capital projects.

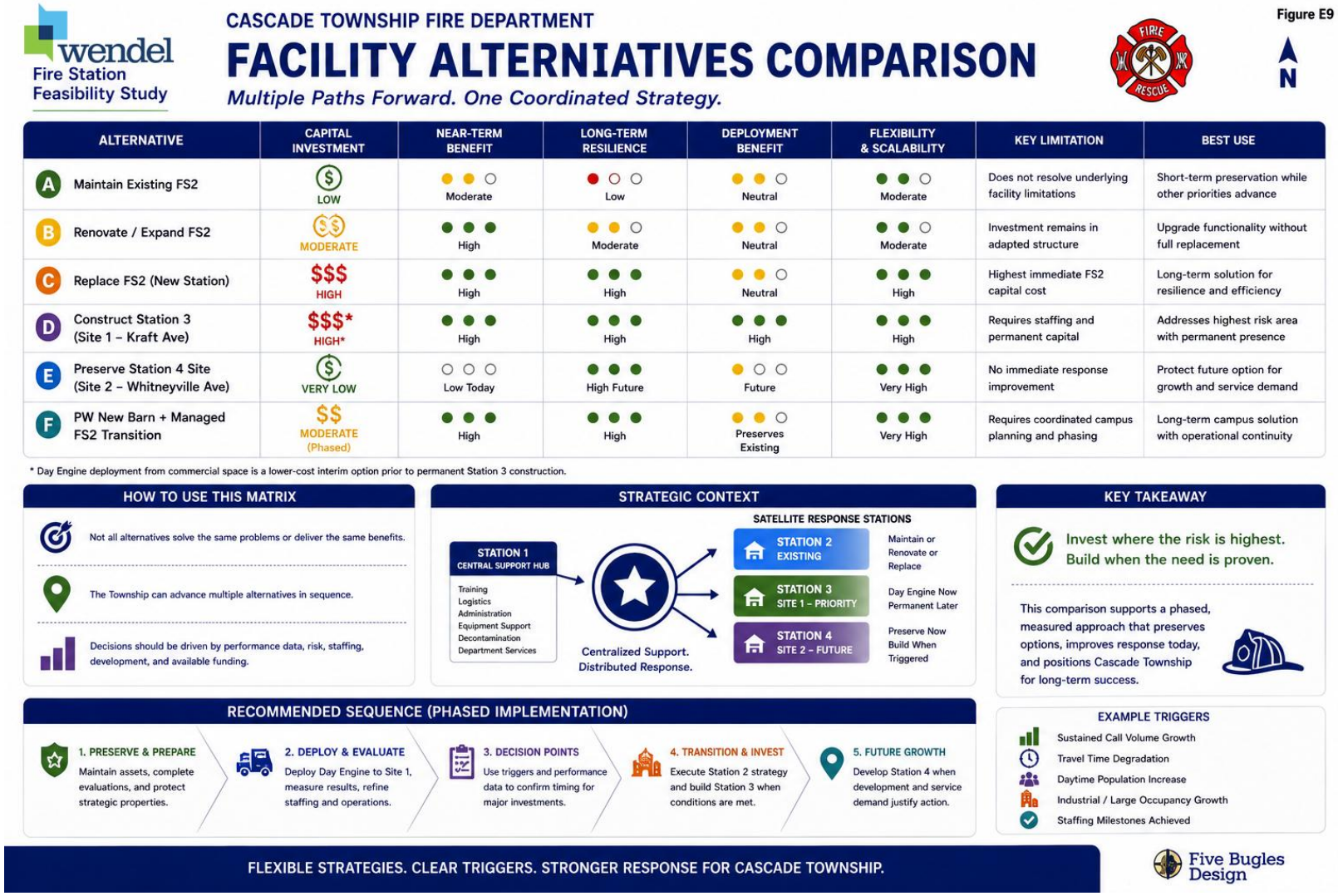


Figure 6 Facility Alternatives Infographic

Facility Alternatives Summary

The alternatives point toward a phased strategy rather than a single capital decision. In the near term, Station 2 can remain in service while the Township addresses necessary maintenance, advances planning for GIS Site 1, and protects the two properties that have long-term value to the response network.

The larger investments can follow when their respective conditions are established. Operating experience can determine when a permanent Station 3 is warranted. Building condition and lifecycle economics can determine when Station 2 should transition from maintenance to replacement. Future growth and response performance can determine whether Station 4 is eventually required.

7. Conceptual Planning

The conceptual planning developed for this study tests how the preferred facility strategies can be accommodated within the Township's existing and future properties. The concepts apply the space program established in Section 3 and the findings of the Site Feasibility and Facility Alternatives analyses.

These plans are intended to demonstrate feasibility, operational relationships, and potential development patterns. They are not final architectural designs. Building configuration, engineering systems, site development, and project scope will require further refinement as individual projects advance.

Three planning concepts are particularly relevant to the long-term strategy: coordinated development of the Station 2/Public Parks and Facilities property, eventual replacement of Station 2, and development of a permanent Station 3 at GIS Site 1.

Station 2 / Public Parks and Facilities Campus

The existing Station 2 property presents an opportunity to address Fire Department and Public Parks and Facilities needs through coordinated campus planning.

Station 2 occupies the portion of the property most advantageous for emergency response. Its relationship to the public roadway should therefore be preserved for long-term fire service use. A new Parks and Facilities building can be located farther into the property, where immediate street frontage is less important to its daily operation.

The campus concept should establish the long-term organization of the property before significant new construction occurs. Particular attention should be given to:

- preserving direct fire apparatus access to the public roadway;
- reserving sufficient frontage for an eventual replacement Station 2;
- locating the Parks and Facilities building and associated service areas away from primary emergency response circulation;
- coordinating employee, service, and emergency vehicle movements;
- planning utilities, stormwater systems, and site infrastructure to serve both current and future development; and
- allowing the existing Station 2 to remain operational throughout the transition.

The objective is not to determine the exact location of every future improvement, but to avoid near-term decisions that could compromise the most valuable portion of the site for emergency response.

Under this approach, a new Parks and Facilities building can be constructed while the existing fire station remains in service. When Station 2 reaches the appropriate replacement point, the existing building can be removed and a purpose-built station constructed in approximately the same advantageous frontage location.

Replacement Fire Station 2

The conceptual replacement for Station 2 applies the satellite station program developed in Section 3. The building would be sized around the assigned company and apparatus rather than the footprint or organization of the existing station.

Planning should emphasize a direct relationship between crew spaces and the apparatus bays, short response paths, separation between apparatus and occupied areas, and clear transitions between operational and living functions. Crew accommodations should support continuous occupancy without adding Department-wide functions that are not required at the station.

Contamination control should follow the satellite strategy established in the space program. A gear-dump area provides a controlled location for contaminated PPE and equipment, while an apparatus-adjacent restroom/utility area can provide emergency gross-decontamination capability when personnel cannot follow the normal procedure of returning to Station 1.

The replacement station should also be planned as a resilient emergency response facility. Emergency power, communications, mechanical and electrical systems, security, structural design, and site access should support continued operation during severe weather, utility interruptions, and other community emergencies.

The conceptual plan should remain compact. Future flexibility is better provided through thoughtful building placement, structural organization, utilities, and site planning than by constructing unused rooms. Where practical, the campus plan should preserve an area for future expansion without making that expansion necessary for the initial facility to function effectively.

GIS Site 1 – Fire Station 3

The permanent Station 3 concept applies the same satellite program to the Township-owned property at 5191 Kraft Avenue SE. The approximately two-acre corner property provides opportunities for a compact response station, although the grading, drainage, and usable development area identified in Section 5 will require further investigation before a final site plan is established.

The property's frontage on both Kraft Avenue and 52nd Street provides flexibility in organizing circulation. Conceptual planning should explore whether emergency apparatus and routine employee or visitor traffic can use separate access points while maintaining efficient response in multiple directions.

Building placement should be driven first by apparatus movement. The apparatus bays and apron should have a direct relationship to the preferred response route, with employee parking, visitor access, utilities, and service functions arranged so they do not interfere with emergency operations.

The site concept should also identify a reasonable area for future expansion. Parking, stormwater facilities, utilities, and site circulation should be arranged so that a foreseeable addition or change in apparatus assignment remains possible without major reconstruction of the site.

A permanent Station 3 does not need to precede deployment of a company to GIS Site 1. The Day Engine strategy described in Section 2 can operate independently from leased commercial space while the Kraft Avenue property is preserved and evaluated. If operating experience supports permanent deployment, the conceptual station can then be refined using actual staffing and response data.

GIS Site 2 – Future Station 4

No conceptual building plan is recommended for the Whitneyville Avenue property at this time.

Section 5 identifies the property as potentially favorable for future fire service use but also identifies topography, parcel configuration, apparatus access, and usable development area as issues requiring further investigation. More importantly, the deployment analysis does not identify Station 4 as a current facility need.

The appropriate planning action is therefore to preserve the property and confirm its development potential. A future station should be programmed when operational conditions warrant deployment to GIS Site 2, allowing the building to respond to the staffing, apparatus, technology, and service model in place at that time.

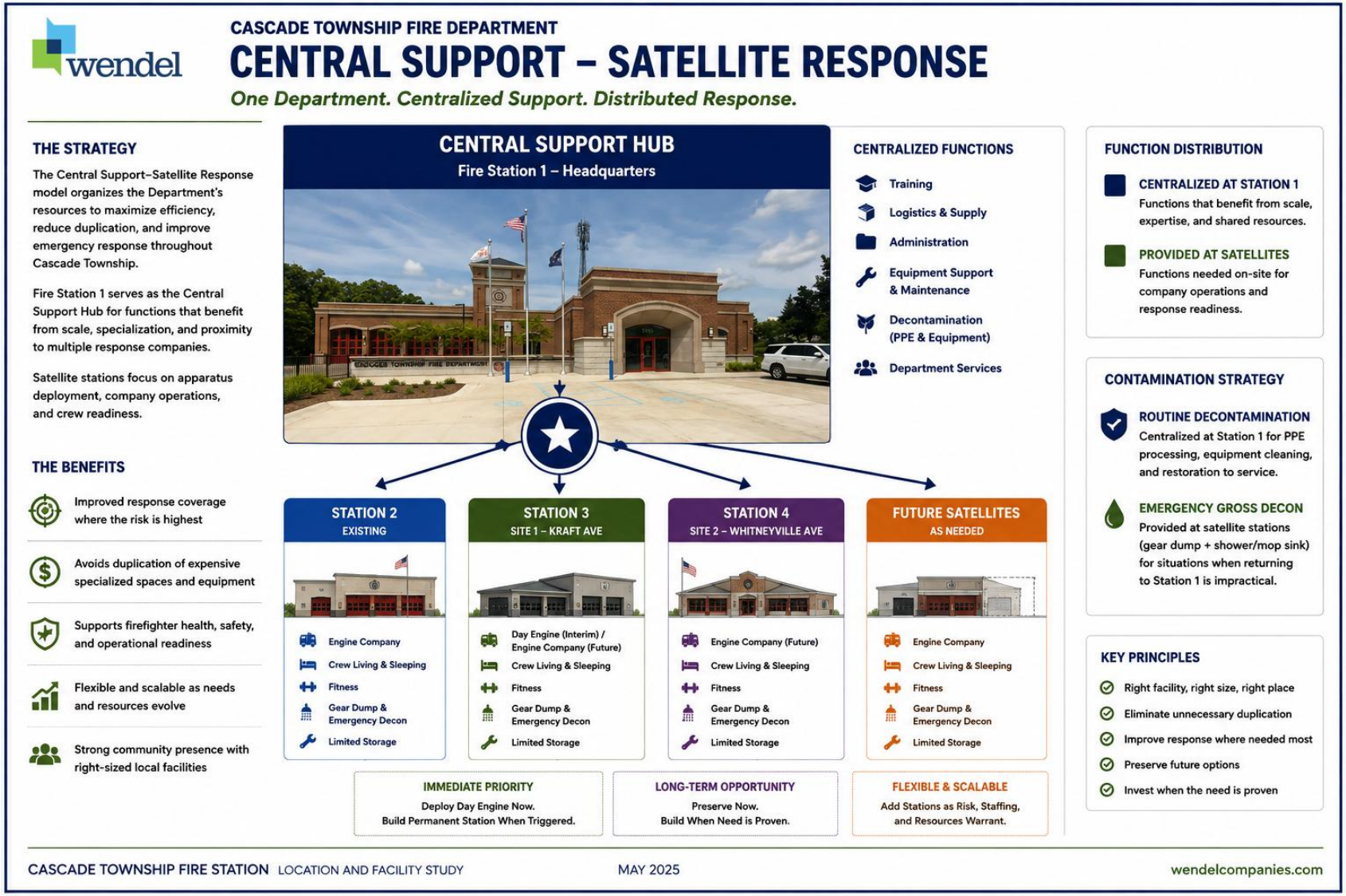


Figure 7 Satellite Response-Central Support Infographic

Satellite Station Planning Principles

Replacement Station 2, Station 3, and an eventual Station 4 should share a common planning approach without becoming identical buildings. Consistency should be concentrated where it provides operational or lifecycle value:

- common apparatus-bay and response relationships;
- consistent health, safety, and contamination-control practices;
- efficient, multifunctional crew spaces;
- standardized building systems, materials, equipment, and technology where practical;
- simple circulation and clear separation of operational and occupied areas; and
- site-specific adaptation for access, topography, neighborhood context, and future expansion.

A common architectural vocabulary may also provide value as the station network develops, but operational consistency is more important than reproducing a fixed prototype on sites with different physical conditions.

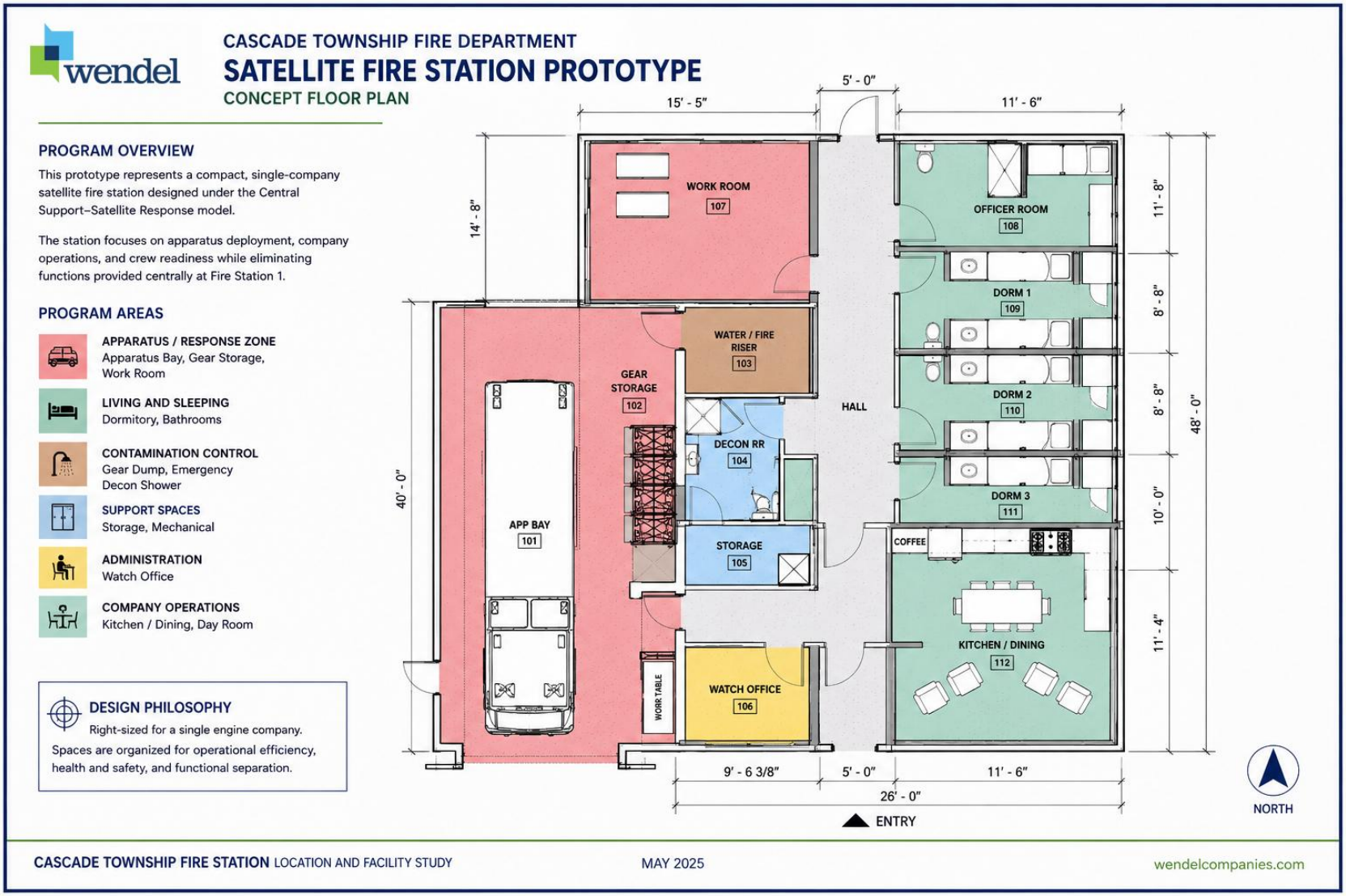


Figure 8 Satellite Fire Station Concept Infographic

Conceptual Planning Summary

The concepts illustrate a straightforward physical strategy for the Department's future facilities. The Station 2 property can accommodate a coordinated municipal campus while preserving the prime emergency response location. A replacement Station 2 can be smaller and purpose-built around the satellite program. The same program can inform a permanent Station 3 at Kraft Avenue, adapted to the site's access and development conditions. Whitneyville Avenue can remain undeveloped until both site feasibility and operational need are better established.

The conceptual plans included in this section illustrate these relationships at a planning scale. Larger versions are provided in **Appendix D – Conceptual Plans** for future reference as individual projects move into programming and design.

8. Opinion of Probable Costs

The Opinion of Probable Costs provides planning-level estimates for the principal facility and deployment strategies identified through this study. These estimates are intended to assist Cascade Township in comparing alternatives, establishing capital priorities, and developing a long-term implementation strategy. They should not be interpreted as construction bids or final project budgets.

Actual project costs will depend upon the scope and timing of each improvement, site conditions, construction market conditions, escalation, final building program, procurement method, and the extent of required infrastructure and site development. As individual projects advance, the planning estimates should be updated through programming, conceptual design, and subsequent design phases.

Unless otherwise noted, future project budgets should consider construction cost together with appropriate allowances for architectural and engineering services, surveying, geotechnical and environmental investigations, permitting, furniture and equipment, technology and communications, contingencies, testing and inspections, and other owner costs. Future projects should also include escalation appropriate to the anticipated year of construction.

Fire Station 2 – Maintain and Repair

Under the maintain-and-repair strategy, the Township would continue operating Fire Station 2 while completing the improvements necessary to preserve the building in safe and reliable service. This represents the minimum capital investment associated with Station 2 and is intended to extend the building's useful fire-service life rather than initiate a comprehensive renovation.

Anticipated work includes roof and attic improvements, exterior siding and masonry repairs, flashing and drainage corrections, damaged concrete replacement, selected interior finish improvements, building-system maintenance, and targeted health and safety improvements. Limited interior modifications may also be appropriate where relatively modest investments provide meaningful operational benefit.

Because this strategy assumes an eventual transition to a purpose-built replacement station, capital improvements should be evaluated according to their necessity and expected useful life. Major investments intended to substantially extend the lifecycle of the existing structure should be weighed against the Township's longer-term replacement strategy.

Estimated Planning-Level Cost:

$$

Fire Station 2 – Comprehensive Renovation and Limited Expansion

This alternative would comprehensively renovate the existing approximately 8,500-square-foot Station 2 to better support contemporary career staffing and its role as a response-focused satellite station. Renovation would include correction of identified building-envelope deficiencies together with substantial interior reconfiguration, building-system improvements, crew living and sleeping accommodations, health and safety improvements, contamination-control provisions, and operational upgrades.

Limited expansion may be appropriate where required program elements cannot be efficiently accommodated within the existing footprint; however, the Central Support–Satellite Response model should minimize the need to add building area by retaining training, logistics, major equipment support, and routine decontamination at Station 1.

Before committing to a comprehensive renovation, the Township should complete a structural and resilience assessment to determine the extent of practical improvements and the remaining useful life created by the investment.

Estimated Planning-Level Cost:

$$$

Fire Station 2 – Purpose-Built Replacement

This alternative assumes replacement of the existing Station 2 with a new satellite response station specifically designed and engineered for emergency response operations. The facility would be right-sized according to the satellite space program rather than simply replicating the existing 8,500-square-foot building.

The project would include apparatus accommodations, company operations, crew living and sleeping areas, fitness, limited equipment and supply storage, contamination-control provisions, emergency power, resilient building systems, site development, apparatus circulation, parking, and supporting infrastructure.

Replacement provides the highest level of long-term resilience and operational efficiency among the Station 2 alternatives but also requires the greatest immediate capital investment. Project planning should account for temporary fire service operations or construction phasing necessary to maintain response capability during construction.

Estimated Planning-Level Cost:

$$$$

Station 2 / Public Works Campus Master Plan

If the Township advances the coordinated Public Works and Station 2 strategy, a conceptual master plan should be prepared for the overall municipal property before significant new construction occurs.

The master plan would establish the location of the new Public Works facility, preserve the existing Station 2 frontage and apparatus access for future fire service use, identify the approximate footprint of an eventual replacement fire station, coordinate internal circulation, utilities and stormwater infrastructure, and establish appropriate development and expansion areas.

This relatively modest planning investment is important because decisions made when locating the Public Works building could significantly influence the cost and feasibility of replacing Station 2 in the future.

