

# CASCADE CHARTER TOWNSHIP

2865 Thornhills SE Grand Rapids, Michigan 49546-7192



**Date:** January 18, 2021  
**To:** Treasurer Ken Peirce  
Trustee John Shipley  
Trustee Timmy Noordhoek  
**From:** Ben Swayze, Township Manager  
Adam Magers, Fire Chief

**Subject:** Public Safety Advisory Committee Meeting Agenda – Jan 20, 2021 (9:00a)

The Public Safety Advisory Committee is to meet in the Township Hall Large Conference Room, of the Township Office, or by Zoom to discuss the following:

1. **Officers of the Committee** – The Committee is responsible for appointing a Chair and Vice-Chair

**Recommended Action** – Appoint Officers

2. **Medic 1 & Chief Vehicle Replacements** – In the FY 2021 the Township budgeted to replace Medic 1 and Chief Vehicle as part of our regular vehicle replacement program. Attached you will find a staff report from Chief Magers, as well as support documentation for his recommendation. Chief Magers will be at the meeting to review the recommendations and answer any questions you may have.

**Recommended Action** – Recommendation to the Township Board regarding the purchase of replacement vehicles for Medic 1 and the Chief's Vehicle

3. **Fire Station #1 Study** – The Township is holding the public input session for the Cascade Fire Station #1 planning analysis the evening on January 19. This will be an opportunity to debrief of the public hearing and discuss what additional analysis the committee would like to be conducted prior to the February PSAC meeting. The full planning analysis document is attached for your review.

**Recommended Action** – No action, review and staff direction only.

CASCADE TOWNSHIP  FIRE DEPARTMENT

*Dedicated to Serving You*

January 15, 2021

PSAC Staff Report

Medic 1 and Chief Vehicles

Members of the Board,

The fire department is requesting the approval for the purchase of the following vehicles:

- Medic 1 – 2021 Ford F-250
- Chief/Command Vehicle – 2021 Ford F-250

Per our vehicle replacement schedule, current Chief vehicle (2016 Tahoe) and Medic 11 (2015 Suburban) will rotate into our Inspection/Prevention division. Our current Inspector vehicle (2012 Suburban) is shared by our Fire Marshal and Inspector. This vehicle will go into utility status where it will be used for staff transport to classes/training/errands/etc. Current Utility is a 2007 Suburban that is in rough shape and will go to auction. By purchasing pick-up trucks instead of SUVs we are continuing our goal of reducing carcinogens and contamination in the passenger compartment of our vehicles. Attached you will find three vehicle quotes from Borgman Ford, Fox Ford, and Betten Ford.

The vehicles will need to be upfitted with lights/sirens/radios/wiring/caps/slide-out/equip and graphics. Great Lakes Upfitting out of Holland Michigan is recommended. (See attached quote)

We recommend the GOVT Pricing quote from Borgman Ford for the Medic and Command vehicles at \$35,751 and \$36,571 respectively. If approved, the purchase of each vehicle, plus upfitting and miscellaneous, shall not exceed \$60,000.

Thank you for your consideration.



Adam T. Magers

Fire Chief, Cascade Township



V1DP0037 01.29 2412 EN

CNGP530

VEHICLE ORDER CONFIRMATION

01/12/21 15:27:54

==>

Dealer: F48072

2021 F-SERIES SD

Page: 1 of 2

Order No: 0101 Priority: 80

Order Type: 2 Price Level: 115

Ord PEP: 603A Cust/Flt Name:

PO Number:

RETAIL

RETAIL

W2B F250 4X4 CREW/C \$46300

17X FX4 OFF-ROAD PK \$400

160" WHEELBASE

.SKID PLATES

PQ RACE RED

10000# GVWR PKG

3 40/20/40 CLOTH

425 50 STATE EMISS NC

S MEDIUM EARTH GR

512 SPARE TIRE/WHL2 NC

603A PREF EQUIP PKG

54F PWRSCOPE TT MIR 280

.XLT TRIM

592 ROOF CLEAR LGTS 95

.AMFM/MP3/CLK

JACK

996 .6.2L EFI V8 ENG NC

44S 6-SPD AUTOMATIC NC

TOTAL BASE AND OPTIONS 49815

TDU LT275/700WLAT18 290

TOTAL 49815

X3E 3.73 ELOCKING 390

\*THIS IS NOT AN INVOICE\*

JOB #1 BUILD

\* MORE ORDER INFO NEXT PAGE \*

TRAILER TOW PKG

166 CARPET DELETE (50)

F8=Next

F1=Help F2=Return to Order

F3/F12=Veh Ord Menu

F4=Submit F5=Add to Library

S006 - MORE DATA IS AVAILABLE.