Estimated Planning-Level Cost:

$

New Public Works Storage / Operations Building

Under the coordinated campus strategy, the Township would construct a new Public Works storage or operations building farther into the existing municipal property while Fire Station 2 remains operational in its current location.

The Public Works facility should be programmed independently according to that department's storage, equipment, shop, grounds, administrative, and operational requirements. Because these functions generally require fewer specialized systems and resilience provisions than a continuously occupied emergency response facility, the building may provide a comparatively economical method of addressing immediate Public Works needs while preserving the prime frontage for fire service use.

The final cost will depend substantially upon the required building area, level of conditioning, shop functions, equipment storage requirements, site development, utilities, and final program.

Estimated Planning-Level Cost:

$$$

GIS Site 1 – Day Engine Commercial Deployment

The Day Engine represents the lowest-capital method of improving response within the airport and industrial corridor. Rather than constructing a permanent station initially, the Township would lease or sublease suitable commercial, industrial, or flex space within or near the GIS Site 1 response area.

Initial costs would include lease expenses and tenant improvements necessary to accommodate an engine company. Improvements may include apparatus access and storage, basic crew workspace, restroom and break facilities, communications and IT, security, limited equipment storage, emergency power where appropriate, and contamination-control provisions.

Because the concept is intended as an interim operational deployment, tenant improvements should be limited to those necessary to provide safe and reliable operations. Significant investment in leased space should be avoided unless justified by the anticipated duration of occupancy.

Estimated Planning-Level Cost:

$$

Personnel costs associated with staffing the Day Engine should be evaluated separately as an operating expense and are not included in the facility estimate.

GIS Site 1 – Permanent Fire Station 3

A permanent Station 3 would be developed as a compact satellite response facility supporting an engine company within the airport and industrial corridor. Fire Station 1 would continue providing centralized training, logistics, equipment support, administration, and routine decontamination, allowing Station 3 to remain substantially smaller than a conventional full-service fire station.

The project budget should include the satellite station building, apparatus apron and circulation, crew parking, utilities, emergency power, site security, stormwater management, technology infrastructure, and other site development. The facility and site should also preserve reasonable expansion opportunities if staffing or apparatus assignments change in the future.

The Township-owned property at 5191 Kraft Avenue SE potentially eliminates a significant land-acquisition expense; however, site feasibility, environmental conditions, utilities, and development requirements should be confirmed before establishing a final project budget.

Estimated Planning-Level Cost:

$$$$

GIS Site 2 – Future Fire Station 4

Construction of Fire Station 4 is not identified as a current capital need. The primary recommendation associated with GIS Site 2 is preservation of the Township-owned property at 4570 Whitneyville Avenue SE and confirmation of its long-term suitability for public safety use.

Because the eventual station may not be required for many years, establishing a detailed construction estimate today would provide limited value. Staffing models, apparatus, building technology, construction costs, and the Department's operational requirements may change substantially before the project advances.

For long-range capital planning, the Township may carry an order-of-magnitude allowance based upon the future construction of a single-company satellite station similar in philosophy to Station 3, with the estimate periodically updated as the anticipated implementation horizon

Current Site Preservation Cost:

No significant capital expenditure anticipated, subject to site feasibility evaluation.

Future Planning-Level Station Allowance:

To far out to estimate

Site Feasibility and Predevelopment Studies

Before permanent development of the Kraft Avenue or Whitneyville Avenue properties, planning-level site feasibility should be followed by appropriate due diligence. Depending upon the property and project, this may include boundary and topographic surveying, utility verification, environmental review, wetlands evaluation, geotechnical investigation, traffic and apparatus-access analysis, zoning review, stormwater evaluation, and other predevelopment services.

Completing this work early reduces uncertainty and allows the Township to identify potential site constraints before significant design expenditures are incurred.

Estimated Planning-Level Allowance:

$ per site

Long-Term Capital Planning

The facility strategies identified through this study should not be interpreted as projects that must be funded or constructed simultaneously. The recommended approach intentionally separates immediate operational actions, existing-facility lifecycle decisions, land preservation, and future capital construction.

The Township can therefore sequence investment according to operational need and available funding. Near-term expenditures can focus on preserving Station 2, evaluating and protecting strategic sites, master planning the Station 2/Public Works property, and potentially establishing the GIS Site 1 Day Engine. Larger capital investments—including a permanent Station 3 and eventual replacement of Station 2—can occur as documented operational and facility conditions warrant.

For long-range budgeting, project estimates should be maintained in current-year dollars and escalated to the anticipated midpoint of construction when individual projects are incorporated into the Township's Capital Improvement Plan. This approach will allow decision-makers to distinguish changes in project scope from changes caused simply by construction-market escalation.

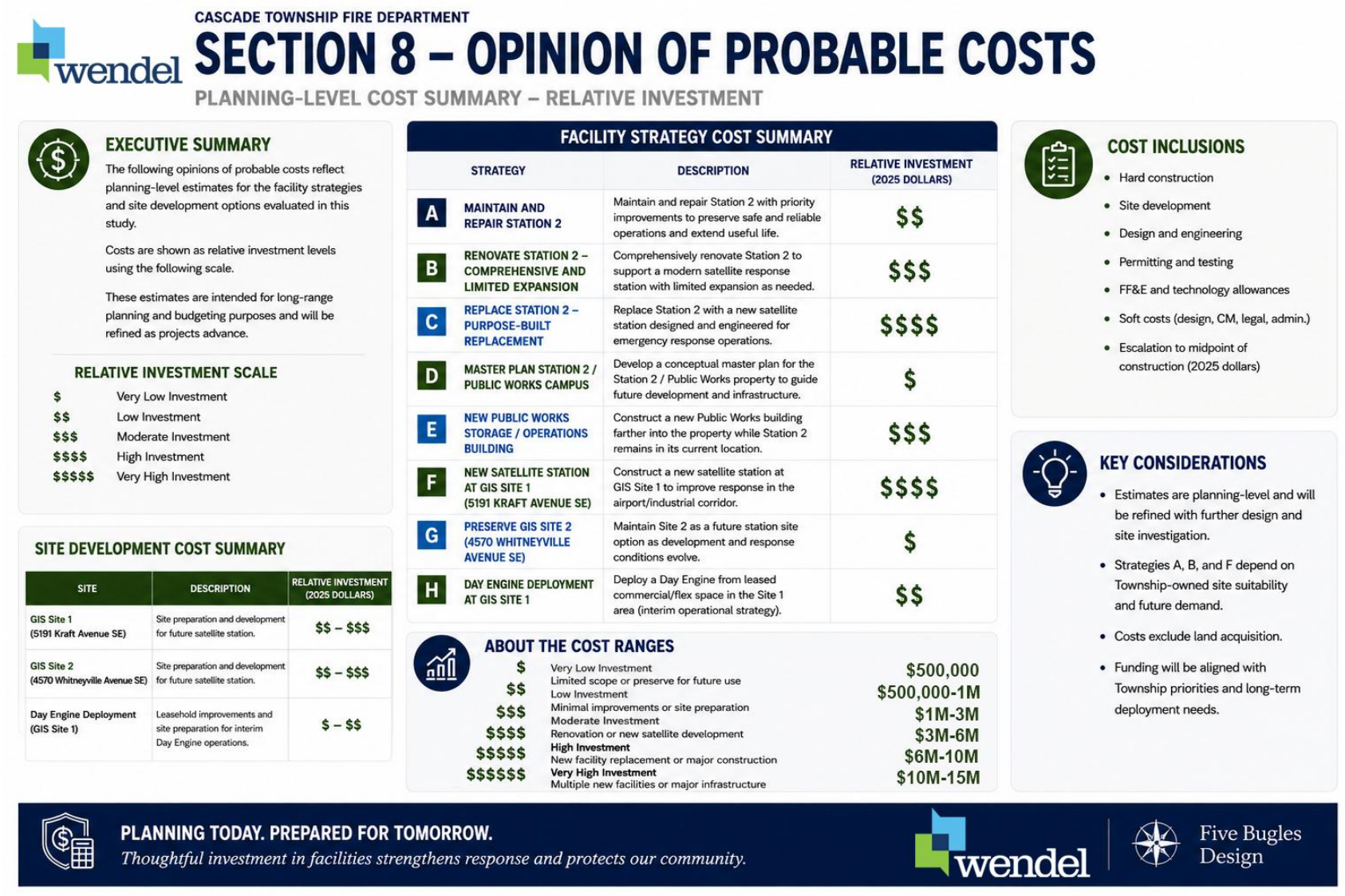


Figure 9 Opinion of Probable Costs Infographic

9. Implementation Strategy

The recommendations developed through this study do not require Cascade Township to commit to a fixed sequence of construction projects. Some actions should occur in the near term because they preserve important assets, address known facility needs, or reduce uncertainty. Other investments depend on future staffing, response performance, facility condition, development, and available funding. Implementation is therefore organized around three stages: Preserve and Prepare, Deploy and Evaluate, and Transition When Triggered. These stages may overlap. Their purpose is to distinguish actions that can reasonably begin now from major capital investments that should proceed when supporting conditions are demonstrated.

Preserve and Prepare

The first stage focuses on maintaining the existing system, protecting strategic properties, and completing the planning necessary to support later decisions.

Maintain Fire Station 1 as the Central Support Hub

Fire Station 1 should continue to serve as the Department's headquarters and primary location for training, administration, logistics, equipment support, and routine post-incident decontamination. No significant expansion is recommended at this time. As staffing and the station network grow, the Department should periodically review the capacity of shared functions, particularly logistics and storage, PPE and equipment processing, decontamination, training, and administration.

Maintain Fire Station 2

Station 2 should remain in service while the Township addresses the priority maintenance items identified in Section 4. Near-term work should concentrate on preserving reliable operations and preventing avoidable deterioration. Improvements that provide clear operational, health and safety, or maintenance benefits can proceed as appropriate. Larger investments intended to substantially extend the building's service life should be considered in the context of the renovation and replacement alternatives rather than undertaken independently.

Complete Station 2 Structural and Resilience Evaluation

Before committing to a comprehensive renovation of Station 2, the Township should complete a structural and resilience evaluation proportionate to the level of investment being considered. The evaluation should establish the capabilities of the existing structure, identify practical improvements, and help determine whether substantial reinvestment would produce an appropriate additional service life. The results will provide an important basis for comparing renovation with eventual replacement.

Master Plan for Station 2 / Public Parks and Facilities Property

A coordinated master plan should be prepared before significant new construction occurs on the municipal property containing Station 2. The plan should reserve the existing fire station frontage and direct roadway access for long-term emergency response use while identifying an appropriate location for a new Public Parks and Facilities building farther into the property. Utilities, stormwater, internal circulation, parking, and future development areas should be coordinated so that near-term improvements do not constrain eventual replacement of Station 2.

This work can proceed independently of the timing of fire station replacement.

Advance Kraft Avenue Site Due Diligence

The Township should retain the property at 5191 Kraft Avenue SE and advance the site evaluation identified in Section 5. Near-term investigation should establish the usable development envelope and address topography, grading and drainage, roadway access, utilities, environmental conditions, stormwater requirements, and other development constraints. The objective is to determine whether the property can be confidently reserved for permanent Station 3 before significant design work begins. This work does not require the Township to commit to the construction of the station.

Preserve the Whitneyville Avenue Property

The property at 4570 Whitneyville Avenue SE should remain available for potential future public safety use. Because Station 4 is not identified as a current need, detailed design is unnecessary. The Township should nevertheless complete enough due diligence to understand whether topography, access, usable development area, utilities, or other conditions could materially affect its long-term viability. If the property is confirmed as suitable, it should be preserved as a future option while development and response conditions are monitored.

Establish Local Response Performance Measures

Cascade Township should establish a manageable set of performance measures that can be tracked consistently over time. These measures should supplement national response objectives and provide local information for future staffing and deployment decisions.

Useful measures may include:

- first-arriving travel performance;
- company utilization;
- simultaneous incidents;
- mutual and automatic aid use;
- development and daytime population changes; and
- selected intervention-time measures for large or complex occupancies.

The intent is not to create an extensive new reporting system, but to establish enough consistent information to recognize when the assumptions supporting this study begin to change.

Deploy and Evaluate

Once staffing and operating resources permit, the next stage is to improve response within GIS Site 1 without requiring immediate construction of a permanent station.

Implement the GIS Site 1 Day Engine

The Department should establish the Day Engine deployment described in Section 2 using suitable leased or subleased commercial space within or near the Site 1 response area. Initial deployment hours can be aligned with the periods when the airport and industrial corridor experience its greatest daytime activity. The operating schedule can subsequently be adjusted as experience demonstrates when the additional company provides the greatest benefit. The commercial location should remain intentionally simple. Investment should be limited to the improvements necessary to safely house the apparatus and support the assigned personnel during the anticipated occupancy period.

Monitor and Refine the Deployment

The Day Engine should be treated as both an operational resource and a means of testing the long-term Site 1 strategy.

The Department should monitor a focused set of measures, including:

- improvement in first-arriving response;
- company utilization;
- incident distribution by time of day;
- simultaneous incidents;
- mutual and automatic aid interaction;
- effects on Stations 1 and 2;
- staffing sustainability; and
- intervention time at selected large occupancies where practical.

The results should be reviewed periodically rather than waiting for a predetermined number of years. If the deployment provides measurable benefit but utilization remains concentrated during the workday, the Day Engine may remain the appropriate service model. If demand expands into evenings, nights, and weekends, longer deployment hours or continuous staffing can be considered. In this way, the operating model can mature before the Township determines the final requirements of a permanent building.

Transition When Triggered

Permanent Station 3, replacement Station 2, and eventual Station 4 represent larger capital commitments. Their timing should be based on identifiable conditions rather than calendar dates alone.

Permanent Fire Station 3

Planning for permanent Station 3 should advance when the Site 1 deployment demonstrates a sustained need for a permanent facility.

Indicators may include:

- measurable response improvement from the Day Engine;
- sustained company utilization;
- expansion of service demand beyond the initial deployment hours;
- increased industrial or commercial development;
- growth in daytime or permanent population;
- increasing simultaneous incidents;
- staffing sufficient to support expanded deployment; or
- locally adopted performance measures supporting permanent coverage.

Not every indicator must be present. The decision should consider the overall operating pattern and the value of converting the temporary deployment into a permanent facility. If the Kraft Avenue property has already completed appropriate due diligence, the Township will be positioned to move into programming and design without beginning another site search.

Replacement Fire Station 2

Station 2 should continue operating while it remains safe, functional, and economically reasonable to maintain. Replacement should advance when the balance between continued investment and resulting service life begins to favor a new facility.

Potential indicators include:

- increasing maintenance expenditures;
- major roof, envelope, mechanical, electrical, or structural work becoming necessary;
- findings from the structural and resilience evaluation;
- inability to adequately support staffing or operations;
- health and safety limitations that cannot be reasonably corrected;
- increasing operational inefficiency; or
- renovation costs that no longer provide reasonable value compared with replacement.

The decision should consider lifecycle value rather than building age alone. A major repair need does not automatically require replacement, just as the ability to renovate does not automatically make renovation the better investment.

When replacement is warranted, the campus strategy described in Sections 6 and 7 allows the existing building to be removed and a purpose-built satellite station constructed in the preserved response location.

Future Fire Station 4

Development of Station 4 should remain a long-term, condition-driven decision.

Potential indicators include:

- substantial residential development in the southeastern Township;
- measurable deterioration in response performance;
- increasing emergency demand;
- greater frequency of simultaneous incidents;
- changes in mutual or automatic aid availability;
- roadway or development changes affecting existing station access; or
- staffing sufficient to support another company.

Until those conditions emerge, preservation of a viable site provides the Township with the necessary flexibility without creating a premature capital or staffing obligation.

Future Community Risk Assessment

Cascade Township should consider completing a Community Risk Assessment or similar operational study as the Department's deployment system evolves. The work could be completed internally or through a separate professional study and should build on the GIS and performance information developed through this facilities assessment.

Particular attention could be given to major industrial occupancies, hazardous materials, daytime and transient populations, effective response force, simultaneous incidents, mutual and automatic aid, and intervention time within selected complex facilities.

A future risk assessment is not a prerequisite to implementing this study. Its purpose would be to refine the performance measures and deployment triggers used for subsequent staffing and capital decisions.

Individual actions should be incorporated into the Township's regular capital planning and budgeting process as their timing becomes clearer. Facility condition and operational performance should be reviewed periodically so that emerging needs can be anticipated rather than addressed only after they become urgent.



Figure 10 Implementation Strategy Infographic

Implementation Summary

The implementation strategy separates actions that can reasonably occur now from major investments that depend on future conditions. Maintenance, site preservation, due diligence, campus planning, and performance monitoring can proceed without committing Cascade Township to immediate construction.

The Day Engine provides the same flexibility operationally. It allows the Department to improve Site 1 deployment and learn from actual performance before determining the timing and program of a permanent Station 3.

Replacement of Station 2 and development of Station 4 can follow when facility condition, response performance, community growth, staffing, and lifecycle economics support those investments. This approach allows Cascade Township to move forward while retaining control over the timing and scale of its largest future capital commitments.

10. Study Summary

Cascade Township enters this planning period from a strong position. Fire Station 1 is a modern headquarters facility with the capacity to support Department-wide operations, while Station 2 remains serviceable and occupies an important location within the existing response network. The facility strategy identified through this study therefore does not require wholesale replacement of the current system. Instead, it provides a framework for extending that system as staffing, development, and emergency service needs change.

The Central Support–Satellite Response model provides the basis for that growth. By maintaining specialized support functions at Station 1, future response stations can remain compact and focused on the personnel and apparatus assigned to them. This approach makes better use of the Township's existing investment while reducing unnecessary duplication in future facilities.

The next opportunities are different in both purpose and timing. GIS Site 1 presents the stronger current case for expanded deployment, but the Township can test that need through a Day Engine before committing to permanent construction. Station 2 can remain in service while its condition is managed and the surrounding municipal property is planned for its eventual replacement. GIS Site 2 represents a longer-term opportunity, where preserving a viable property today may be more important than determining when or what to build.

Taken together, the recommendations allow Cascade Township to make incremental decisions without losing long-term options. Maintenance, site preservation, due diligence, operational deployment, and capital construction can occur on separate timelines. Major investments can then be made when response performance, staffing, facility condition, development, and lifecycle value demonstrate that they are warranted.

The appendices that follow provide the technical documentation supporting the study, including the GIS response and coverage analysis, detailed fire station space program, existing conditions documentation, and conceptual planning exhibits. These materials are intended to serve as a reference as individual recommendations advance into future planning, budgeting, design, and implementation.

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intersect Design. Strategy. Architecture.

Primary Contact:
Bill LaDitka, IAIA, LEED AP
Principal Architect | Planner, Intersect Studio
(269) 944-9279
bill@intersect-studio.com

wendel

Five Bugles Design™

Primary Contact:
Vaughan S. Miller, AIA
Public Safety Designer | Operational Strategist, Wendel Companies
(715) 832-4848
vmiller@wendelcompanies.com



Cascade Charter Township

Facilities Master Plan Appendices

September 2026

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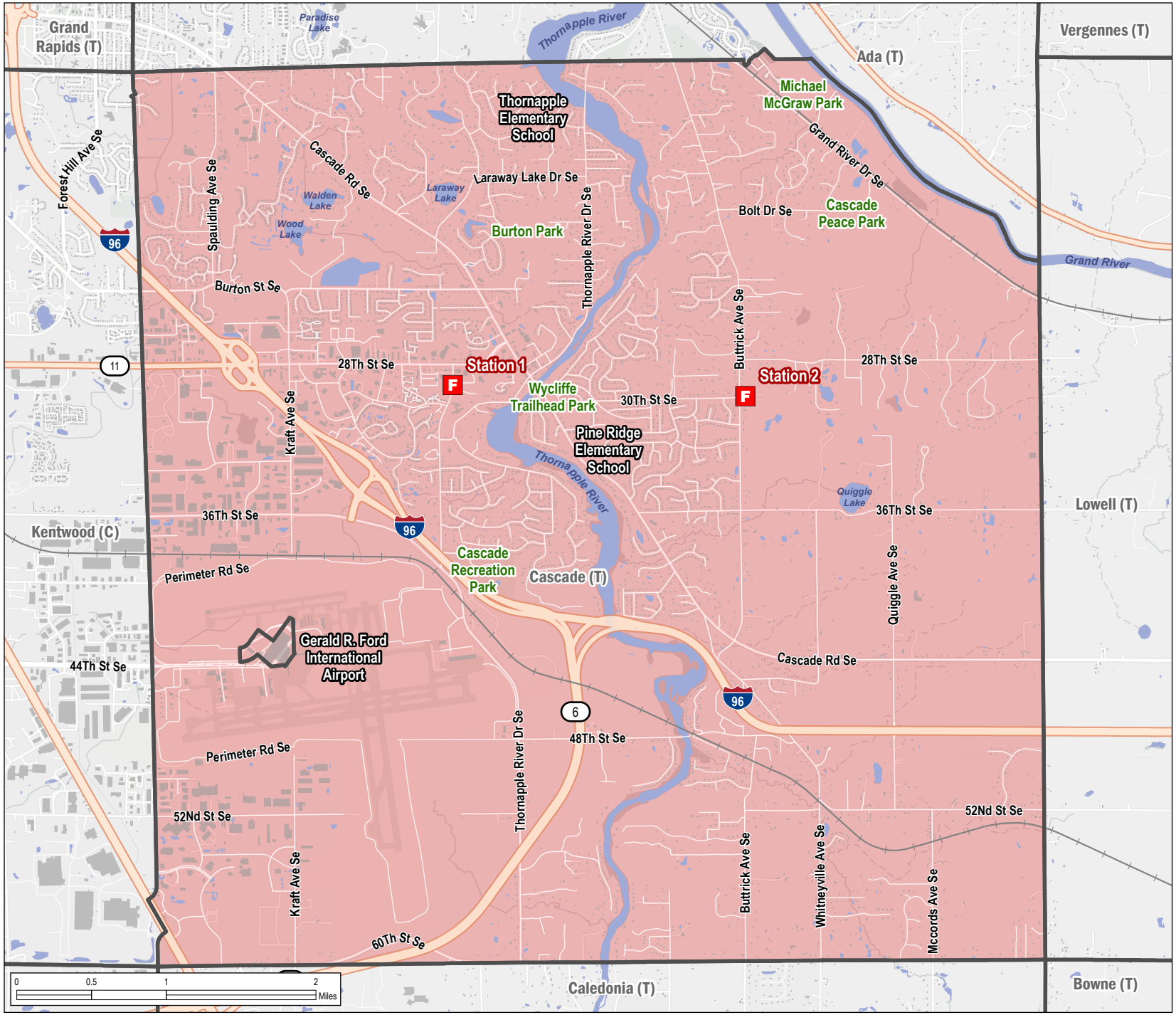
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Appendix A – Fire & Emergency GIS Response Analysis

This appendix is an attachment and contains the GIS exhibits developed to evaluate Cascade Township's existing and potential future fire service deployment. The analysis illustrates existing station coverage, historical incident distribution, residential and daytime population patterns, mutual and automatic aid considerations, and the comparative response improvements associated with GIS Sites 1 and 2. These exhibits provide the technical basis for the deployment findings and future station planning discussed in Section 2.

Figure E1



FIRE CASCADE TOWNSHIP RESCUE

Cascade Township Fire Department

Station Location Study

Response Area

N W E S

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad

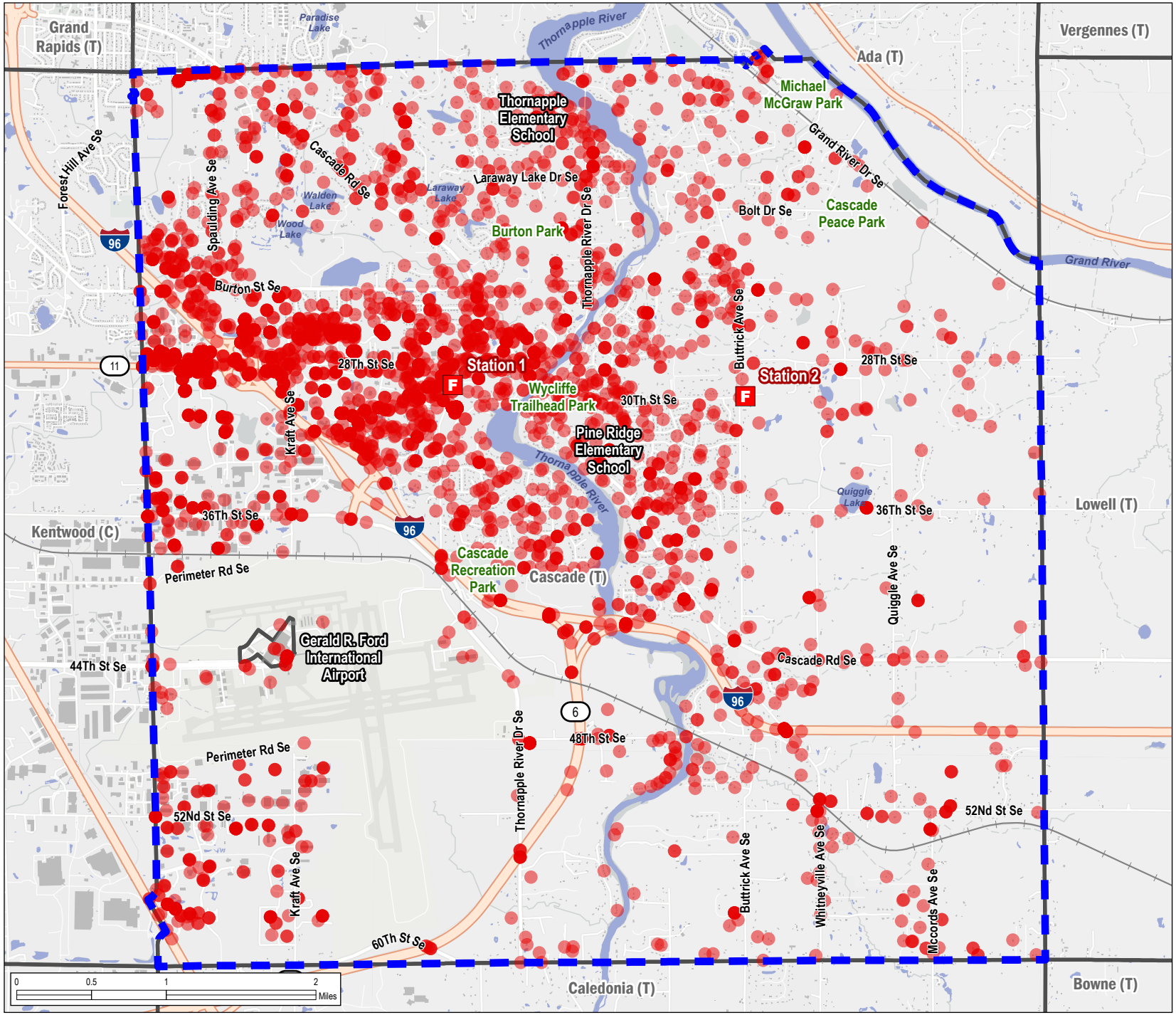
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Figure E2



Cascade Township Fire Department

Station Location Study

Incident Call Locations (2024-2026)

N
W
E
S

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad
- Incident Calls (2024-2026)

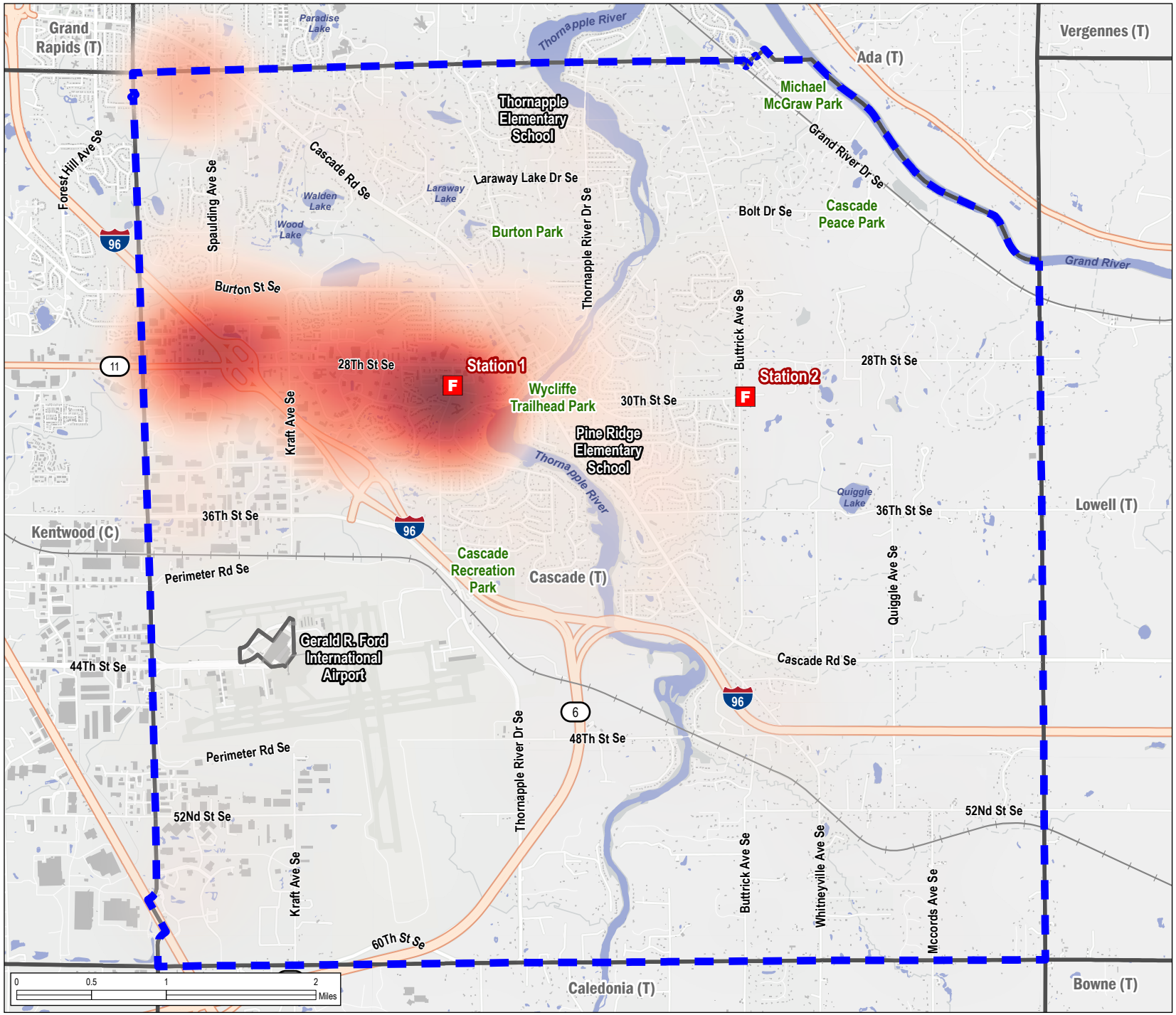
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Figure E2a



Cascade Township Fire Department

Station Location Study

Incident Calls (2024-2026) Heat Map

N
W
E
S

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad

Incident Calls (2024-2026)

- Low Incident Occurrence
- High Incident Occurence

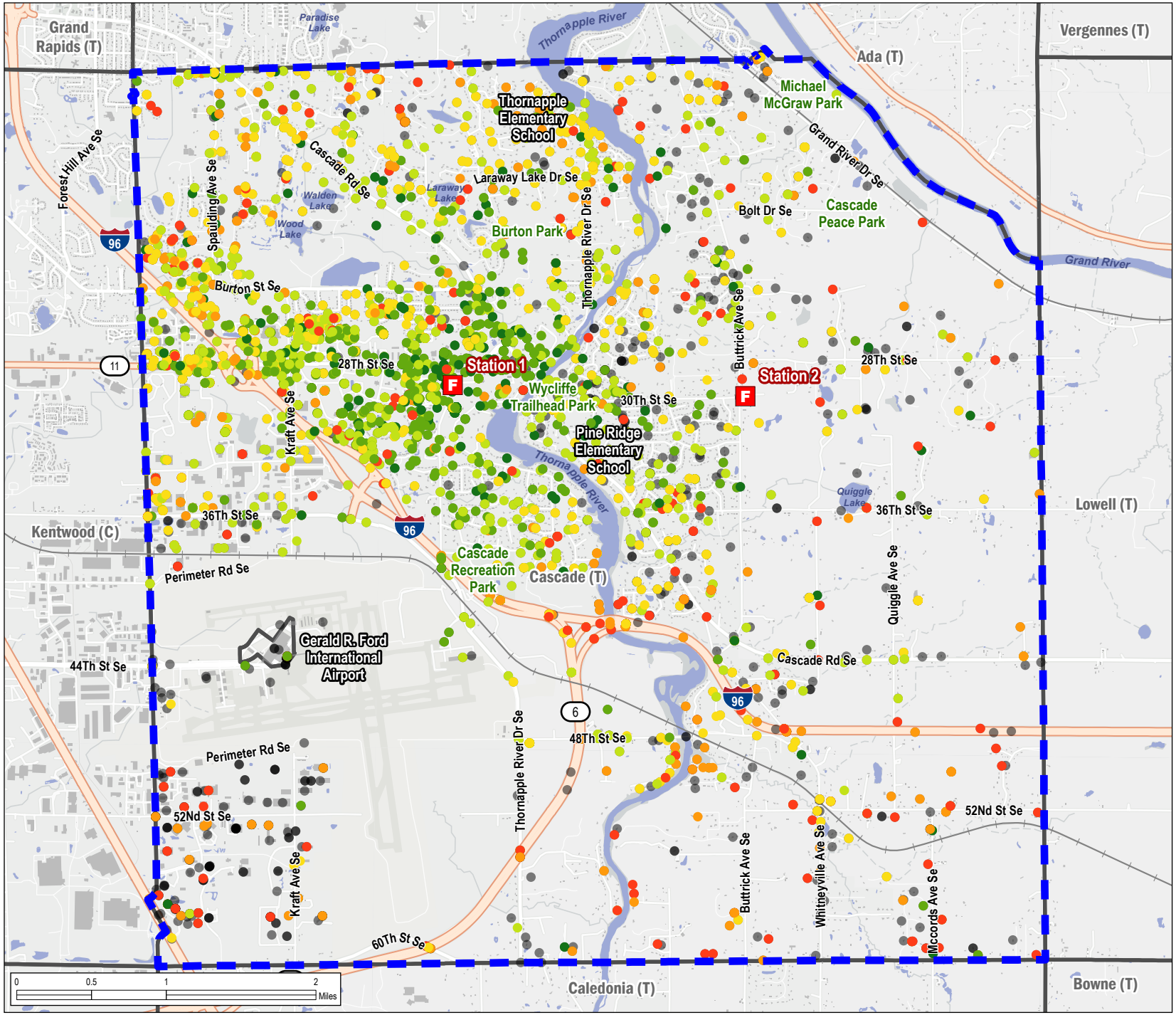
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Figure E2b



Cascade Township Fire Department

Station Location Study

Incident Call Locations (2024-2026) Time to Arrival - Info from Department

N
W
E
S

LEGEND

- Cascade FD Response Area
- Existing Stations
- Building Footprints
- Railroad

Incident Calls (2024-2026)

Time to Arrival (minutes)

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10+
- Unknown

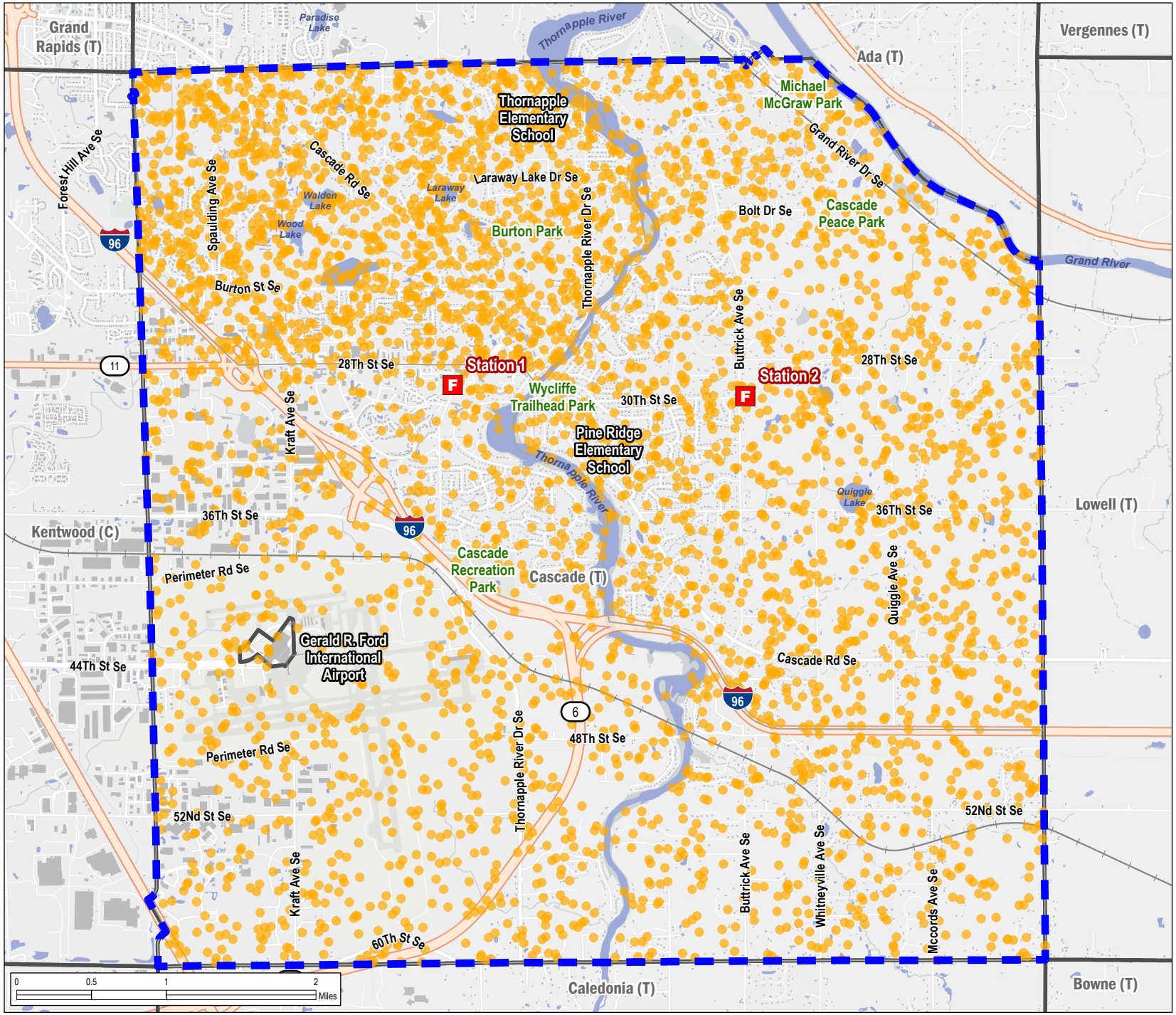
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Figure E3



Cascade Township Fire Department

Station Location Study

Population Point Density

LEGEND

- Cascade FD Response Area
- Existing Stations
- Building Footprints
- Railroad

2024 Total Population (by Census Tract)

- 1 Point = 5 People

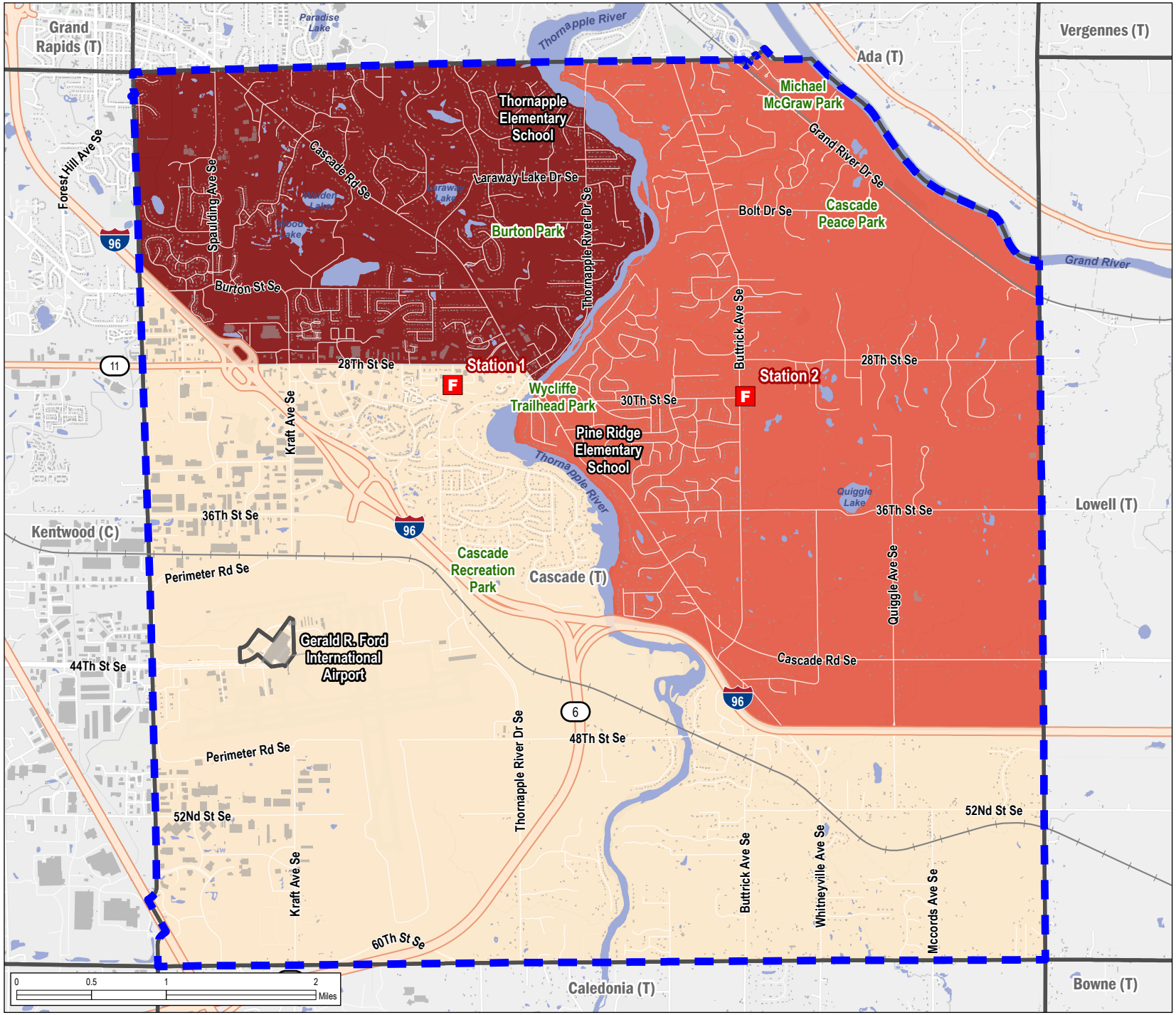
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Figure E3a