QC060691

V1DP0037

2,6

CNGP530

VEHICLE ORDER CONFIRMATION

01/12/21 15:28:00

==>

Dealer: F48072

2021 F-SERIES SD

Page: 2 of 2

Order No: 0101 Priority: 80

Order Type: 2 Price Level: 115

Ord PEP: 603A Cust/Flt Name:

PO Number:

RETAIL

RETAIL

66S UPFITTER SWCH \$165

67D 200/240 AMP ALT NC

76S REMOTE START 250

FUEL CHARGE

DEST AND DELIV 1695

TOTAL BASE AND OPTIONS 49815

TOTAL 49815

\*THIS IS NOT AN INVOICE\*

F7=Prev

F1=Help

F2=Return to Order

F3/F12=Veh Ord Menu

F4=Submit

F5=Add to Library

S099 - PRESS F4 TO SUBMIT

QC060691

V1DP0037

2,6

*\$ 37772 After current incentives*

*base #'s*

*Add for*

*7.3L V8*

*10 speed auto > \$1861*

*Preder*

*Bedliner \* 595*

*Adjust. pedals 109*

*Fog lamps 119*

*Lane depart warning 104*

*wheel well liners*

*Front \$164*

*rear \$164*

*both \$328*

*eng. block heater 91*

*rapid heat 228*

*XL Premium 2726*

*XL Valve 1347*

*running boards 405*

*vehicle safe 301*

*Vermillion Red \$600*

1/13/2021

IMS2 CNGP530 VEHICLE ORDER CON

VIRTC1DP V5.59 #

CNGP530 VEHICLE ORDER CONFIRMATION 01/13/21 15:33:40  
 ==> Dealer: F48071  
 Page: 1 of 2  
 2021 F-SERIES SD  
 Order No: 9999 Priority: D1 Ord FIN: QH814 Order Type: 5B Price Level: 115  
 Ord PEP: 600A Cust/Flt Name: CASCADE TWP F PO Number:  
 RETAIL RETAIL  
 W2B F250 4X4 CREW/C \$40620 TRAILER TOW PKG  
 160" WHEELBASE FLEET SPCL ADJ NC  
 PQ RACE RED 17S STX APPEAR PKG 1825  
 A VNYL 40/20/40 .CRUISE CONTROL  
 S MEDIUM EARTH GR .BRIGHT GRILLE  
 600A PREF EQUIP PKG .CST ALUMINUM-18  
 .XL TRIM 17X FX4 OFF-ROAD PK 400  
 .AIR CONDITIONER NC .SKID PLATES  
 .AMFM/MP3/CLK  
 996 .6.2L EFI V8 ENG NC TOTAL BASE AND OPTIONS 47280  
 44S 6-SPD AUTOMATIC NC TOTAL 47280  
 TDU LT275/700WLAT18 290 \*THIS IS NOT AN INVOICE\*  
 X3E 3.73 ELOCKING 390  
 90L PWR EQUIP GROUP 1075 \* MORE ORDER INFO NEXT PAGE \*  
 JOB #1 BUILD F8=Next  
 F1=Help F2=Return to Order F3/F12=Veh Ord Menu  
 F4=Submit F5=Add to Library  
 S006 - MORE DATA IS AVAILABLE. QC09835

V1DP1074 2,6

1/13/2021

IMS2 CNGP530 VEHICLE ORDER CON

VIRTCDP V4.50 5432

CNGP530 VEHICLE ORDER CONFIRMATION 01/13/21 15:33:56  
==> Dealer: F48071

2021 F-SERIES SD

Page: 2 of 2

Order No: 9999 Priority: D1 Ord FIN: QH814 Order Type: 5B Price Level: 115  
Ord PEP: 600A Cust/Flt Name: CASCADE TWP F PO Number:

RETAIL RETAIL  
18B PLAT RUNNING BD \$445 DEST AND DELIV \$1695

10000# GVWR PKG  
425 50 STATE EMISS NC TOTAL BASE AND OPTIONS 47280  
512 SPARE TIRE/WHL2 NC TOTAL 47280  
52B BRAKE CONTRLLR 270 \*THIS IS NOT AN INVOICE\*  
TELE TT MIR-PWR  
JACK