Cascade Township Fire Department

Station Location Study

Population Density by Census Tract

LEGEND

- Cascade FD Response Area
- Existing Stations
- Building Footprints
- Railroad

2024 Total Population

6,800

7,300

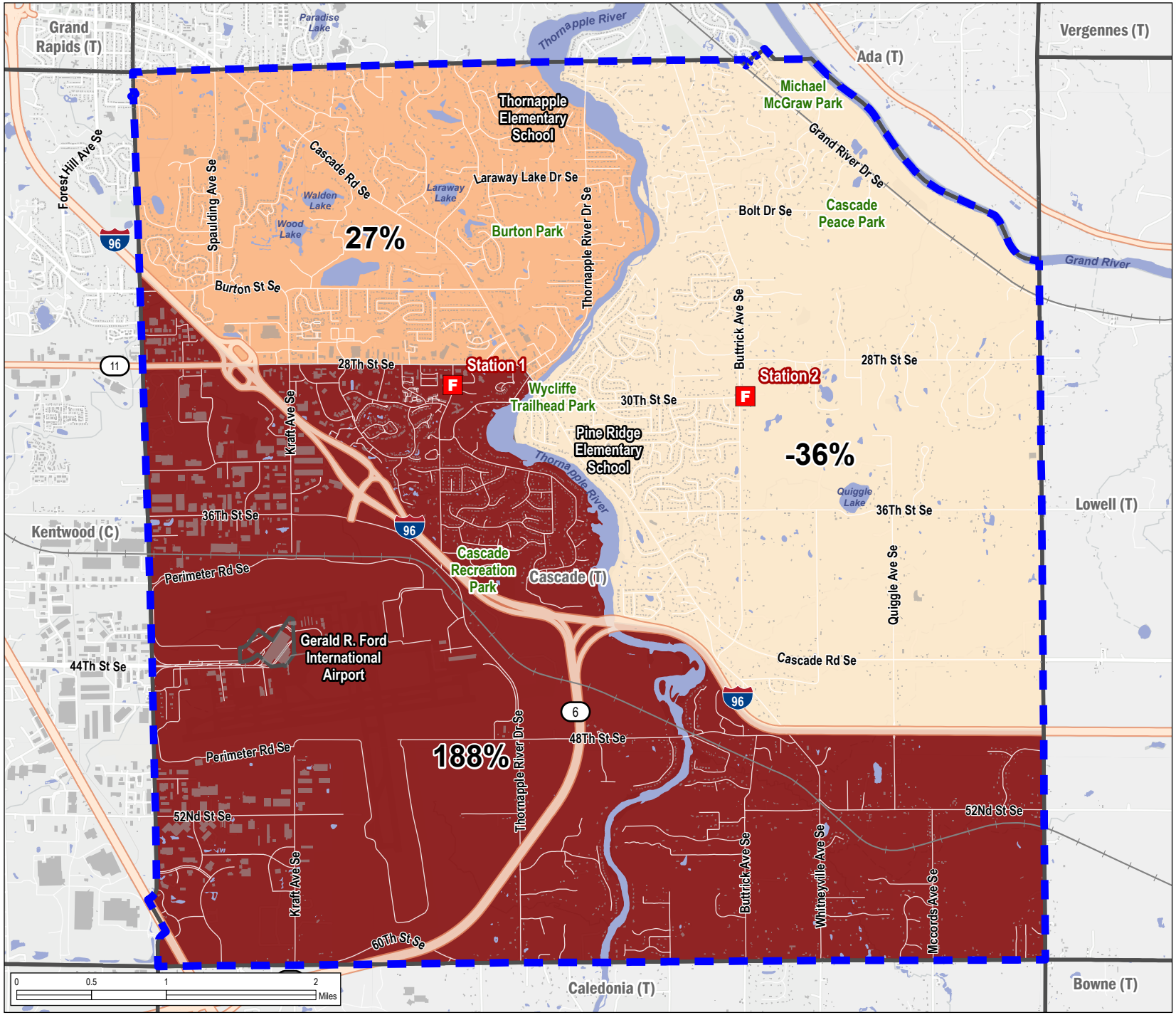
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Figure E3b



Cascade Township Fire Department

Station Location Study

Daytime Population by Census Tract

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad

2024 Total Daytime Population (% change from Total Population Labeled)

4,500

20,000

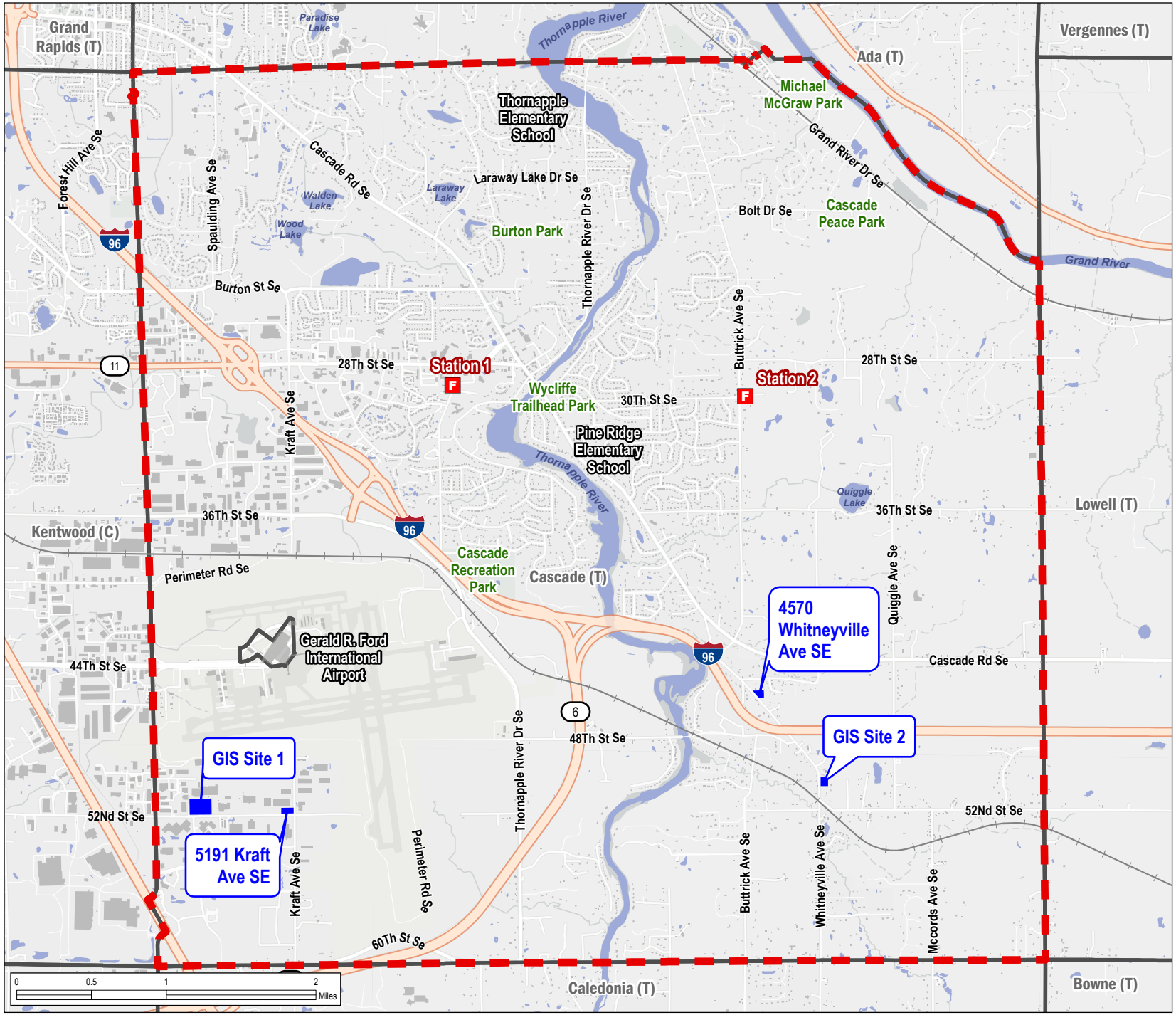
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Figure E4



Cascade Township Fire Department

Station Location Study

Sites Overview

LEGEND

- Cascade FD Response Area
- Existing Stations
- Site Parcels
- Building Footprints
- Railroad

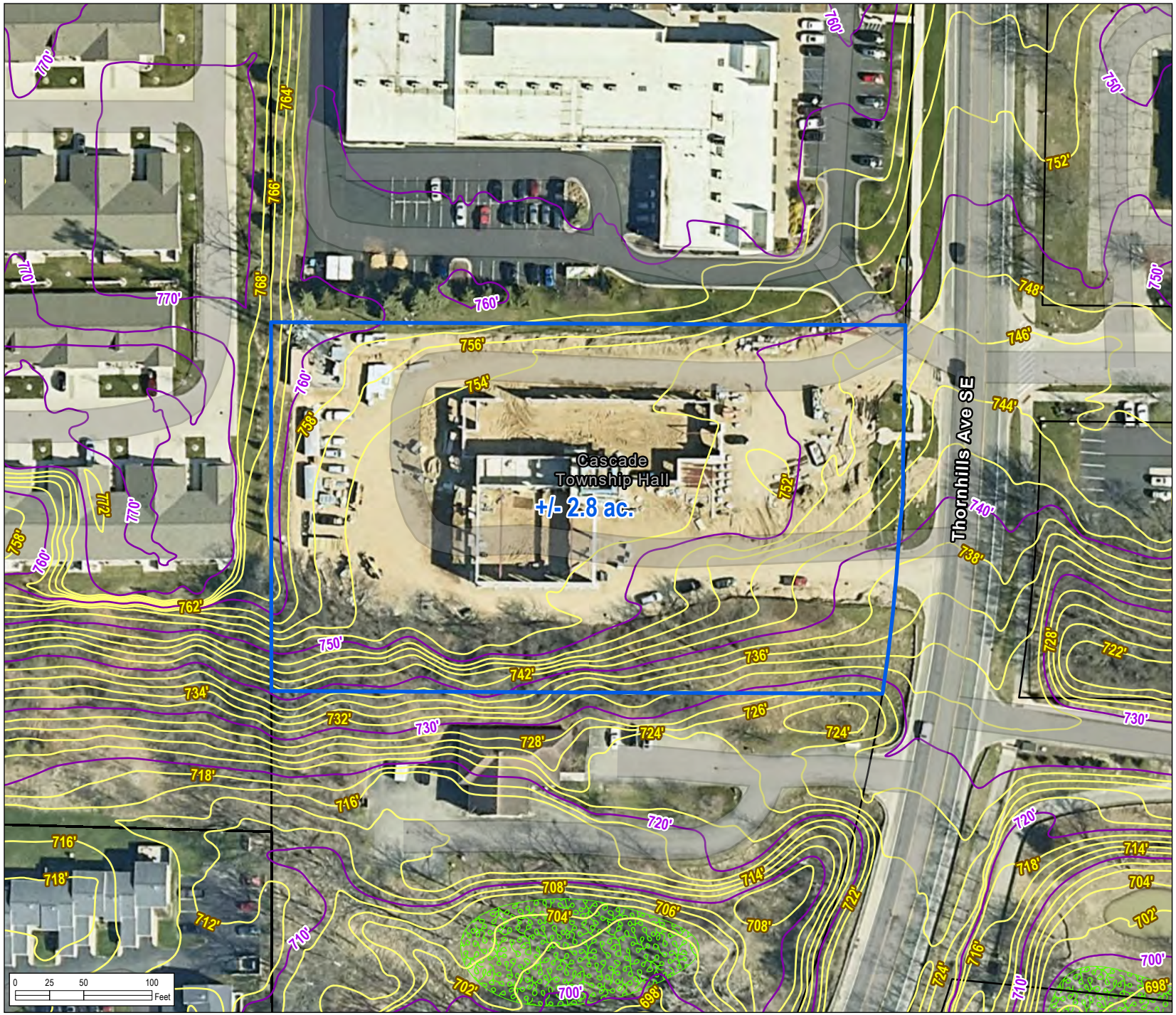
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Figure E5



Cascade Township Fire Department

Station Location Study

Site Detail -
Station 1
2865 Thornhills Ave SE
Grand Rapids, MI 49546

N
W E
S

LEGEND

- Cascade FD Response Area
- Parcels
- Site Parcels
- 2ft Contours
- 10ft Contours
- Federal Wetlands
- State Wetlands
- Waterbodies

FEMA Floodzones

- 100 Year Floodzone
- 500 Year Floodzone

Five Bugles Design

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Figure E6



Cascade Township Fire Department

Station Location Study

Site Detail -
Station 2
2990 Buttrick Ave SE
Ada, MI 49301

N
W E
S

LEGEND

- Cascade FD Response Area
- Parcels
- Site Parcels
- 2ft Contours
- 10ft Contours
- Federal Wetlands
- State Wetlands
- Waterbodies

FEMA Floodzones

- 100 Year Floodzone
- 500 Year Floodzone

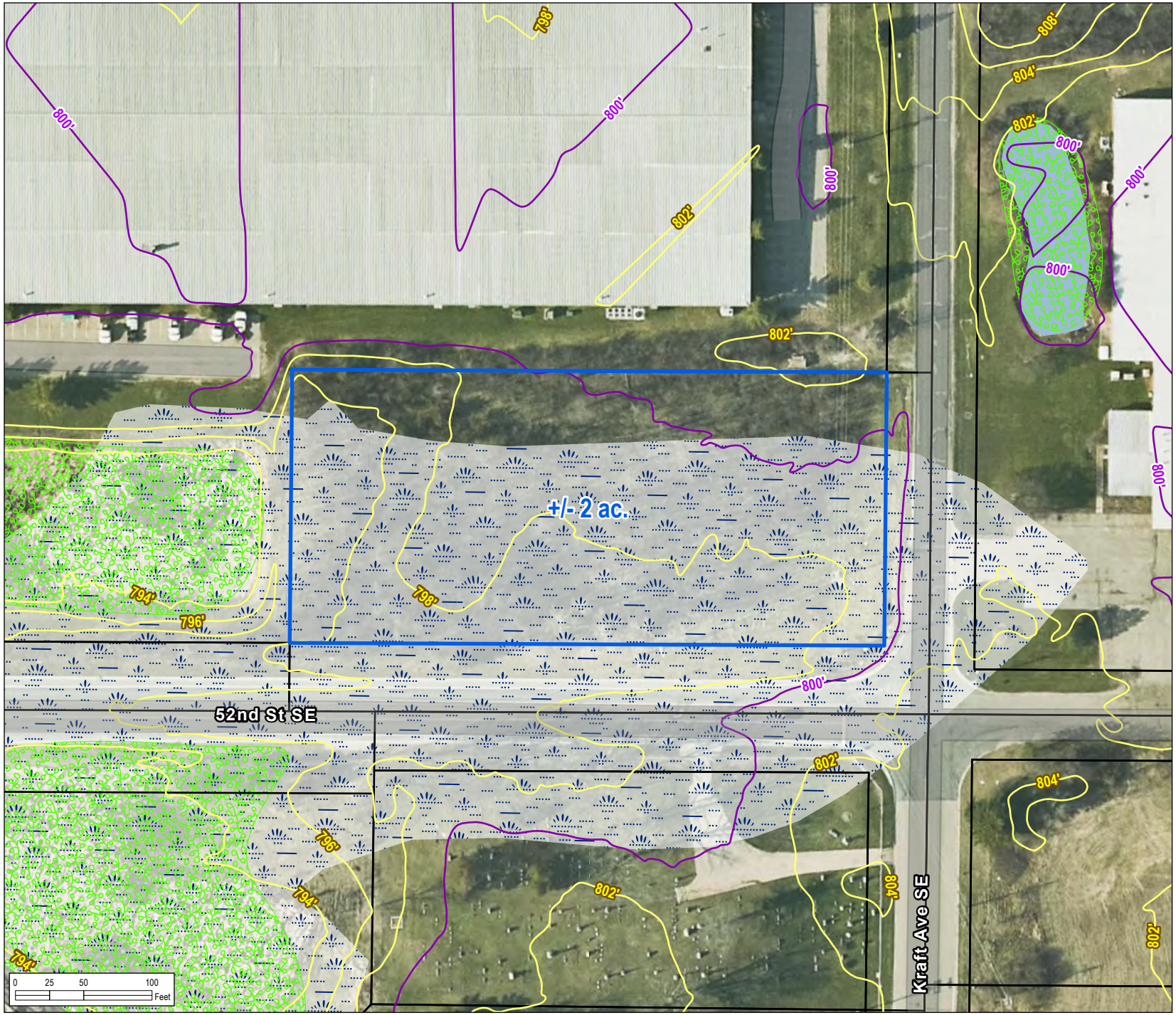
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Figure E7



Cascade Township Fire Department

Station Location Study

Site Detail -
Township Owned Site 1
5191 Kraft Ave SE
Grand Rapids, MI 49512

N
W
E
S

LEGEND

- Cascade FD Response Area
- Parcels
- Site Parcels
- 2ft Contours
- 10ft Contours
- Federal Wetlands
- State Wetlands
- Waterbodies

FEMA Floodzones

- 100 Year Floodzone
- 500 Year Floodzone

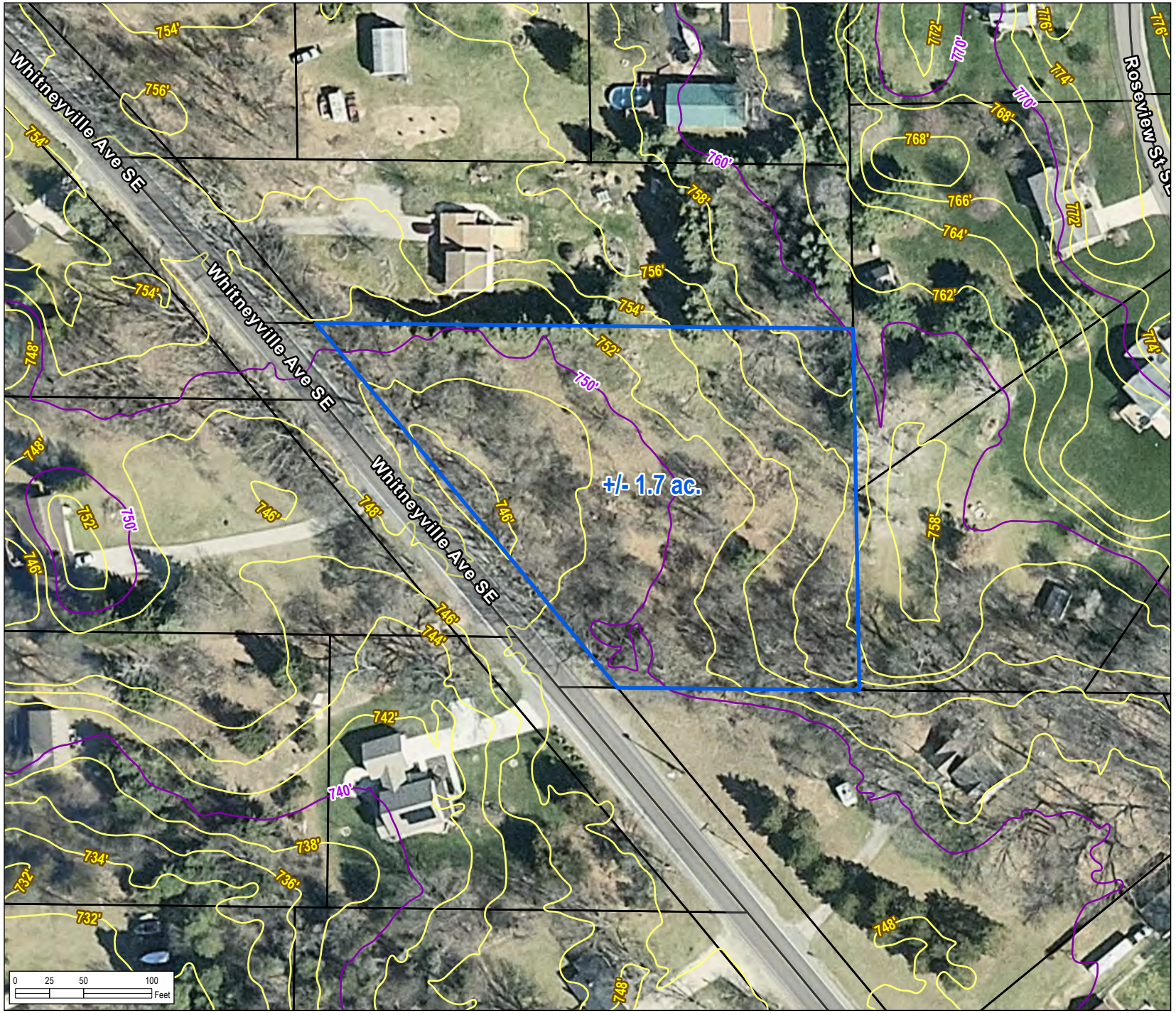
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Figure E8



Cascade Township Fire Department

Station Location Study

Site Detail -
Township Owned Site 2
4570 Whitneyville Ave SE
Ada, MI 49301

N
W E
S

LEGEND

- Cascade FD Response Area
- Parcels
- Site Parcels
- 2ft Contours
- 10ft Contours
- Federal Wetlands
- State Wetlands
- Waterbodies