66L LED BOX LIGHT 60 \$ 34,574 complete  
66S UPFITTER SWITCH 165 Per Truck  
67D 200/240 AMP ALT NC  
942 DAY RUNNING LTS 45

SP DLR ACCT ADJ  
SP FLT ACCT CR  
FUEL CHARGE  
B4A NET INV FLT OPT NC F7=Prev  
F1=Help F2=Return to Order F3/F12=Veh Ord Menu  
F4=Submit F5=Add to Library  
S099 - PRESS F4 TO SUBMIT QC09835

+600 (Red)  
+1825  
\$36,999

V1DP1074 2,6



[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck (3) ( Complete)

### Window Sticker

#### SUMMARY

[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck MSRP:\$41,900.00

Interior:Jet Black, Vinyl seat trim

Exterior 1:Red Hot

Exterior 2:No color has been selected.

Engine, 6.6L V8

Transmission, 6-speed automatic, heavy-duty

#### OPTIONS

CODE	MODEL	MSRP
CK20743	[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck	\$41,900.00
<b>OPTIONS</b>		
1WT	Work Truck Preferred Equipment Group	\$0.00
5Y1	Seats, Driver and passenger front individual seats	\$0.00
AE7	Seats, front 40/20/40 split-bench	\$0.00
AKO	Glass, deep-tinted	Inc.
ANQ	Alaskan Snow Plow Special Edition	\$2,595.00
AQQ	Remote Keyless Entry	Inc.
C49	Defogger, rear-window electric	Inc.
CGN	Chevytec spray-on bedliner	Inc.
DBG	Mirrors, outside power-adjustable vertical trailing	Inc.
DMQ	Decal, Alaskan Snow Plow Special Edition	Inc.
FE9	Emissions, Federal requirements	\$0.00
G7C	Red Hot	\$0.00
GT4	Rear axle, 3.73 ratio	\$0.00
H2G	Jet Black, Vinyl seat trim	\$0.00
IOR	Audio system, Chevrolet Infotainment 3 system	\$0.00
JGF	GVWR, 10,650 lbs. (4831 kg)	Inc.
JHD	Hill Descent Control	Inc.
K34	Cruise control, electronic	Inc.

This document contains information considered Confidential between GM and its Clients uniquely. The information provided is not intended for public disclosure. Prices, specifications, and availability are subject to change without notice, and do not include certain fees, taxes and charges that may be required by law or vary by manufacturer or region. Performance figures are guidelines only, and actual performance may vary. Photos may not represent actual vehicles or exact configurations. Content based on report preparer's input is subject to the accuracy of the input provided.  
Data Version: 12809. Data Updated: Jan 13, 2021 10:53:00 PM PST.



[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck (3) ( Complete )

KW5	Alternator, 220 amps	Inc.	
L8T	Engine, 6.6L V8		\$0.00
MYD	Transmission, 6-speed automatic, heavy-duty		\$0.00
NZZ	Skid Plates	Inc.	
PCV	WT Convenience Package		\$1,185.00
PTW	Wheels, 18" (45.7 cm) High Gloss Black aluminum	Inc.	
QG3	Tires, LT275/70R18, mud-terrain, blackwall;	Inc.	
QT5	Tailgate, gate function manual with EZ Lift	Inc.	
U01	Lamps, Smoked Amber roof marker, (LED)	Inc.	
UF2	LED Cargo Area Lighting		\$125.00
V46	Bumper, front chrome		\$200.00
VJH	Bumper, rear chrome		\$0.00
VYU	Snow Plow Prep/Camper Package	Inc.	
Z71	Z71 Off-Road Package		\$175.00
ZYG	Tire, spare LT275/70R18 all-terrain, blackwall	Inc.	
—	Suspension, Off-Road	Inc.	

<b>SUBTOTAL</b>	<b>\$46,180.00</b>
Adjustments Total	\$0.00
Destination Charge	\$1,695.00
<b>TOTAL PRICE</b>	<b>\$47,875.00</b>

**FUEL ECONOMY**

Est City:N/A  
 Est Highway:N/A  
 Est Highway Cruising Range:N/A

*Tinney Automotive Bid  
 Randy Scofield \$37375*

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## Window Sticker

### SUMMARY

[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck

MSRP:\$41,900.00

Interior:Jet Black, Vinyl seat trim

Exterior 1:Summit White

Exterior 2:No color has been selected.

Engine, 6.6L V8

Transmission, 6-speed automatic, heavy-duty

### OPTIONS

CODE	MODEL	MSRP
CK20743	[Retail] 2021 Chevrolet Silverado 2500HD (CK20743) 4WD Crew Cab 159" Work Truck	\$41,900.00
<b>OPTIONS</b>		
1WT	Work Truck Preferred Equipment Group	\$0.00
5Y1	Seats, Driver and passenger front individual seats	\$0.00
AE7	Seats, front 40/20/40 split-bench	\$0.00
AKO	Glass, deep-tinted	Inc.
ANQ	Alaskan Snow Plow Special Edition	\$2,595.00
AQQ	Remote Keyless Entry	Inc.
C49	Defogger, rear-window electric	Inc.
CGN	Chevytec spray-on bedliner	Inc.
DBG	Mirrors, outside power-adjustable vertical trailing	Inc.
DMQ	Decal, Alaskan Snow Plow Special Edition	Inc.
FE9	Emissions, Federal requirements	\$0.00
GAZ	Summit White	\$0.00
GT4	Rear axle, 3.73 ratio	\$0.00
H2G	Jet Black, Vinyl seat trim	\$0.00
IOR	Audio system, Chevrolet Infotainment 3 system	\$0.00
JGF	GVWR, 10,650 lbs. (4831 kg)	Inc.
JHD	Hill Descent Control	Inc.
K34	Cruise control, electronic	Inc.

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L8T	Engine, 6.6L V8		\$0.00
MYD	Transmission, 6-speed automatic, heavy-duty		\$0.00
NZZ	Skid Plates	Inc.	
PCV	WT Convenience Package		\$1,185.00
PTW	Wheels, 18" (45.7 cm) High Gloss Black aluminum	Inc.	
QG3	Tires, LT275/70R18, mud-terrain, blackwall;	Inc.	
QT5	Tailgate, gate function manual with EZ Lift	Inc.	
U01	Lamps, Smoked Amber roof marker, (LED)	Inc.	
UF2	LED Cargo Area Lighting		\$125.00
V46	Bumper, front chrome		\$200.00
VJH	Bumper, rear chrome		\$0.00
VYU	Snow Plow Prep/Camper Package	Inc.	
Z71	Z71 Off-Road Package		\$175.00
ZYG	Tire, spare LT275/70R18 all-terrain, blackwall	Inc.	
—	Suspension, Off-Road	Inc.	

<b>SUBTOTAL</b>	<b>\$46,180.00</b>
Adjustments Total	\$0.00
Destination Charge	\$1,695.00
<b>TOTAL PRICE</b>	<b>\$47,875.00</b>

FUEL ECONOMY

Est City:N/A  
 Est Highway:N/A  
 Est Highway Cruising Range:N/A

*Timney Automotive Bid  
 Randy Scofield \$37375*

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 Data Version: 12809. Data Updated: Jan 13, 2021 10:53:00 PM PST.

Great Lakes Upfitting  
 11555 Crossing Ct  
 Suite 100  
 Holland, MI 49424



# Quote

Date	Quote No.
1/15/2021	20-221

Bill To
Cascade Fire Attn: Zeke Kadish

Ship To

**\*\*\*Our No-Hassle Warranty\*\*\***  
 Full Support of Manufacturers Parts  
 Warranty  
 Five-Year Workmanship Warranty

Terms	Account #	Project
Net 30		

Item	Description	Qty	Rate	Amount
SOS ENFLB004M1-0UF	SOS 54"/137cm 12 VOLT NFORCE LED LIGHTBAR W/ LIN DSC TECHNOLOGY /D24/D12D12D12D12D12D12D12D12D24\ /R_W/ R_W R_W R_W R_W R_W R_W R_W R_W\  A --GRT-- --GRT--- GRT --GRT--- Q--GRT-- A   A --CLR-- --CLR--- CLR --CLR--- Q--CLR-- A  \D24\ D12D12D12D12D12D12D12D12 /D24/ \R_W\R_A R_A R_A R_A R_A R_A R_A/R_W/ Material - Lexan [12 6 12] Accessories - QUICK CONNECT, PNFLBSPLT1, AUTO-DIM Mount - Standard Fixed Height Mount (PNFLBK06) Hook - PNFLBF33 Vehicle - Chevrolet Silverado (2019.5-20)  REAR MINI-BAR ON TOPPER (RED/WHITE, RED WARNING, WHITE STEADY-BURN ON REVERSE AND SIDE SCENE LIGHTING)	1	2,070.98	2,070.98T

<b>Subtotal</b>
<b>Sales Tax (0.0%)</b>
<b>Total</b>

1. All Sales Estimates are Confidential and Proprietary between Great Lakes Upfitting and its Customers Only.
2. Quoted Pricing is Valid for 30 Days from Date of Quote, Unless Otherwise Agreed.
3. Our Warranty - Great Lakes Upfitting Purchased Parts for the Manufacturers Warranty Term and Workmanship for 5 Years.