FEMA Floodzones

- 100 Year Floodzone
- 500 Year Floodzone

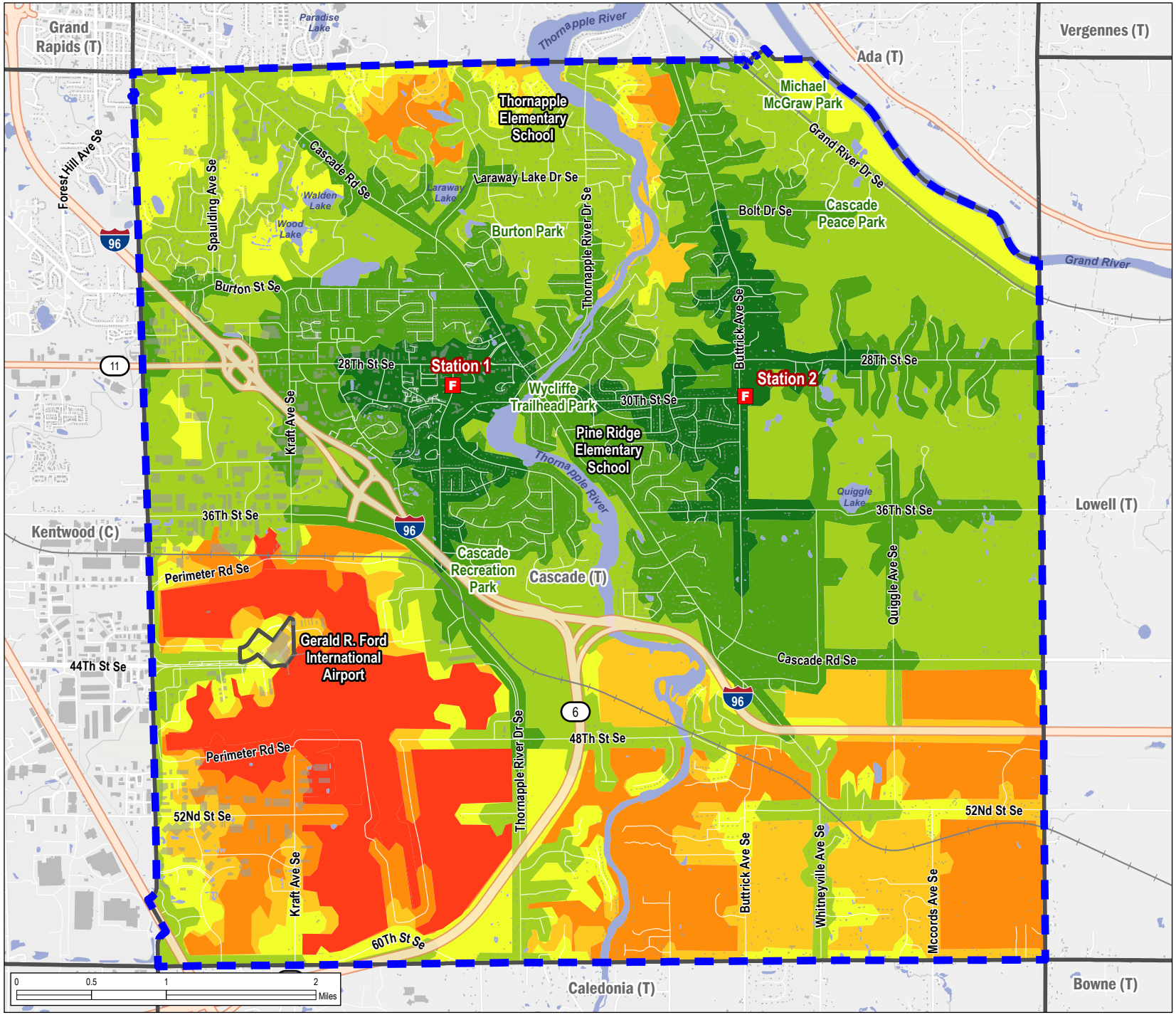
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Figure A1



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations - Mutual Aid Included

N W E S

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad

Drive Time Areas [minutes (% of Response Area)]

- 0 - 2 (6.7%)
- 2 - 4 (21.8%)
- 4 - 6 (33.3%)
- 6 - 7 (10%)
- 7 - 8 (9%)
- 8 - 10 (10.9%)
- 10+ (8.3%)

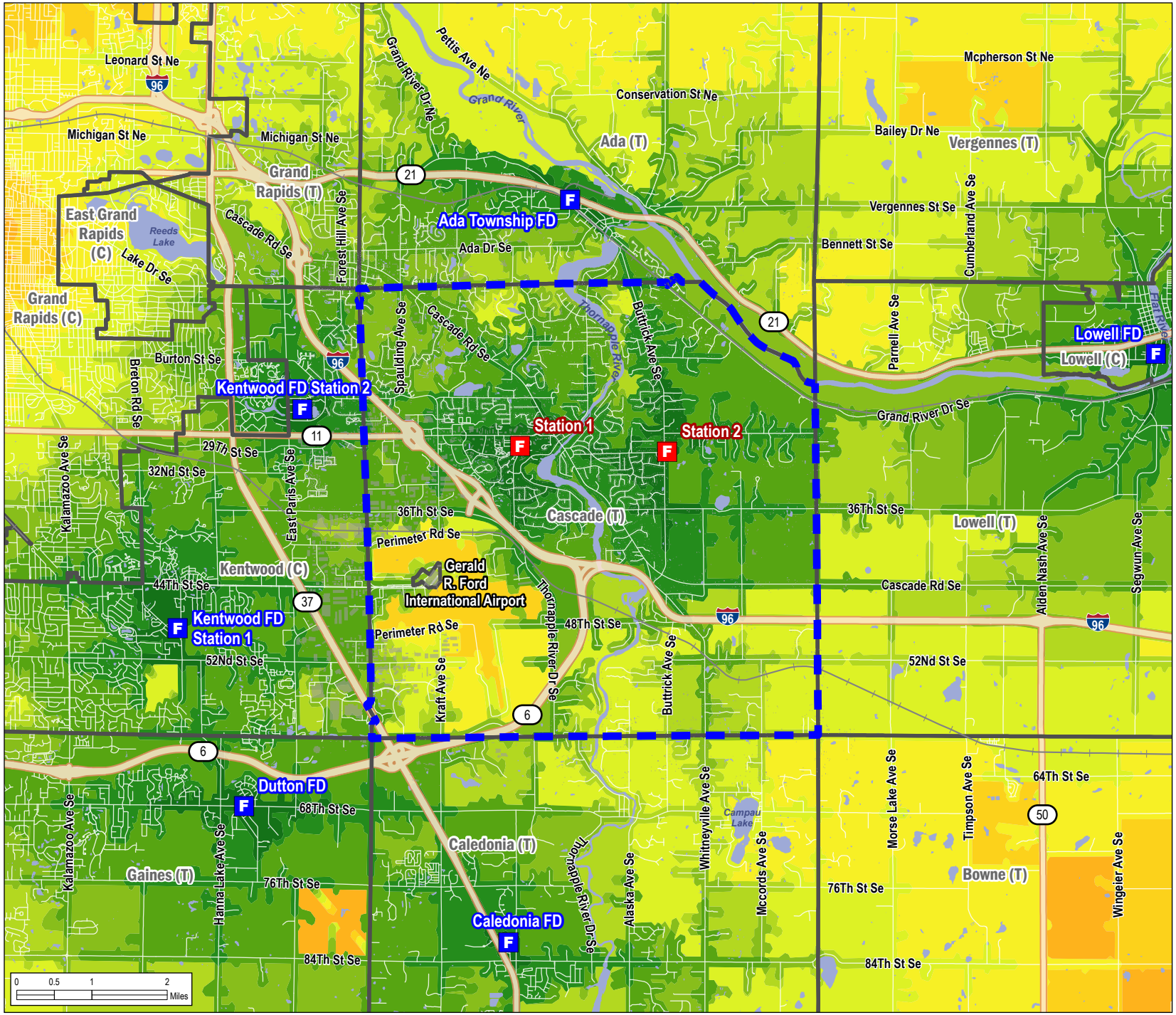
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Figure A1a



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations - Mutual Aid Included Regional View

LEGEND

- Cascade FD Response Area
- Existing Stations
- Mutual Aid Stations
- Building Footprints
- Railroad

Drive Time Areas

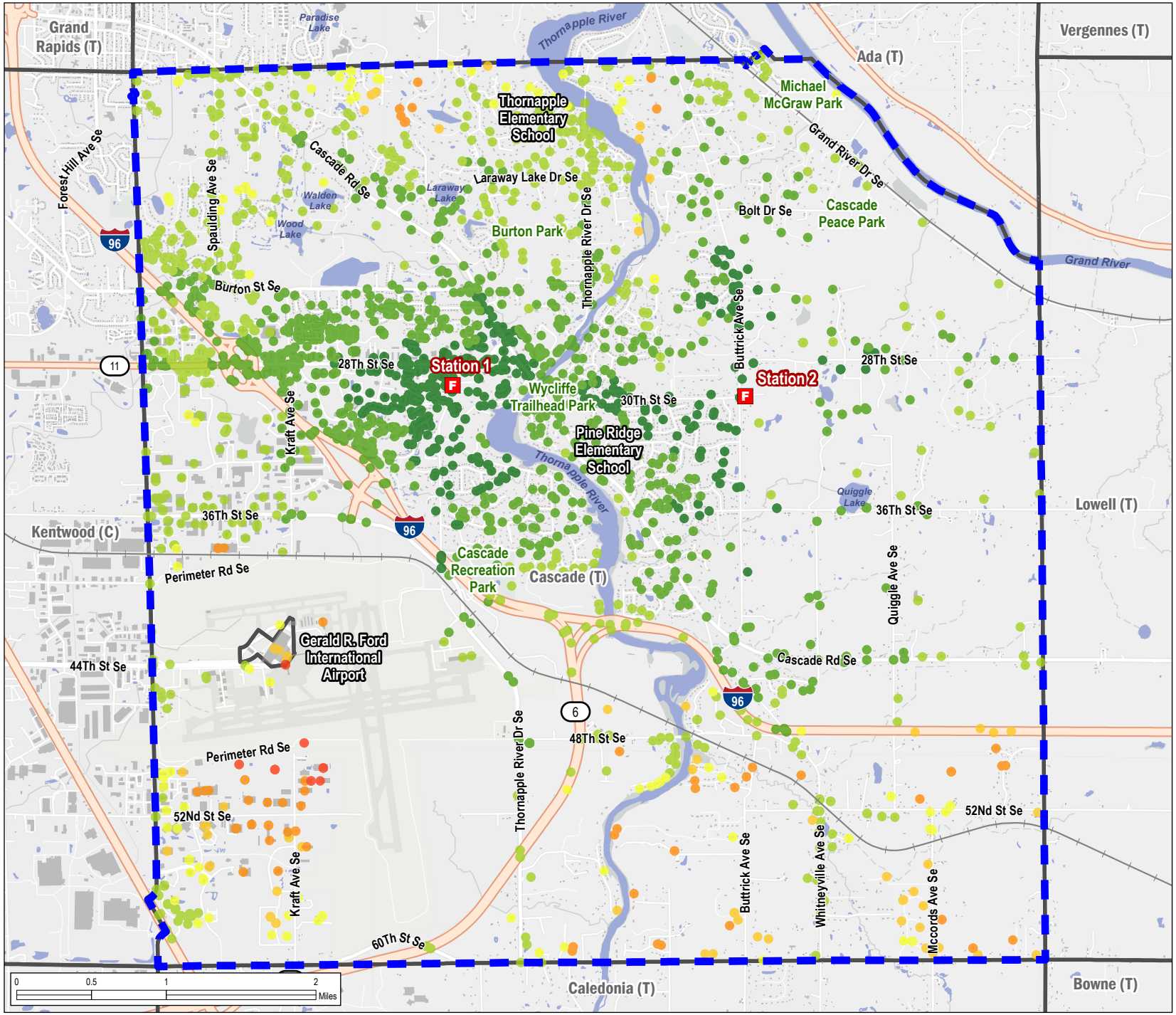
- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 7
- 7 - 8
- 8 - 10
- 10 - 12
- 12 - 14
- 14 - 16
- 16 - 18
- 18 - 20
- 20+

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Figure A1b



Cascade Township Fire Department

Station Location Study

Response Times to Incident Calls from Existing Stations - Mutual Aid Included

N
W
E
S

LEGEND

- Cascade FD Response Area
- F Existing Stations
- Building Footprints
- Railroad

Incident Locations (2024-2026)

Drive Times [minutes(% of Incident Calls)]

- 0 - 2 (21.6%)
- 2 - 4 (39%)
- 4 - 6 (31.1%)
- 6 - 7 (4.5%)
- 7 - 8 (1.6%)
- 8 - 10 (1.9%)
- 10+ (0.3%)

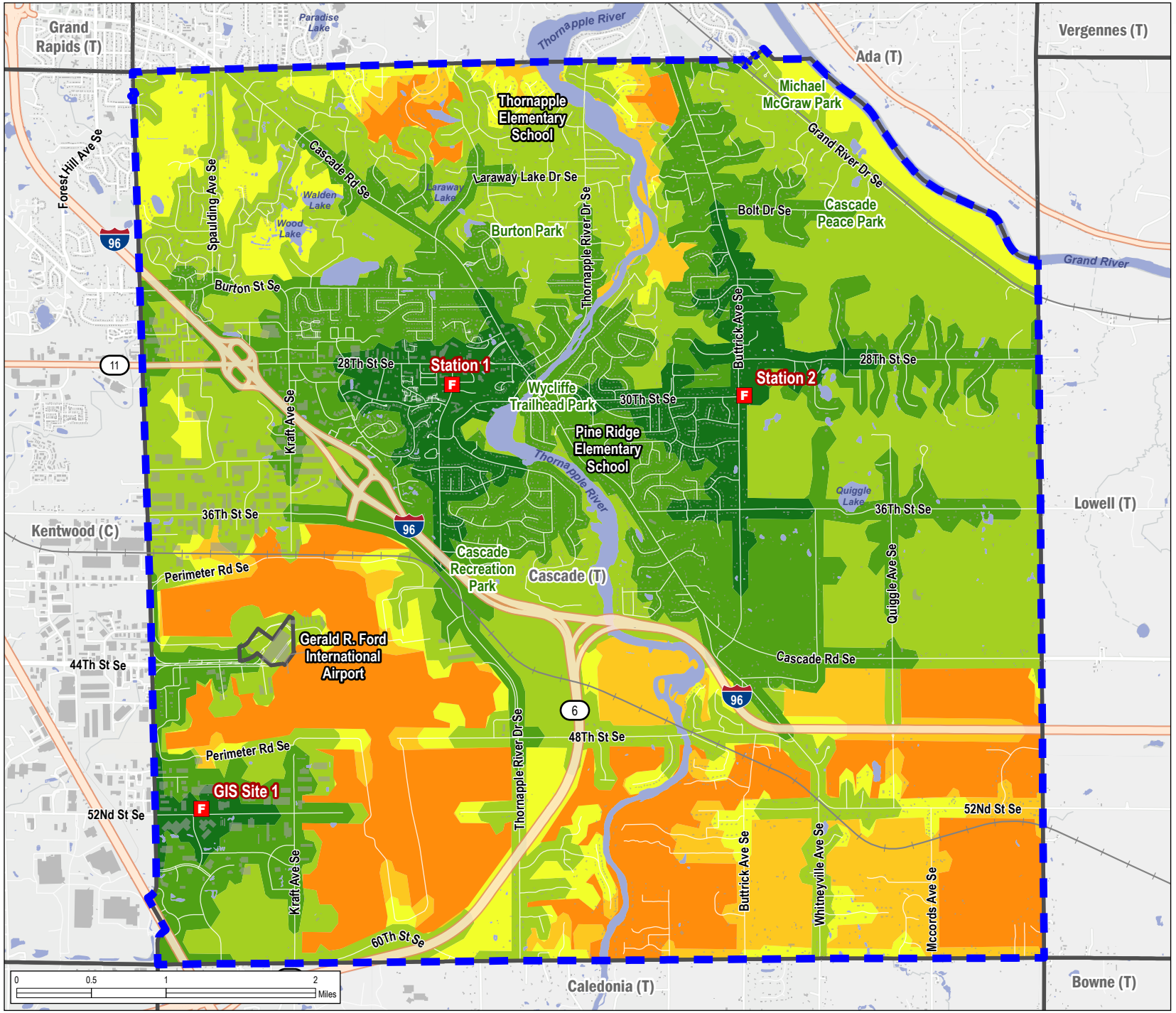
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Figure A2



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations and GIS Site 1 (Incident Call Demand) - Mutual Aid Included

LEGEND

- Cascade FD Response Area
- F — Existing and Proposed Stations
- Building Footprints
- Railroad

Drive Time Areas [minutes (% of Response Area)]

- 0 - 2 (7.4%)
- 2 - 4 (24.9%)
- 4 - 6 (35.5%)
- 6 - 7 (8.6%)
- 7 - 8 (7.7%)
- 8 - 10 (16.1%)
- 10+ (0%)

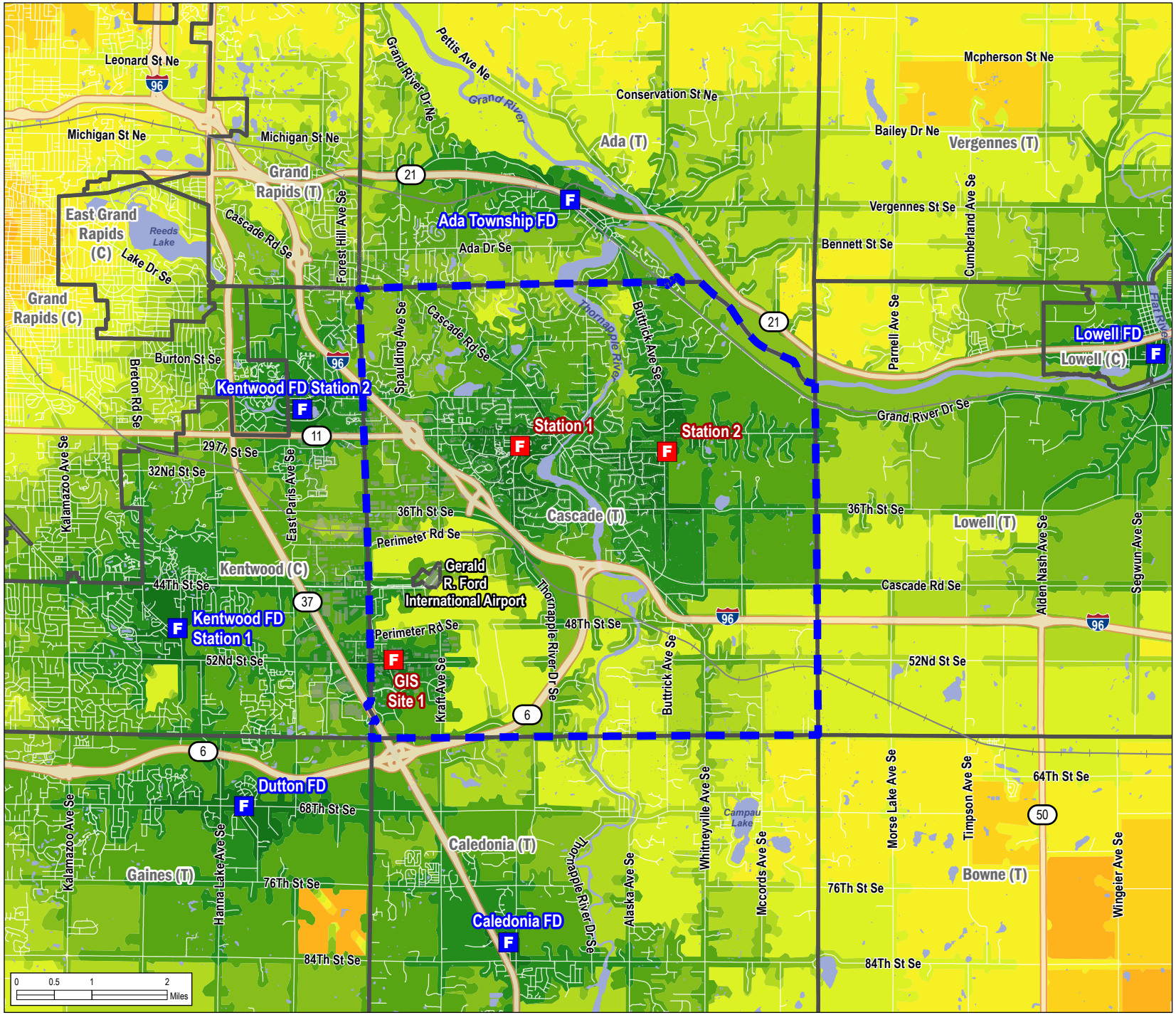
Five Bugles Design

WPN: 656401 | Map Created: July 2026

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Figure A2a



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations and GIS Site 1 - Mutual Aid Included Regional View

N W E S

LEGEND

- Cascade FD Response Area
- Existing and Proposed Stations
- Mutual Aid Stations
- Building Footprints
- Railroad

Drive Time Areas

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 7
- 7 - 8
- 8 - 10
- 10 - 12
- 12 - 14
- 14 - 16
- 16 - 18
- 18 - 20
- 20+

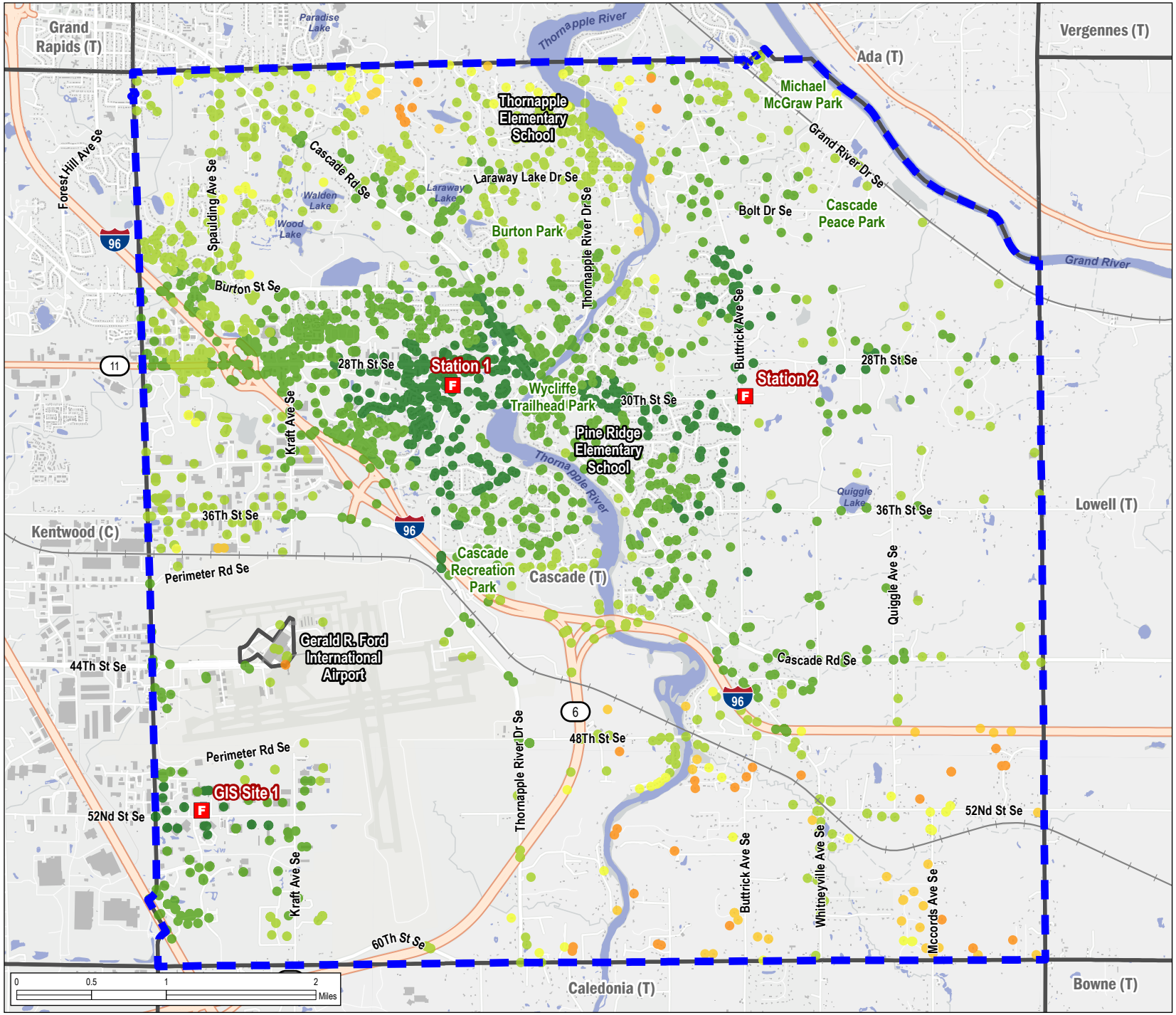
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Figure A2b



Cascade Township Fire Department

Station Location Study

Response Times to Incident Calls from Existing Stations and GIS Site 1 (Incident Call Demand) - Mutual Aid Included

N
W
E
S

LEGEND

- Cascade FD Response Area
- F — Existing and Proposed Stations
- Building Footprints
- Railroad

Incident Locations (2024-2026)

Drive Times [minutes(% of Incident Calls)]

- 0 - 2 (22.4%)
- 2 - 4 (41.3%)
- 4 - 6 (30.5%)
- 6 - 7 (3.6%)
- 7 - 8 (1.0%)
- 8 - 10 (1.1%)
- 10+ (0%)

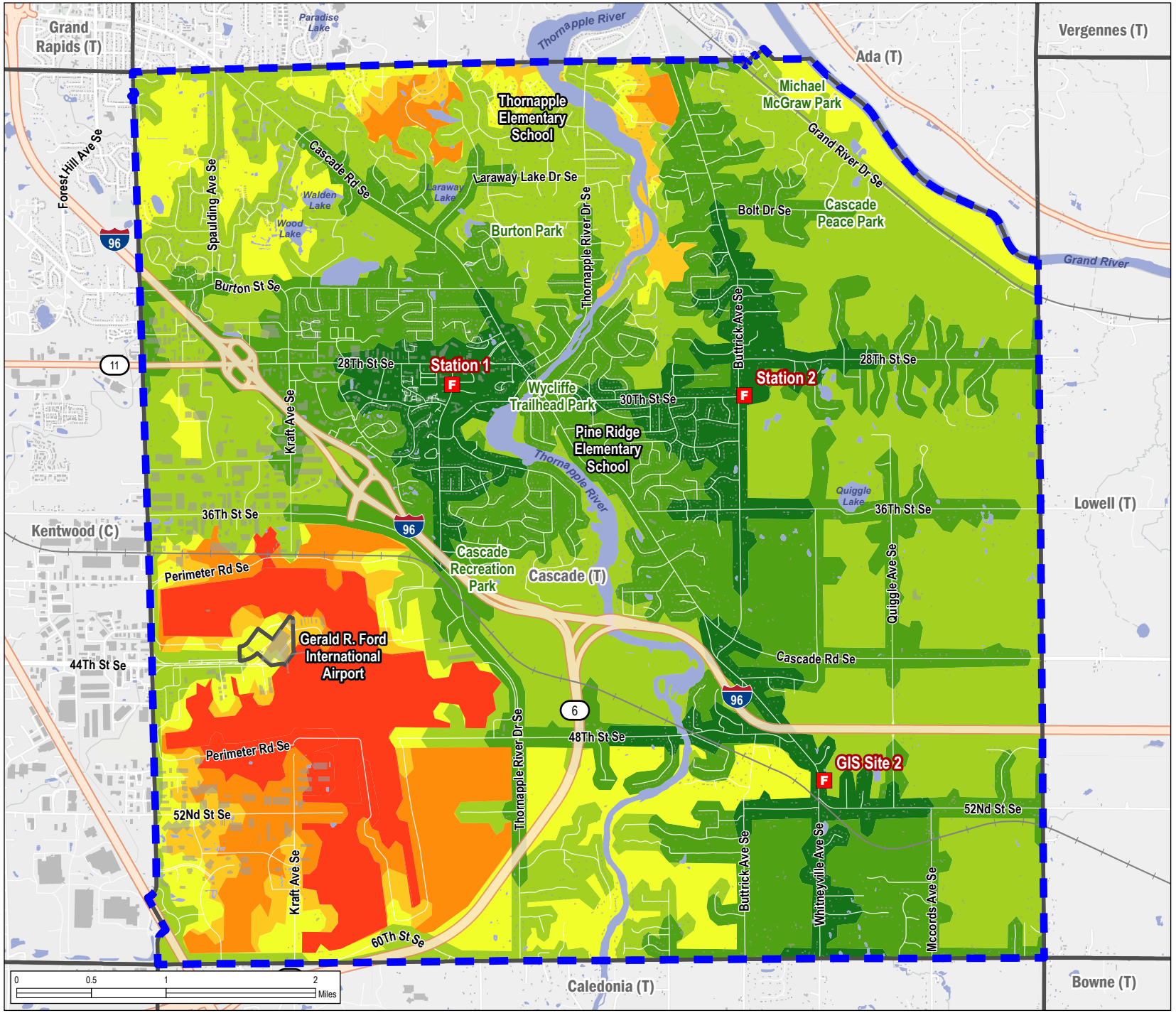
Five Bugles Design

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Figure A3



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations and GIS Site 2 (Response Area Demand) - Mutual Aid Included

N
W
E
S

LEGEND

- Cascade FD Response Area
- F — Existing and Proposed Stations
- Building Footprints
- Railroad

Drive Time Areas [minutes (% of Response Area)]

- 0 - 2 (9.6%)
- 2 - 4 (27.6%)
- 4 - 6 (37.7%)
- 6 - 7 (10.2%)
- 7 - 8 (3.1%)
- 8 - 10 (5.2%)
- 10+ (6.6%)

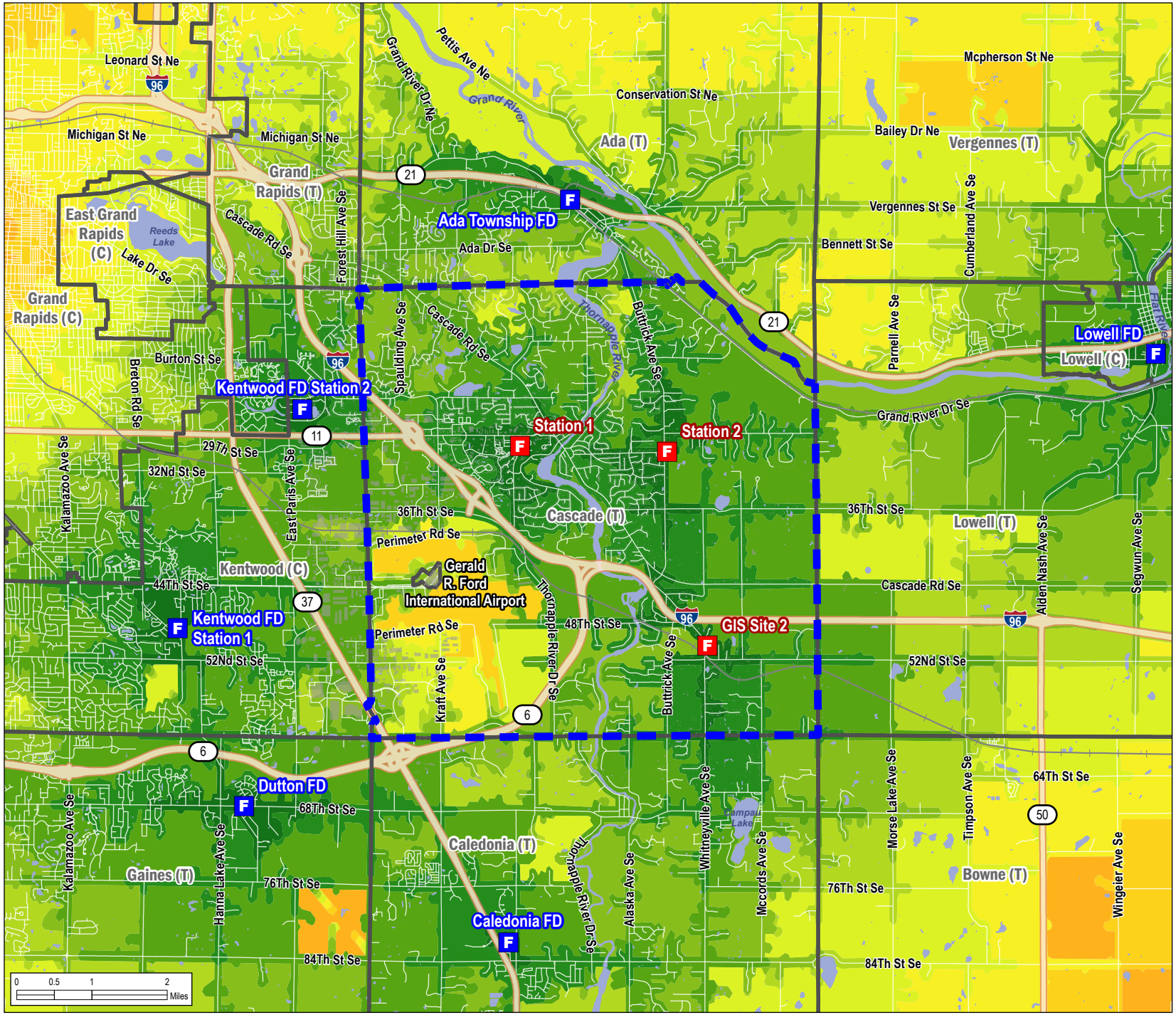
Five Bugles Design

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Figure A3a



Cascade Township Fire Department

Station Location Study

Drive Times from Existing Stations and GIS Site 2 - Mutual Aid Included Regional View

N W E S

LEGEND

- Cascade FD Response Area
- Existing and Proposed Stations
- Mutual Aid Stations
- Building Footprints
- Railroad

Drive Time Areas

- 0 - 2
- 2 - 4
- 4 - 6
- 6 - 7
- 7 - 8
- 8 - 10
- 10 - 12
- 12 - 14
- 14 - 16
- 16 - 18
- 18 - 20
- 20+

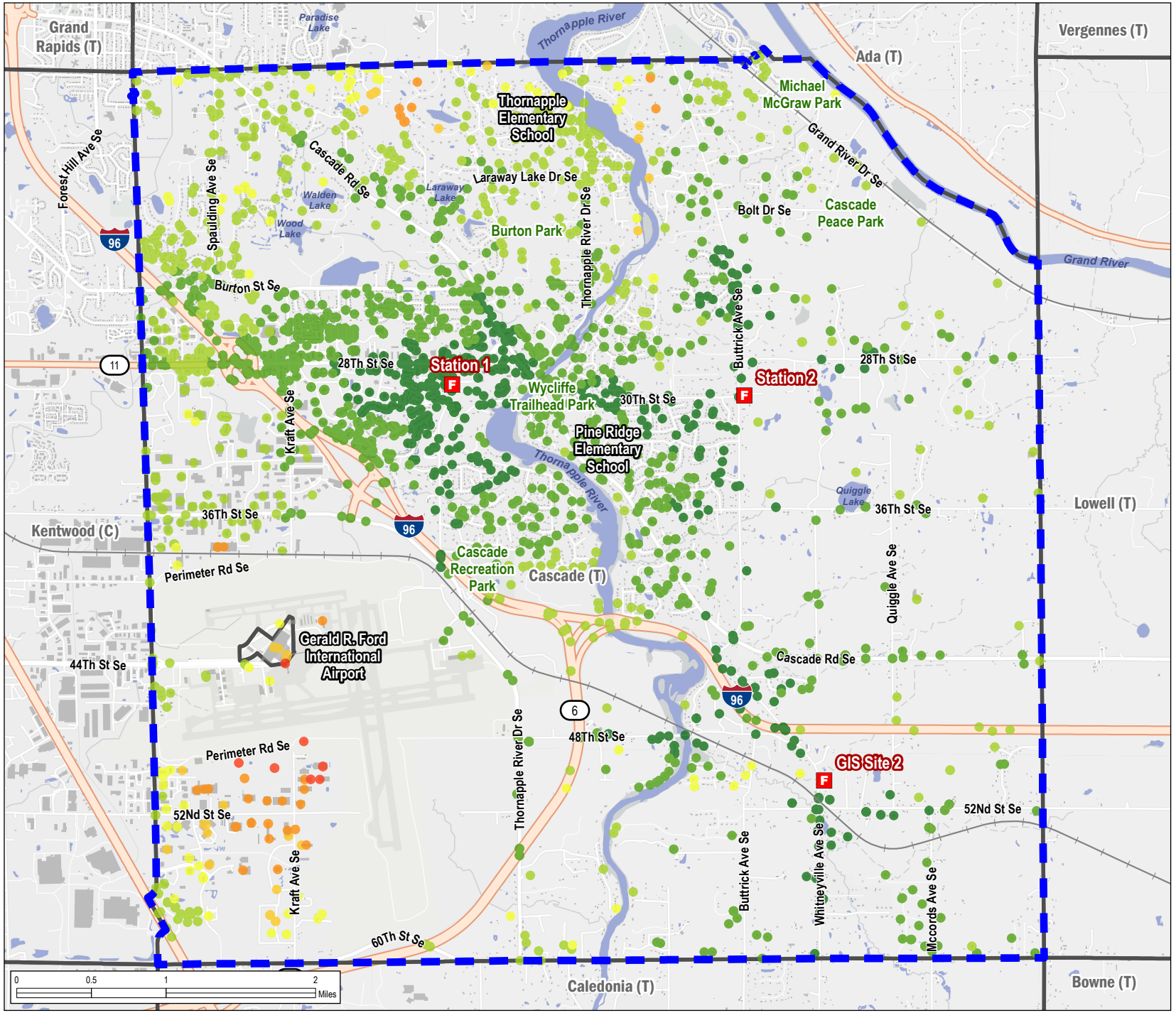
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Figure A3b



Cascade Township Fire Department

Station Location Study

Response Times to Incident Calls from Existing Stations and GIS Site 2 (Response Area Demand) - Mutual Aid Included

N
W
E
S

LEGEND

- Cascade FD Response Area
- F — Existing and Proposed Stations
- Building Footprints
- Railroad

Incident Locations (2024-2026)

Drive Times [minutes(% of Incident Calls)]

- 0 - 2 (23.8%)
- 2 - 4 (39.7%)
- 4 - 6 (29.8%)
- 6 - 7 (4%)
- 7 - 8 (0.9%)
- 8 - 10 (1.4%)
- 10+ (0.3%)

Five Bugles Design

WPN: 656401 | Map Created: July 2026

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Appendix B – Fire & Emergency Existing Conditions Documentation

This appendix provides supporting documentation of the existing Cascade Township fire facilities, with particular emphasis on Fire Station 2. Existing floor plans, annotated observations, and selected photographs document the physical and functional conditions observed during the facility assessment and provide additional context for the maintenance, renovation, and replacement alternatives evaluated in the report.

Fire Station 2 was reviewed through field observation and photographic documentation to identify visible building conditions, maintenance concerns, underutilized areas, and opportunities for future functional improvement. The observations documented on the accompanying existing-conditions sheet are planning-level in nature and are intended to supplement the assessment presented in the body of the report.

Exterior and Building Envelope

Several exterior conditions warrant maintenance or corrective work. The existing architectural roof element has experienced leakage at its base and is identified for removal. The roof should be repaired and reconfigured as part of a coordinated reroofing project rather than through continued localized repair. The attic configuration also contributes to winter ice-damming conditions, indicating that future roof work should consider the underlying insulation, ventilation, and thermal conditions in addition to the roofing material itself.

The existing vinyl siding is weathered and brittle in areas and shows localized damage, including holes associated with mowing and exterior maintenance. Repairs or replacement should be coordinated with future envelope improvements. Masonry wainscot areas also require repair, and transitions between the masonry and siding should be reviewed and re-flashed where necessary.

Roof drainage is contributing to deterioration of adjacent concrete. Downspouts should be redirected toward appropriate drainage areas, with damaged concrete repaired or replaced after the drainage condition is corrected. Taken together, the roof, siding, masonry, flashing, drainage, and concrete conditions suggest that future exterior work should be approached as a coordinated building-envelope project rather than as a series of unrelated repairs.

Interior Conditions and Space Utilization

The interior photographs demonstrate that the existing building contains usable space that is not fully aligned with current Fire Department operations. Several office areas appear underutilized, providing opportunities for future reconfiguration or reassignment as operational needs are refined. The existing fitness area is also large relative to current station staffing and may provide an opportunity to recover floor area for other crew or support functions.

The former rip-and-run area no longer appears necessary for its original purpose and should be considered for removal or incorporation into a future reorganization of the station. These conditions support evaluating the existing floor area more comprehensively before considering expansion of the building.

Interior finishes show normal wear associated with the age and use of the facility. Flooring is specifically identified for replacement in several areas. Where future interior reconfiguration is anticipated, finish replacement should be coordinated with that work rather than undertaken independently.

Apparatus and Support Areas

The apparatus bay remains functional and provides substantial space for current Department vehicles. The existing open structure above the apparatus area, however, results in a large, conditioned volume. Installation of a ceiling should be considered as part of future mechanical, energy-efficiency, or roof improvements to reduce the volume requiring environmental control.
The open attic condition elsewhere in the building is also identified as contributing to ice-damming concerns. Roof, attic, insulation, ventilation, and mechanical improvements should therefore be evaluated together so that work in one area does not perpetuate problems in another.

Overall Existing Conditions

The documented conditions do not indicate that Fire Station 2 requires immediate replacement. Rather, they identify a combination of deferred or age-related maintenance needs and functional opportunities within the existing building. The most significant physical concerns are associated with the roof and building envelope, drainage, exterior materials, and related attic conditions. Internally, the principal opportunity is the amount of existing space that could potentially be reorganized to better support current staffing and contemporary station operations.
These observations reinforce the study's broader conclusion that Station 2 can remain in service while priority maintenance is addressed, and its longer-term future is evaluated. The existing footprint should be tested against the satellite station space program before additional building area is considered. If substantial renovation is pursued, the work should be coordinated with the structural and resilience evaluation identified elsewhere in the study so that the Township can understand both the cost of the improvements and the useful service life they are expected to provide.

This appendix contains the space program needs identified for each use group per the Workgroup programming sessions, facility assessments & Discovery Workshop. The intent is to outline the total square footage that a facility will require in order to support the day-to-day function of each facility and its services and staff. For Township Administration & Parks, square footage from existing facilities has been documented next to the current identified needs square footage for a side by side comparison.