Signature

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Net 30		

Item	Description	Qty	Rate	Amount
SOS ENRMB00A65	SOS 17"/43cm 9-32V NROADS LED SGL STACK MINIBAR /  NNN NNN  \ /  NNN NNN  \  D12 CLR CLR D12   R_W -D - --- R_W  \  D12  D12  / \  R_W  R_W  / WIRING - Direct Connect MOUNT - Std Fixed Height Mount (PNRLBK00)	1	306.50	306.50T
SOS EMPSC07MB-9	SECONDARY LIGHTING SOS 7"x3" mpower with Screw Mount 36 LED 9-32 Volt SAE with 1.5' Pigtail Clear Housing/Lens RED/GRN/WHT (GRILLE)	2	237.50	475.00T
SOS PMP8BZL01C	SOS Chrome Single Bezel (includes gasket) - for use with mpower® 7x3 Lights	2	15.00	30.00T
SOS EMPS2QMS4D	mpower 4" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 12 LED, Dual Color - Red/White (ABOVE FRONT WHEEL)	2	98.00	196.00T

<b>Subtotal</b>
<b>Sales Tax (0.0%)</b>
<b>Total</b>

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Item	Description	Qty	Rate	Amount
SOS EMPS2QMS4D	mpower 4" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 12 LED, Dual Color - Red/White (LOWER REAR QUARTER PANEL)	2	98.00	196.00T
SOS EMPSC07MB-9	SOS 7"x3" mpower with Screw Mount 36 LED 9-32 Volt SAE with 1.5' Pigtail Clear Housing/Lens RED/GRN/WHT (REAR TAILGATE)	2	237.50	475.00T
SOS PMP8BZL01C	SOS Chrome Single Bezel (includes gasket) - for use with mpower® 7x3 Lights	2	15.00	30.00T
SOS ETHFSS-FV	Select-A-Pattern Headlight Flasher, Solid State, 12v Isolation Model (WITH LOOMED, LONG LEADS)	1	42.00	42.00T
SOS ETFBSSN-P	Flashback Alternating Taillight Flasher, Solid State - 2.4 f.p.s.	1	38.50	38.50T
SOS EMPS2QMS4D	mpower 4" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 12 LED, Dual Color - Red/White (UNDERMIRROR)	2	98.00	196.00T
SOS ENGCC01243	SIREN & CONTROL SYSTEM bluePRINT® 3 Central Controller - Communication Hub for use within the EV Control System - 1 Active High Ignition Input, 24 Outputs (100 Amps max)	1	318.50	318.50T
SOS ENGCP18002	SOS bluePRINT® Remote Control Panel - 15 Programmable Buttons w/ Knob Control	1	218.08	218.08T

<b>Subtotal</b>
<b>Sales Tax (0.0%)</b>
<b>Total</b>

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Terms	Account #	Project
Net 30		

Item	Description	Qty	Rate	Amount
SOS ENGHNK04	15 ft Harness Kit for Central Controller	1	80.00	80.00T
SOS ENGSA07152	bluePRINT® 400 Series Remote Siren/Switch Module, 10-16v - for two 100 watt speakers, with Nine 10-Amp & Three 20-Amp Relay Outputs	1	336.50	336.50T
SOS ENGLNK004	bluePRINT Link® Module for Chevrolet Express & GMC Savana Vans 2008-2019; Tahoe (2014-2020); Silverado & Sierra Pickup Truck (2014-2019); Suburban & Yukon (2014-2020)	1	246.00	246.00T
SOS ETSS100J	100J Series Composite Speaker w/ Universal Bail Bracket - 100 watt	2	125.00	250.00T
SOS ETSSVBK02	SOS 100N/100J Series Speaker Bracket (only - no drill) for the Chevrolet Silverado 1500 2019.5 - 2020, Bumper Mount/Driver Side	1	10.00	10.00T
SOS ETSSVBK03	SOS 100N/100J Series Speaker Bracket (only - no drill) for the Chevrolet Silverado 1500 2019.5 - 2020, Bumper Mount/Passenger Side	1	10.00	10.00T
SOS ETSKLF100	LF Aftershock Siren System, includes: 100 Watt Speaker, 200 Watt Amplifier and Universal Bracket	1	384.50	384.50T
SOS ETSSLFVNK10	SOS Frame Mount Bracket (no drill) for the Aftershock Low Frequency Speaker for installation on Chevrolet Silverado 1500 SSV (VIN starts with 1G) 2019.5 - 2020, mounts 2 speakers	1	23.00	23.00T
SOS ENGND04101	bluePRINT Remote Node, 4 Active High/Low Inputs, 10 Outputs (50 Amps max)	1	179.00	179.00T

<b>Subtotal</b>
<b>Sales Tax (0.0%)</b>
<b>Total</b>

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Terms	Account #	Project
Net 30		

Item	Description	Qty	Rate	Amount
SOS ENGHNK03	SOS 10 ft Harness Kit for Remote Node	1	65.00	65.00T
GAMBERJ 7170-0784-04	CONSOLE Gamber Johnson 2019+ Chevy Silverado/GMC Sierra 1500 Console with Internal Cup Holder, Side Armrest, Wiring Chase, and Mongoose Motion Attachment Kit	1	812.46	812.46T
GAMBERJ 7160-0250	Gamber Johnson NotePad™ V Universal Computer Cradle	1	256.74	256.74T
KUSSMAUL KM-091-237...	AUTO-CHARGER KUSSMAUL Auto Charge 2000 PLC	1	711.62	711.62T
KUSSMAUL KM-091	Kussmaul Standard Auto-Eject (15 Amps, Red)	1	224.14	224.14T
BEDSLIDE #1500	BED SLIDE-OUT Bedslide #1500 Capacity, 2020 F250	1	1,846.83	1,846.83T
GLU Installation Shop Supplies	INSTALLATION LABOR & SHOP MATERIALS/SUPPLIES Installation Services - Installation Labor & Materials Shop Supplies		2,600.00 384.00	2,600.00 384.00
Vehicle Graphics	GRAPHICS DESIGN & INSTALLATION Vehicle Graphics - Parts & Labor - Custom Design, NFPA Compliant		2,200.00	2,200.00T

<b>Subtotal</b>	\$15,212.35
<b>Sales Tax (0.0%)</b>	\$0.00
<b>Total</b>	\$15,212.35

1. All Sales Estimates are Confidential and Proprietary between Great Lakes Upfitting and its Customers Only.
2. Quoted Pricing is Valid for 30 Days from Date of Quote, Unless Otherwise Agreed.
3. Our Warranty - Great Lakes Upfitting Purchased Parts for the Manufacturers Warranty Term and Workmanship for 5 Years.

Signature \_\_\_\_\_

# PLANNING ANALYSIS

## Cascade Township Fire Department New Fire Station 1

MAY 2020 - CASCADE TOWNSHIP, MICHIGAN



# CREATIVE PEOPLE. STRATEGIC SPACES.

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# Executive Summary

Cascade Charter Township and the Cascade Township Fire Department commissioned Progressive AE and its consultant- Redstone Architects - to study the feasibility of a new fire station to replace the current Fire Station Number 1 at 2865 Thornhills SE. Station Number 1 is one of two stations in the Department. The desire to conduct this study results from a 2019 community engagement effort lead by the Township Board and facilitated by planning professionals of Progressive AE. In that needs assessment and facilities study, Fire Station One was ranked the top priority for investment in existing or new facilities.

Three sites were considered, including the current Thornhill's site and two alternate sites. Based on the Thornhills site, a space needs assessment was completed to identify the needs of the Cascade Township Fire Department. A concept layout, based on the needs assessment, was developed to demonstrate adjacencies

As part of the site planning analysis exercise, the pros and cons of each location were considered against the planning priorities of the Fire Department and the Township's long-range master plan. (See appendix for alternate site options and supporting analysis information.) The Thornhill's location was ultimately selected as best meeting the priorities.

The building concept plan was applied to the Thornhills site resulting in three site concept options. Again, the pros and cons of each option were identified by the team and evaluated against the planning priorities, resulting in one of the three options removed from consideration. (See appendix for third site option and supporting analysis information.)

Our report includes the final two options for the Thornhill's location both of which are feasible options to replace the existing Fire Station Number 1.