Pg 2-3 Township Administration

Pg 4 Park & Facilities

Pg 5-7 Fire & Emergency Satellite Response Station

Township Administration Space Needs Program

AREA	PEOPLE CURRENT	PEOPLE FUTURE ADD	PEOPLE TOTAL	ROOM NAME	Remarks / Description / Features: EXISTING	Remarks / Description / Features: PERFORMANCE GOAL	CURRENT SF	NEEDS RATIO	NEEDS QTY.	NEEDS SF	NEEDS TOTAL
Entry	37	12	49	Visitor Entrance	Light - filled, glass box, Display of Materials from clients	Welcoming / inviting for staff, guests & clients, open sightlines, clear directional signage, connection to public meeting space for after hours meetings	200		1	250	250
				Employee Entrance					1	120	120
						SUBTOTAL Entry	200				370
Welcome				Reception Desk	Open Reception Desk w branding, always staffed, desk not big enough to actually do work, Monitor, plants & decorative lighting,	Would like open & welcoming - Twp residents expect concierge service - larger desk space for tasks because receptionists support many groups with tasks & process forms - would like their desk to be connected to rest of staff, not separate - but first line of greeting. Forms, Branding/Signage, Forms etc, Seating area, monitor w information	64	1 / 1	1	250	250
				Lobby	some tables w/ Info & forms nearby, staff directory wall, waiting room type seating (chairs in a line against wall)				1	1,600	1,600
				Public Service Counter	Current Services: Passport (Clerk), Elections (Clerk), Treasurer, Assessing, Econ. Dev (DDA), Planning & Zoning, Wide open - no security for staff, open sightlines but sound is an issue. standing height except for Clerk	Add safety measures for staff - glazing, panic buttons, security cameras But want it to feel open & welcoming. Service desk spaces w/ adjacent staff behind with good visibility to the public area to see when someone needs service.	450	1 / 1	6	64	384
						SUBTOTAL Welcome	514				2,234
Recharge				Kitchen / Break Room	Fridge/Freezer, Keurig, Toaster Microwave, DW, TV Monitor, wall bar w high seating, 3pp table & chairs, nice indirect lighting, not highly utilized, no daylight	Connection to daylight/outdoors	300		1	750	750
				Hospitality/Coffee Outside Training Room + for staff use	Bottle Filler, Fridge/Freezer, Micro, Bunn Coffee, DW		50				
						SUBTOTAL Work Cafe	350				750
Connect				Visitor Meeting Room (Consult Room)	Direct access from Lobby & Staff Side - table for 8 people + monitor - currently 90% utilized by staff internal meetings	For impromptu meeting with residents when transaction cant be completed at counter - or for scheduled meetings. Visible/glass wall to lobby/staff to keep staff safe, accessible from staff side (Secure) + public side - 4-6 people	250	1/1	1	150	150
				Large Public Meeting Room (Trustees, ZBA, Planning Comm, Parks Comm.	Wisner Center - raised dias for 9 people w/ ramp - tech/ sunken monitors & mics, moveable podium, wall logo, separated behind secure moveable partition when not in use. Capacity of 234 people is plenty. Large Room subdivides in Lg, Med & Small rooms w moveable dividers.	For Trustee & Committee Meetings - could be smaller & require less sub-division. Table & chair storage for flexibility of furniture - trainings, Twp meetings - could subdivide to have a smaller meeting at far end - 30x60 - Occupancy: 9+ 200			1	1,800	1,800
				Board Closed Session Conf	None	For 12 people - directly adjacent to Public Meeting Room, monitor, hospitality		1/1	1	360	360
				Training Room	Current has moveable monitor on carts, projector, seats ~20 @ training tables, only used a few times a quarter to capacity, otherwise used as overflow when smaller meeting room is occupied, or during elections by Clerk & locked.		575	1/1	1		-
				Medium Connect Space	Current Visitor meeting room - highly used (see above)	Meeting space for 8 ppl, usable wall space with marker boards, technology capable. 14 x 18		1 / 30	2	250	500
				Small Connect Space / Room	(1) Existing, seats 5 seating is cramped around a small table, room is large,no windows	Meeting or focus space: 2-6 ppl, usable wall space with marker boards, technology capable, at least 1 fully private	144	1 / 15	2	144	288
						SUBTOTAL Connect	969				3,098
Focus				Focus Room	None	Meeting or focus space - single user, Max 2 for short periods of time, 'phone booth' for use in areas with open work stations (Comm Dev)		1 / 20	2	50	100
						SUBTOTAL Focus	-				100
Wellness				Wellness / Lactation Room	None	Wellness + Lactation Room, Comfortable furnishing, Privacy-Capable, dimmable lighting		1/20	2	70	140
						SUBTOTAL Recharge	-				140
Manager	5	1	6	Twp Manager (1)	Private Office, undersized table for meeting 2-3 people		240		1	200	200
				Exec Asst (1)	Cubicle		64		1	64	64
				HR (1) - future 2	Private Office - guest chairs		140		2	130	260
				Communications (1)	Cubicle		64		1	64	64
				Front Desk Reception (1) part time							-
						SUBTOTAL Manager	508				588
Econ Dev (DDA)	1	1	2	DDA (1)	Private Office	Report to Mgr Office - Proximity - proximity to comm mtg rooms	140		1	150	150
				Economic Dev (1) - Future	Open Paneled Workstation, 8x8	Report to Mgr Office - Proximity - proximity to comm mtg rooms			1	64	64
						SUBTOTAL Economic Development	140				214
Finance	3	1	4	Director of Finance (1)	Private Office, rarely has meetings in office	Lots of focus work, quiet group - desire more connection to Twp Mgr	170		1	120	120
				Accounting (1)	Private Office	Lots of focus work, quiet group	110		2	110	220
				Support / Service Desk (1)	Open Cubicle - low wall next to service counter	Some proximity to assessing is desirable as they overlap during tax season.	64		1	80	80
						SUBTOTAL Finance	344				420
Treasurer	1		1	Deputy Treasurer (1)	Private Office	Lots of focus work, quiet group	120		1	100	100
						SUBTOTAL Treasurer	120				100
Assessing	3		3	2 Staff (Primary + Contract)	Private Offices	Occasional collar w DDA & Treasurer @ Tax Season	240		2	100	200
				Support/Service Desk (1)	Open Cubicle - low wall next to service counter	Occasional collar w DDA & Treasurer @ Tax Season	64		1	64	64
				File Storage			64				-
						SUBTOTAL Assessing	368				264

Township Administration Space Needs Program - cont.

AREA	PEOPLE CURRENT	PEOPLE FUTURE ADD	PEOPLE TOTAL	ROOM NAME	Remarks / Description / Features: EXISTING	Remarks / Description / Features: PERFORMANCE GOAL	CURRENT SF	NEEDS RATIO	NEEDS QTY.	NEEDS SF	NEEDS TOTAL
Clerk	3	1	4	Deputy Clerk (1)	Private Office - but uses a lot of workspace outside of office - back and forth to Wisner		110		1	120	120
				Elections Specialist (1)	Open Cubicle - low wall next to service counter		64		1	72	72
				Helpdesk Window Workstation					2	48	96
				Elections - Seasonal (2)	Sit at Service Desks during election season		64		2	64	128
				Election Workroom	Could be more functional - must remain locked when not in use		160		1	200	200
				Election Equipment Storage	Wisner Center basement		325		1	350	350
						SUBTOTAL Clerk	723				966
Building Inspections	14	1	15	Administrative (2) / Service	Open Desks @ Reception area - not very professional, no place to do paperwork other than at the desk so it clogs up space		580		2	120	240
				Permit Mgr (1)	Private Office - good sightline to admin & reception, but too accessible to visitors		160		1	100	100
				Building Official (1)	Private Office		160		1	120	120
				Building Inspector (4)	Large Shared Offices w/ walls of drawing storage		560		4	80	320
				Electrical Inspectors (2) + Fire Inspector (1) part time	Open Cubicles in separated area		330		5	64	320
				Mech/Plumbing Inspectors (4)	Open Cubicles in separated area		330		5	64	320
				Helpdesk Window Workstation					3	64	192
				Open Workroom / Meeting	Drawing Storage, Plotter/Scanner, Large Worksurfaces - Lg Project drawings sit out for various reviews for weeks at a time. Meeting space with large touchscreen monitor		675		1	500	500
				Storage					1	200	200
						SUBTOTAL Building Inspections	2,795				2,312
Engineer	1	1	2	Engineer (1)	Private Office		140		2	120	240
						SUBTOTAL Engineer	140				240
Planning & Zoning	3	1	4	Planning Director (1)	Private Office	Prefer to have w Comm Dev (Bldg + Eng)	140		1	120	120
				Code Enforcement (1)	Open Paneled Workstation, 8x8	Prefer to have w Comm Dev (Bldg + Eng)	64		1	64	64
				Clerical / Service Desk (1)	Open Paneled Workstation, 8x8 - visible to service desk	Prefer to have w Comm Dev (Bldg + Eng) bldg admin can support	64		1	64	64
						SUBTOTAL Planning & Zoning	268				248
Elected Officials	3	0	3	Township Supervisor	Private Office, comes in for specific meetings	Provide some sort of Flex Office Solution?	110		1	150	150
				Treasurer	Private Office, comes in for specific meetings	Provide some sort of Flex Office Solution?	110		1	80	80
				Clerk	Private Office, In office Tues/Thurs	In Office	110		1	110	110
						SUBTOTAL Elected Officials	330				340
Hoteling / Intern		5		Hoteling		For Parks, Interns, Seasonal	0		0	64	-
						SUBTOTAL Hoteling	-				-
Parks				Parks Director	Private Office	Works out of Burton - recommend reallocated space to new parks bldg	110		0		-
				Parks Coordinator	Open Cubicle	Works out of Burton - recommend reallocated space to new parks bldg	64		0		-
						SUBTOTAL Parks	174				-
Support				IT Closet / Server	Large		100		1	100	100
				Supply / General Storage	Large Room near Building Inspections		150		1	200	200
				File Storage + Fire Safe	Currently only about half full, it will fill up until files get transferred to Library Archive		230		1	230	230
				Workroom	Copy/Print, lots of counter space & cabinet storage, large center work surface		270		1	250	250
				Copy/Print Area			45			45	-
				Janitorial Storage	Currently a room within men's restroom (fire riser/electrical)		70		1	70	70
				Restrooms: Single-User	None	Add	0	1 / 8	5	70	350
				Restrooms: Multi-User - Shared Public & Staff	Both are very cramped, ADA stall, DF W: (3) stalls (2) Lav, stalls are individual rooms with full walls/ doors for privacy. Mens: 3 urinal, 1 ADA stall (divider), 2 lav	Would like to separate staff & public toilets - public toilets to support public meeting room	350		2	250	500
				Outdoor Space	tables w/ fixed seating - nice green & shaded protected area - not paved - not really utilized				1		-
				Parking - For Offices		Zoning Table 19-B: Business & General Office: 3/1000 sf per Zoning. - based on 13,115 sf of area - 40 parking spaces	53 total spots, 2 ADA				-
				Parking - For Meeting Space		Zoning: Schools, Places of Worship or Assembly:1) parking space per (4) seats in the auditorium or place of worship or assembly, or (2) parking spaces per (3) employees, or (1) parking space per (1,000) square feet of floor area, whichever requires the greatest number of parking spaces - based on Occupancy of 209/4 = 53 spaces	53 spaces				-
						SUBTOTAL Support Areas	1,215				1,700
						Subtotal - Programmed Area	9,158				14,084
						30% circulation					4,225
						Estimated Total Area	12,300				18,309

Parks Facility Space Needs Program

AREA	PEOPLE CURRENT	PEOPLE FUTURE ADD	PEOPLE TOTAL	ROOM NAME	Remarks / Description / Features: EXISTING	Remarks / Description / Features: PERFORMANCE GOAL	CURRENT SF	NEEDS RATIO	NEEDS QTY.	NEEDS SF	NEEDS TOTAL
Staff	12	6	18	Director's Office	(1) Shared Office - 212 SF	Small meeting table included	215	1 / 1	1	250	250
				Foreman's Office				1 / 1	1	110	110
				Coordinator		Reservations, Events, Programming, Adjacent to Service Window		1 / 1	1	100	100
				Hotel / Flex				1/1	1	100	100
				Office Storage / Print	Lots of Misc storage in office & break room, Printer in Break Room			1 / 1	1	70	70
				Staff Connect Room		Monitor, White Boards, seating for 4-8		1/1	1	250	250
				Staff Meeting Room		All - Staff - Maybe open with large island to gather around.		1/1	1	550	550
						SUBTOTAL Staff	**215**				1,430
Support				Staff Toilets	(1) single user, unisex, located directly off of break room/eating space (yuck)	(2) single user rooms, ADA	70	1/10	2	70	140
				Mens Locker Rm	Lockers out in Garage	15 Lockers & Bench		1/1	1	360	360
				Womens Locker Room		10 Lockers & Bench		1/1	1	300	300
				Shower Room(s)		Individual Lockable Shower Room - no toilet or sink, 1 ADA shower. (In Locker room sf)		1/10	2	-	-
				Janitor Closet		Mop Sink	40	1/1	1	64	64
						SUBTOTAL Support	**110**				864
Recharge				Break Room	550 sf Lunch Room: Sink, DW, Fridge, Micro, Coffee Table/Seating for ~14, Lg Monitor, Bulletin Boards/Scheduling White Board, First Aid	Sink, Fridge, DW, Microwave x2, Toaster Oven, Tables/Chairs, Sofa/Lounge Seating, Monitor, White Board	550	1/1	1	600	600
				Wellness Room					1	80	80
						SUBTOTAL Recharge	**550**				600
Public				Entry / Lobby		For Service window/Meeting Space Access		1/1	1	200	200
				Public Interface - Service Window		Public can come to reserve a shelter, sign up for Programming, Lost & Found, etc. Visibility to Service WIndow for Coordinator			1		-
				Multipurpose Programming Space		+ Storage		1 / 1	1	1,200	1,200
				Public Toilets/Drinking Fountain	(2) single user RR @ Burton - 200 SF	For park use / for public meeting room. 2 Fixtures each M and Wmn.	200	1 / 1	2	150	300
						SUBTOTAL Public	**200**				1,700
Conditioned Garage				Truck Bays	4110 SF @ Burton, 17'wx10h, 12'wx10H OH door	18'x20', (7) Plow Trucks, (1) Dump w Plow, (1) Bucket Truck, 16'H OH door, Linear Drains,	4110		9	360	3,240
				Equipment Storage Bays		12'x20', Golf carts, mowers, Tool Cat, Tractor w bucket, Utility Vehicle, ATV, etc,			9	360	3,240
				Wash Bay		18'x50'			1	720	720
				Maintenance Shop	1656 SF @ Burton, 18'wx10h OH door	Workbenches	1656		1	300	300
				Equipment Lift Bay		18'x30'			1	540	540
				Truck Lift Bay		18'x40', 2 post lift			1	720	720
				Equipment Space adj to Bays		Tools, Racks, Tire Storage			1	300	300
				Parts & Tools Storage					1	300	300
				Fluid Room		Drainage Grate w Grease Trap			1	200	200
				Pesticide Storage Room		Fire Rated Room			1	100	100
				Rec Equipment /Programming Storage		Shelving /Racks			1	400	400
				Cleaning Supplies Storage		High Rise Shelving /Racks			1	120	120
				Salt Storage		Bags on Shelving/Racks/Pallets			1	120	120
				Event Storage (Seasonal)		Store at Burton?			0	?	
				Traffic Equipment/Barrier Storage	Relocate from Current Rec Park Facility	Store at Burton?			0	?	
						SUBTOTAL Conditioned	**5,766**				10,300
Cold Storage				Traffic Barriers/Signs Storage	600 sf @ Rec Park		1860		0		-
				Rec Park Cold Storage	1260 sf @ Rec Park				0	1,260	-
						SUBTOTAL Cold Storage	**1860**				-
Outdoor Covered				Plows	720 sf @ Burton	Store at Burton off season	720		0		-
						SUBTOTAL Covered	**720**				-
Outdoor Uncovered (Site)				Staff Parking	8-9 spots @ Burton	Parking for all staff - 20+ spots, Site to be fenced for security - gate that is opened/closed after hours, stays open during the day. Cameras	14400		25	288	7,200
				Trailer Parking	5 @ Burton	5 Trailers			5	700	3,500
				Fuel		(1) 250 gal gasoline, (1) 250 gal diesel			1	640	640
				Raw Material Storage		3-5 open bins/stalls. 12'x20' + loading area			1		4,200
				Dumpster Enclosure		5 Yard			1	144	144
						SUBTOTAL Site					15,684
						Subtotal - Programmed Area (Indoor)	9,206				13,464
						30% circulation/ mechanical/ walls					4,039
						Estimated Total Area	**9,206**				**17,503**

*Red outline denotes Optional Community Spaces which are included in Total Area but could be removed from project scope.

wendel

Appendix C – Space Program Documents

Satellite Response Station – Concept Program

The satellite response station program is based on the operational requirements of a single response company. The program provides the spaces necessary to house the assigned apparatus, maintain response readiness, support continuous crew occupancy, and provide appropriate firefighter health and safety features. The program intentionally relies on Fire Station 1 for Department-wide training, administration, logistics, major equipment support, PPE processing, and routine post-incident decontamination. This allows the satellite to concentrate its building area on the functions that must accompany the response company geographically.

Ground Floor Program

Space	Qty.	Unit NSF	Total NSF
Apparatus Bay	1	1,114	1,114
Fitness	1	232	232
Officer Dorm	1	174	174
Dorm	3	137	411
Kitchen / Day	1	345	345
Watch Office	1	83	83
Decon / Gear Dump	1	28	28
Decon Restroom	1	111	111
Crew Laundry	1	20	20
Storage	1	49	49
Water / Fire	1	63	63
Entry	1	46	46
Hall / Circulation	1	185	185

Space	Qty.	Unit NSF	Total NSF
Hall / Circulation	1	64	64
Hall / Circulation	1	48	48
Ground-Floor Programmed Area			**2,973 NSF**
Walls, stairs, shafts and other gross area			**601 SF**
Ground Floor			**3,574 GSF**

Mezzanine Program

Space	Qty.	Unit NSF	Total NSF
Mechanical / Water / Fire	1	327	327
Electrical / IT	1	88	88
Storage	1	452	452
Mezzanine Programmed Area			**867 NSF**
Walls, stair/landing and other gross area			**64 SF**
Mezzanine			**931 GSF**

Building Program Summary

	Area
Ground-Floor Programmed Area	2,973 NSF
Mezzanine Programmed Area	867 NSF
Total Programmed Area	**3,840 NSF**
Ground Floor	3,574 GSF
Mezzanine	931 GSF
Total Building Area	**4,505 GSF**

The resulting concept is a 4,505 GSF single-company satellite fire station, with the occupied response and living functions concentrated on the ground floor and storage and building systems placed primarily on the mezzanine.

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This appendix contains a conceptual facility floor plan design for each use group, based on the Space Needs Program from Appendix C as well as additional diagramming to determine adjacencies, layout & flow of the facility. These concepts are intended to demonstrate feasibility, concept, and spatial & operational relationships and should not be interpreted as final architectural designs. Final building configuration, program, site and scope will be further developed and refined as individual project scnearios are selected and advanved through design development

Pg 2 Parks Facility Concept Plan

Pg 3 Parks Facility Concept Site Plan

Pg 4 Township Administration Adjacency Diagram

Pg 5 Township Administration Facility Concept Plan

This appendix contains the conceptual planning exhibits developed to illustrate potential facility and site strategies identified through the study. The plans may include concepts for the continued use and eventual replacement of Fire Station 2, the Station 2/Public Works campus, and the future GIS Site 1 satellite station. These concepts are intended to demonstrate planning feasibility, operational relationships, and potential development strategies and should not be interpreted as final architectural designs. Final building configuration, site development, and engineering requirements will be refined as individual projects advance through programming and design.

P1 A Satellite Fire Station in a Single Engine Company configuration

P2 A Satellite Fire Station in a Double Company configuration

P3 A Satellite Fire Station in a Single Engine Company configuration plus Sheriff Substation

Conceptual Parks Facility Plan

This conceptual facility plan meets the programmatic needs as outlined in the Space Program document. Additional bays or storage space could be added to accommodate future expansion of services that have not yet been identified.



Scale: 1"=25'

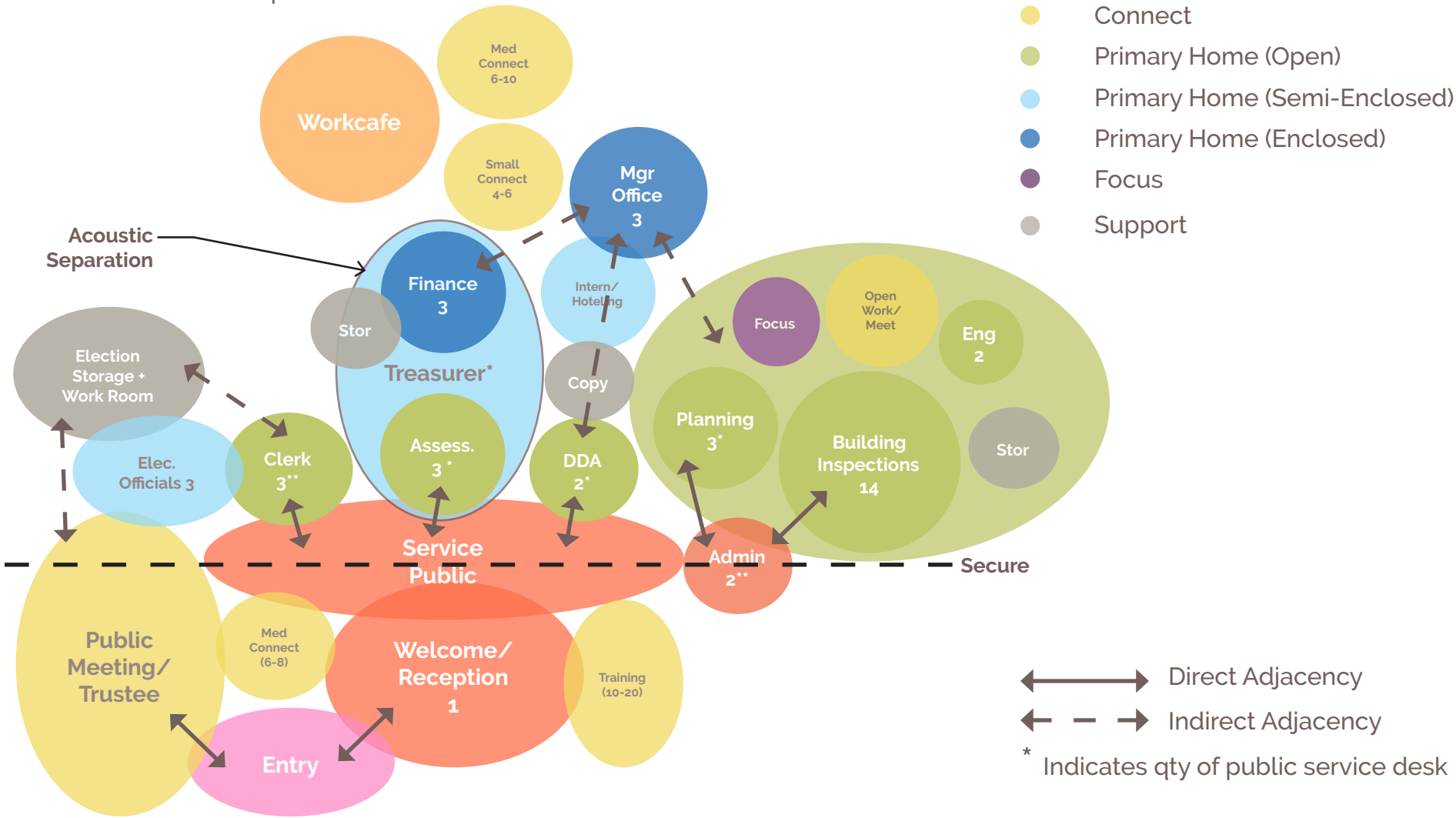
Conceptual Site Plan

This conceptual site plan meets the programmatic needs as outlined in the Space Program document as well as anticipated site spatial needs for storage, fueling, staff parking, and appropriate access and clearances for delivery trucks and large vehicle traffic. The site should be secured and screened with fencing, landscaping, and sitework as necessary to meet zoning and aesthetic expectations.