In addition to the Thornhills site, an outbuilding on the site of Fire Station Number 2 at 2990 Buttrick is included in this report. (See appendix for the outbuilding site and building planning information.) The outbuilding is an outcome of programming, site analysis, ordinance requirements, and construction phasing necessary to keep the apparatus from Station One in operation.

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## PLANNING PRIORITIES

### Site

- Accommodate turning radius of apparatus | site approach and on-site circulation
- Separate apparatus and public circulation
- Provide for drive-through Apparatus Bays
- Provide for a visiting apparatus passing lane if possible (training)
- Conform to Township Planning and Zoning Requirements.

### Building

- Improve health protection of firefighters in all aspects of design
- Reduce risk of exposure to carcinogens, pathogens, and viruses by introducing hot-warm & cold zones
- Provide decontamination areas for safely cleaning equipment
- Provide separation of on duty firefighters and Administrative Staff.
- Provide separate sleep rooms and single-occupancy bathroom/shower facilities for on-duty firefighters

# Buildings and Services Study (2019, excerpted)

## FIRE STATION 1

Operating within a facility that is too small and not appropriately formatted to safely deliver fire services, the station needs to be disconnected from other facilities in order to have the building area to accommodate existing and future operations in a safe working manner and in a facility that is in good physical health.

Fire Station 1 needs additional building area to provide a safe environment for firefighters, internal operations, and the community.

### Issues:

- The department has outgrown a facility that currently does not meet certain building codes.
- A safe separation does not exist between the visitor entry and the internal operational area of the fire station.
- Vehicular and pedestrian traffic on the site creates conflict and is not safe.
- Fire staff living quarters are undersized and create concerns about safe separation between genders and circulation through the space during emergencies.
- Vehicle apparatus bays are too low for the trucks and equipment and don't accommodate all equipment, requiring extra time to keep outdoor vehicles clear and ready for emergency response.
- Mechanical systems and building envelope are not adequate.

### Opportunities:

- Relocate the connected Township Hall to provide space for the Fire Station to grow appropriately on the current site. This would make use of the property and potentially the building shell the township already owns, but this location is not as visible to the community from major roadways.
- Relocate the Fire Station to an alternate location between I-96 and the Thornapple River. This would maintain the station's current coverage area but provide the opportunity to increase visibility and access.

## BUILDING PROFILE

- Owned by Cascade Township
- Year of Original Construction: 1970; renovated 1980 & 2005
- Site Acreage: 2.8 acres
- Building Square Feet: 5,396 gross square feet
- Parking: 70 spaces, shared with township hall

### OVERALL CONDITION:



### BUILDING SHELL:

- The building lacks a fire protection system
- Metal roof and siding need replacement
- Concrete masonry walls leak
- Exterior doors should be replaced with insulated doors with contemporary safety features

### BUILDING INTERIOR:

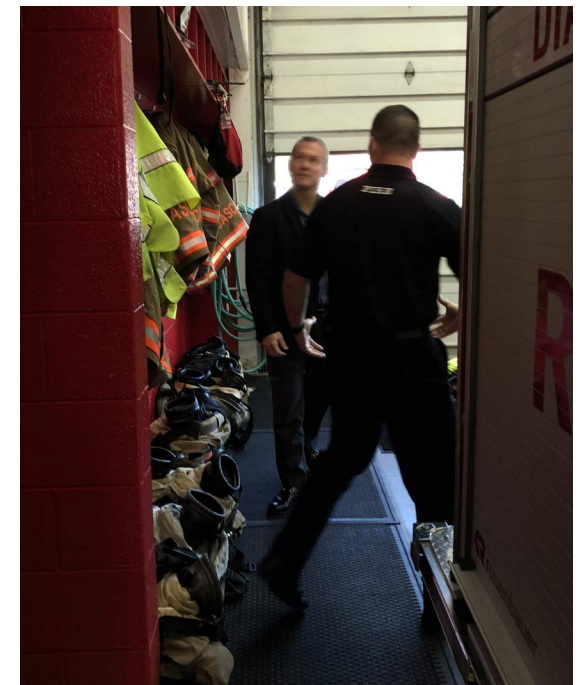
- Interior finishes are reaching the end of their useful life and should be planned for replacement
- Tight interior spaces limit the ability for firefighters to circulate safely during emergency responses
- No safe separation exists between public entry and internal operations areas