Township Administration Adjacency Diagram

By identifying important relationship between spaces, circulation patterns, public and private zones, and potential points of connection, an adjacency diagram helps establish an initial organizational strategy before moving into more detailed floor plans.



Conceptual Township Hall Facility Design

18,700 SF

This conceptual facility plan meets the programmatic needs as outlined in the Space Program document and the spatial relationships as identified in the adjacency diagram.

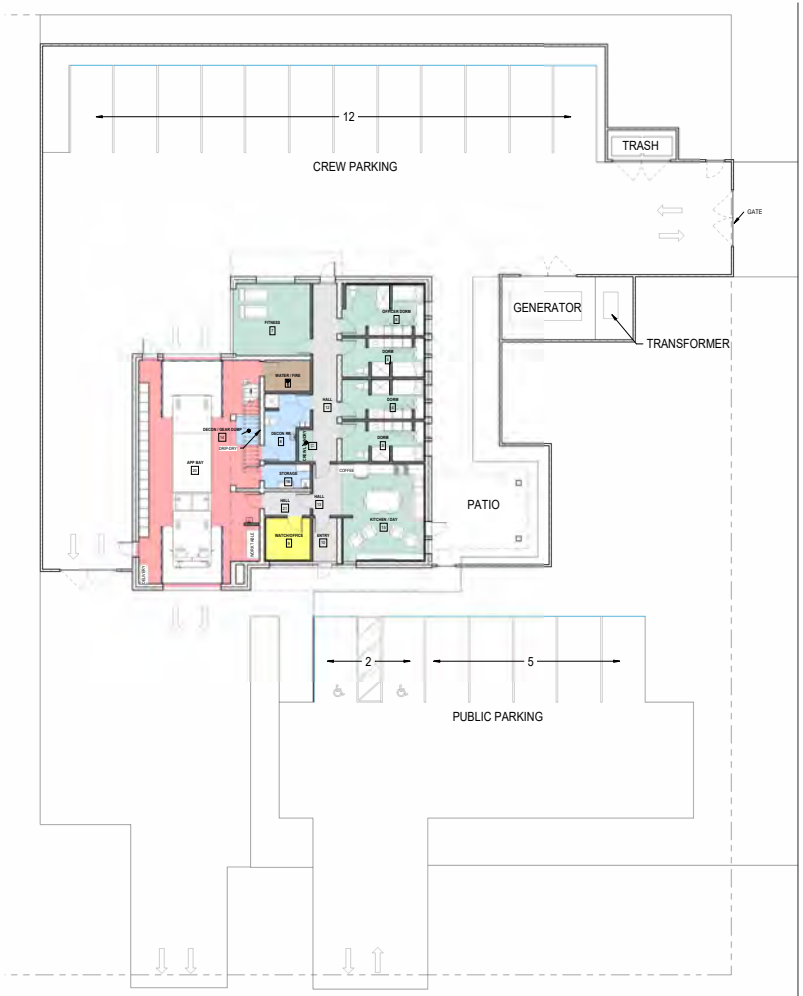


Scale: 1"=25'

Fire Department - Single Engine Bay Concept Plan

CONCEPT PROGRAM

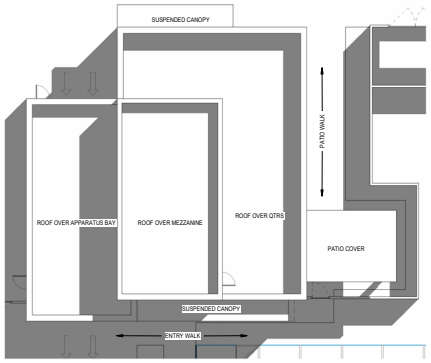
FUNCTION AREA	
Apparatus Bay	1,114 SF
Kitchen / Dayroom	345 SF
Fitness	232 SF
Officer Dorm	174 SF
Dorms – 3 @ 137 SF	411 SF
Watch Office	83 SF
Decon / Gear Dump	28 SF
Decon Restroom	111 SF
Crew Laundry	20 SF
Ground Floor Storage	49 SF
Water / Fire	63 SF
Entry	46 SF
Circulation	297 SF
GROUND FLOOR PROGRAM	2,973 NSF
Mech. / Water / Fire	327 SF
Electrical / IT	88 SF
Mezzanine Storage	452 SF
MEZZANINE PROGRAM	867 NSF**



1 Single Bay Scheme
SCALE: 1" = 10'-0"



2 MEZZANINE
SCALE: 3/32" = 1'-0"



3 ROOF PLAN
SCALE: 3/32" = 1'-0"



4 Section 2
SCALE: 1/8" = 1'-0"



Perspective View From Front
SCALE: 1" = 1'-0"

Owner
BUILDING NAME
STREET ADDRESS
CITY, STATE, ZIPCODE

TINY STATION PROTOTYPE CONCEPT

wendel
Centerpointe Corporate Park
375 Essjay Road, Suite 200
Williamsville, NY 14221
www.wendelcompanies.com
p:716.688.0766 f:877.293.6335
Wendel Architecture, P.C.

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NO.	REVISIONS	DATE

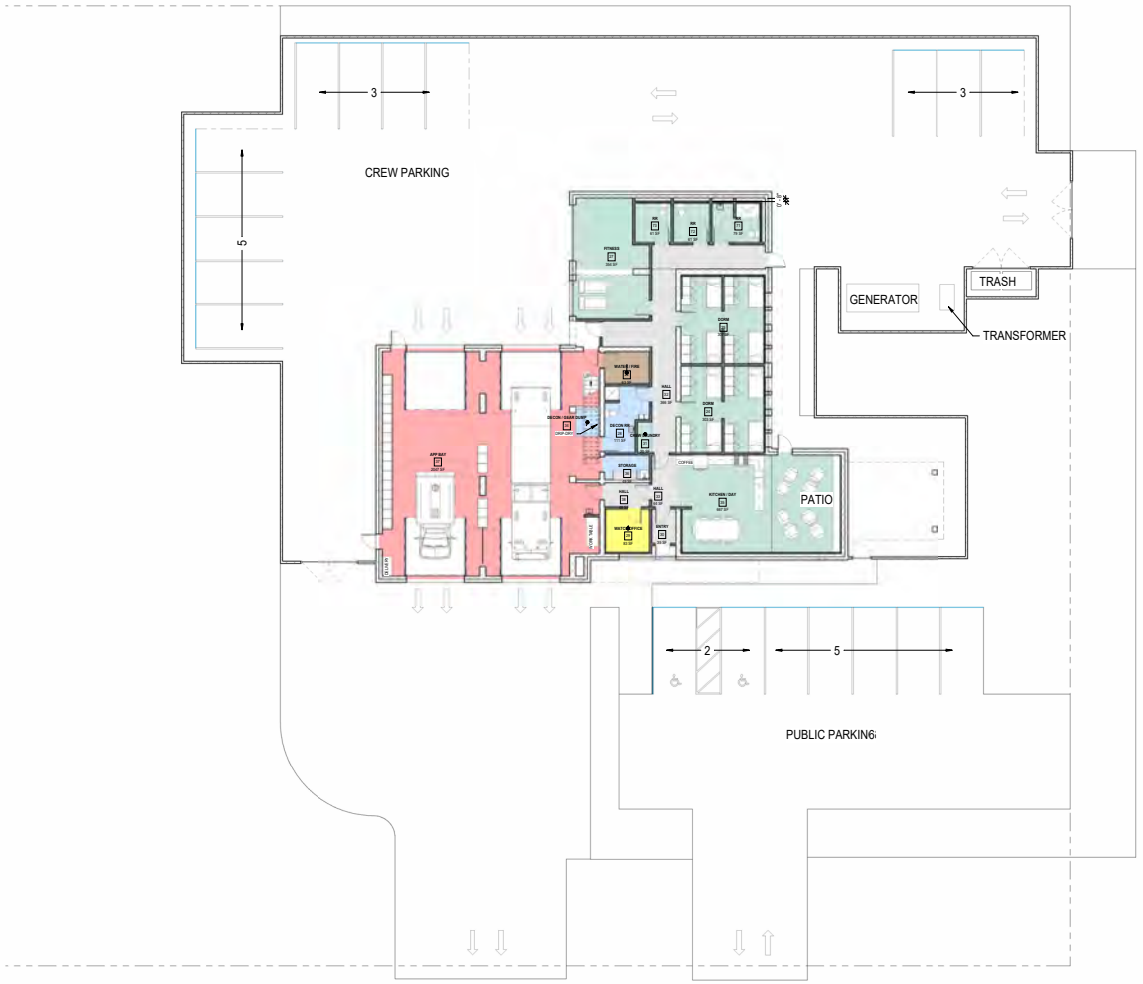
DWG. TITLE
CASCADE FIRE DEPARTMENT FEASIBILITY STUDY

GENERIC SCALE BAR
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DATE 09/23/26
SCALE As indicated
DWN. Author CHK. Staff
PROJ. No. 656401
DWG. No.

P1

Fire Department - 2 Engine Bay Concept Plan



1 TWO-COMPANY SCHEME
SCALE: 1" = 10'-0"

Owner
BUILDING NAME
STREET ADDRESS
CITY, STATE, ZIPCODE

TINY STATION PROTOTYPE CONCEPT

wendel
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GENERIC SCALE BAR
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DATE 09/09/26
SCALE 1" = 10'-0"
DWN. Author CHK. Checker
PROJ. No. 656401
DWG. No.

P2

Fire Department - Sheriff Substation Concept Plan



1 SHERIFF SUBSTATION SCHEME
SCALE: 1" = 10'-0"

Owner
BUILDING NAME
STREET ADDRESS
CITY, STATE, ZIPCODE

TINY STATION PROTOTYPE CONCEPT

wendel
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DATE 09/09/26
SCALE 1" = 10'-0"
DWN. Author CHK. Checker
PROJ. No. 656401
DWG. No.

P3

These conceptual magnitude of cost estimates provides a preliminary projection of the total project cost for Construction based on the Facility design concept from Appendix E. This estimate is intended to support early budget development, project feasibility, and guide discussion. These numbers are based on 2026 Construction costs and do not include cost escalation that should be expected over time. This price is intended to be site neutral: Specific site needs such as acquisition of property, significant earthwork, site improvements or roadwork is not included.

Pg 2 Park & Facilities

Pg 3 Township Administration

Magnitude of Cost - New Parks Facility Concept

Construction Costs: Parks Facility				
			Total	Notes
Warehouse	$ 140	7,700	$ 1,078,000	
Shell of Build-out/ Front of House	$ 220	9,700	$ 2,134,000	
Build-out	$ 150	9,700	$ 1,455,000	
Site	$ 15	65,000	$ 975,000	
Subtotal Construction Costs		17,400	***$ 5,642,000***	
Estimating Contingency	10%		$ 564,200	
Total Construction Costs			***$ 6,206,200***	
			$357	Cost per SF

Owner Direct Costs				
Soft Costs	Unit Cost	Area/ SF/ Unit		
22% of Construction Costs			$ 1,365,364	
Subtotal Owner Direct Costs			***$ 1,365,364***	

Site Acquisition			$ 0	
Other Owner Costs			$ 0	
Total Project Budget			***$ 7,571,564***	
			$ 435	Cost per SF

Assumes building includes community use spaces.

Does not include any Park amenities outside of building

This conceptual magnitude of cost estimate provides a preliminary projection of the total project cost for Construction based on the Facility design concept from Appendix E.

This estimate is intended to support early budget development, project feasibility, and informed decision making.

These numbers are based on 2026 Construction costs and do not include cost escalation that should be expected over time.

This price is intended to be site neutral: Specific site needs such as acquisition of property, earthwork, site improvements or relocation of amenities is not included.

Magnitude of Cost - New Township Hall Concept

Construction Costs: Township Hall				
			Total	Notes
Building	$ 375	18,400	$ 6,900,000	
Site	$ 12	89,000	$ 1,068,000	Varies by site. This is for option 4 = civic drive (not including street relocation)
Subtotal Construction Costs		18,400	***$ 7,968,000***	
Estimating Contingency	10%		$ 796,800	
Total Construction Costs			***$ 8,764,800***	
			$476	Cost per SF

Owner Direct Costs				
Soft Costs	Unit Cost	Area/ SF/ Unit		
27% of Construction Costs			$ 2,366,496	
Subtotal Owner Direct Costs			***$ 2,366,496***	

Site Acquisition			$ 0	
Other Owner Costs			$ 0	
Total Project Budget			***$ 11,131,296***	
	$		**605**	Cost per SF

This conceptual magnitude of cost estimate provides a preliminary projection of the total project cost for Construction based on the Facility design concept from Appendix E.

This estimate is intended to support early budget development, project feasibility, and informed decision making.

These numbers are based on 2026 Construction costs and do not include cost escalation that should be expected over time.

This price is intended to be site neutral: Specific site needs such as acquisition of property, significant earthwork, site improvements or roadwork is not included.

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The Discovery Workshop is an interactive, highly collaborative session designed to drive deep engagement, learning, and shared understanding among the Leadership Team. Beginning with strategic data gathering, the workshop creates a structured environment to explore the Township's community culture, management style, service delivery approach, and aspirations for the future. Through facilitated activities, creative thinking exercises, and a visual preference survey, participants were encouraged to challenge assumptions, articulate ideas, and define a clear project vision and goals.

Workshop Participants:
Jade Smith, Township Manager
Brian Wilson, Building Official
Lorna Nenciarini, Director of Finance
Katie Murawski, Director of Human Resources
Michelle Alberts, Deputy Clerk
Dan Zwick, Director of Parks
Aric Thorne, Township Engineer

Cascade Township Culture, Values and Brand

- Desire to **Elevate Lifestyle**, but grow opportunities for **Experiences**
- Highly educated & affluent
- Highly value leisure time & amenities
- Strong desire for community programming & **activities** - family, senior & adult recreation
- Expect **High Quality** with good return-on-investment, but willing to spend on priority improvements that benefit the community
- Desire to have a **"Village"** core
- Walkability/ non-motorized connectivity a focus
- Human Scaled buildings and Places
- **Traditional Architectural Design** and Detailing
- **Steady Growth** in expectation for improved services, and population
- More places/ spaces for social interaction













Organizational Culture & Values

Core Values

- Community Centered - service driven - want to give back
- Forward Looking & Fiscally Responsible
- Collaborative & Highly Competent
- Passionate, dedicated, pride in the work we do
- Desire for work to be perceived positively by the community & prove value

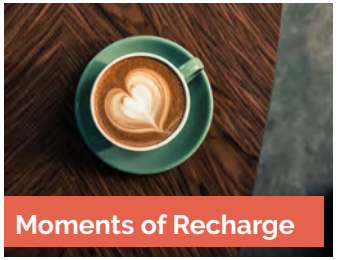
Team Culture

- "We make it work with what we have".
- Newer staff bringing fresh ideas is welcomed
- Strong desire to set the township up for the future
- Dedicated to their specialty
- Doors open - approachable
- All hands on deck to fill the gaps
- "Everyone works hard to be at the top of their game"
- Community sets high expectations for us - continuous desire to improve

Culture Visioning













Discovery Workshop Results

Keep

Reception atmosphere

Parks storage building

Natural light

Concierge Experience

Plants

Collab zones

Break room

Toss

Limited clerk space

Typical office layout

Not enough parking

Location

Overabundance of private offices

A “too open” reception

Isolation between departments

Create

Safety in public interface

Selective access points, cameras or surveillance, less open service counters

Staff only restrooms

Proximity between departments for efficiency

More service counter space

Multi-use spaces

Mid-sized meetings spaces

Fresh air

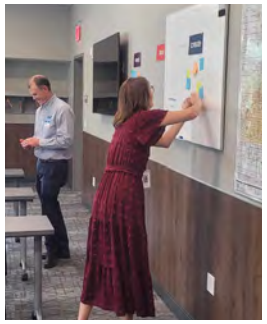
Functional reception area

Parking for trucks and trailers as well as visitors

Tax Season Space

Admin and Board Together







Programming - Spaces Needed

Parks

- Meeting space that fits all staff
- Separate office spaces / service counter
- Larger & more functional modern garage space for storage, equipment, workshop, including lifts, washbay
- Locker rooms, shower & toilet facilities
- A Facility Designed for what they need to do

Township Admin

- Space for future growth of staff & interns
- Additional small/mid-size meeting room(s)
- Closed session meeting space & work space for Board Members
- More functional and secure reception desk

Meeting Rooms

- More public meeting space - separate by function/use group to simplify logistics & set up/teardown

Deep Earth:

What are fundamental issues that we may come up against?

Limitations to location options

Airport creates barriers to service

Community Buy-in

Blue Sky:

What would you dream if there were no constraints?

Walkability + Connect Facilities to Cascade's Amazing trail system

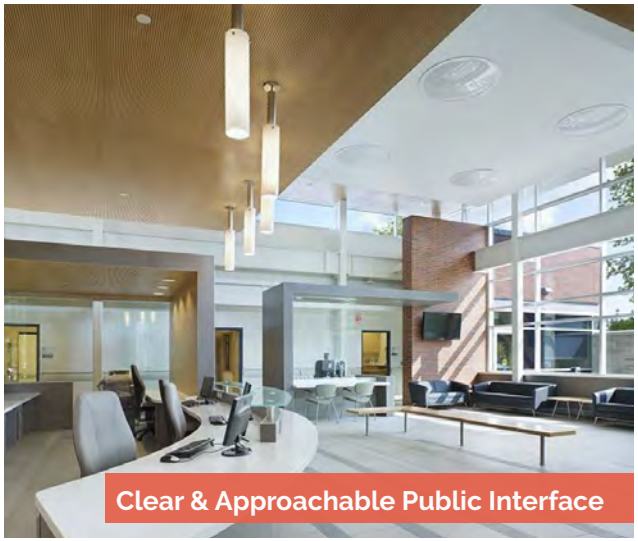
Outdoor public spaces @ Township Hall

Plan for 30 years ahead

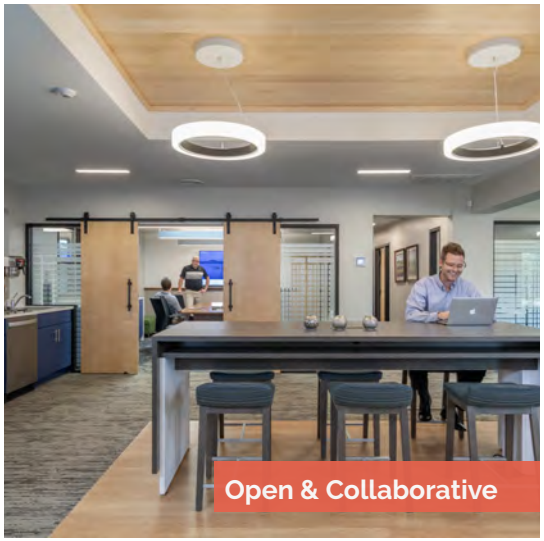
Create a 'Township hub' for admin & parks facilities to share the same piece of property

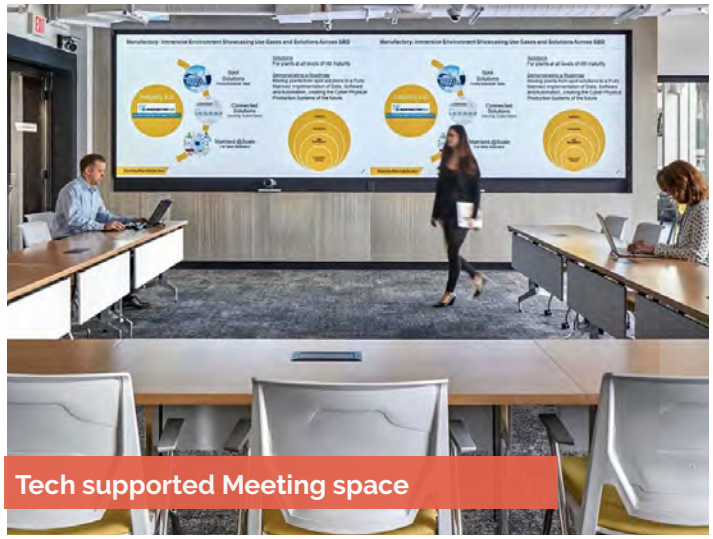
Have a strong presence in the downtown Village

Visual Preference Survey Top Results


Clear & Approachable Public Interface


Timeless Civic Presence


Open & Collaborative


Tech supported Meeting space


Functional Parks Garage


Inviting Multipurpose Space

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intersect Design. Strategy. Architecture.

Primary Contact:
Bill LaDitka, IAIA, LEED AP
Principal Architect | Planner, Intersect Studio
(269) 944-9279
bill@intersect-studio.com

wendel

Five Bugles Design™

Primary Contact:
Vaughan S. Miller, AIA
Public Safety Designer | Operational Strategist, Wendel Companies
(715) 832-4848
vmiller@wendelcompanies.com

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