### BUILDING SYSTEMS:

- Provide a new generator with instant switch over during outages
- Upgrade and replace emergency lighting
- Replace aging HVAC units and provide additional perimeter heating for temperature control and comfort

### SITE:

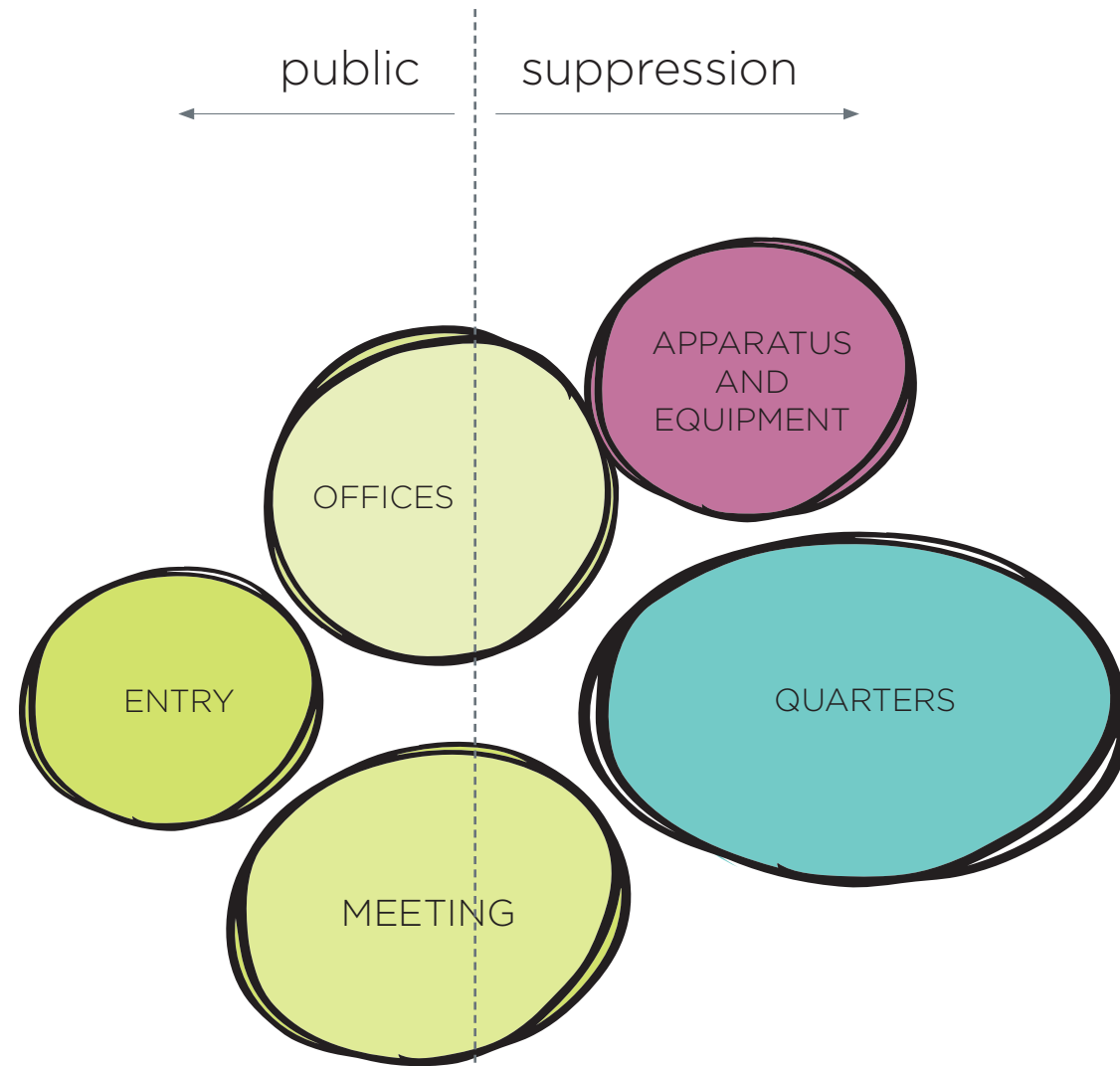
- Insufficient space for safe operation of fire vehicles
- A majority of the parking lot needs to be replaced
- Barrier free parking spaces may not meet current flat grading requirements
- Update and add site lighting
- A storage shed is needed for maintenance equipment to free up space within the apparatus bay (lawn mower, etc)



# Program

## PROJECT SPACE REQUIREMENTS

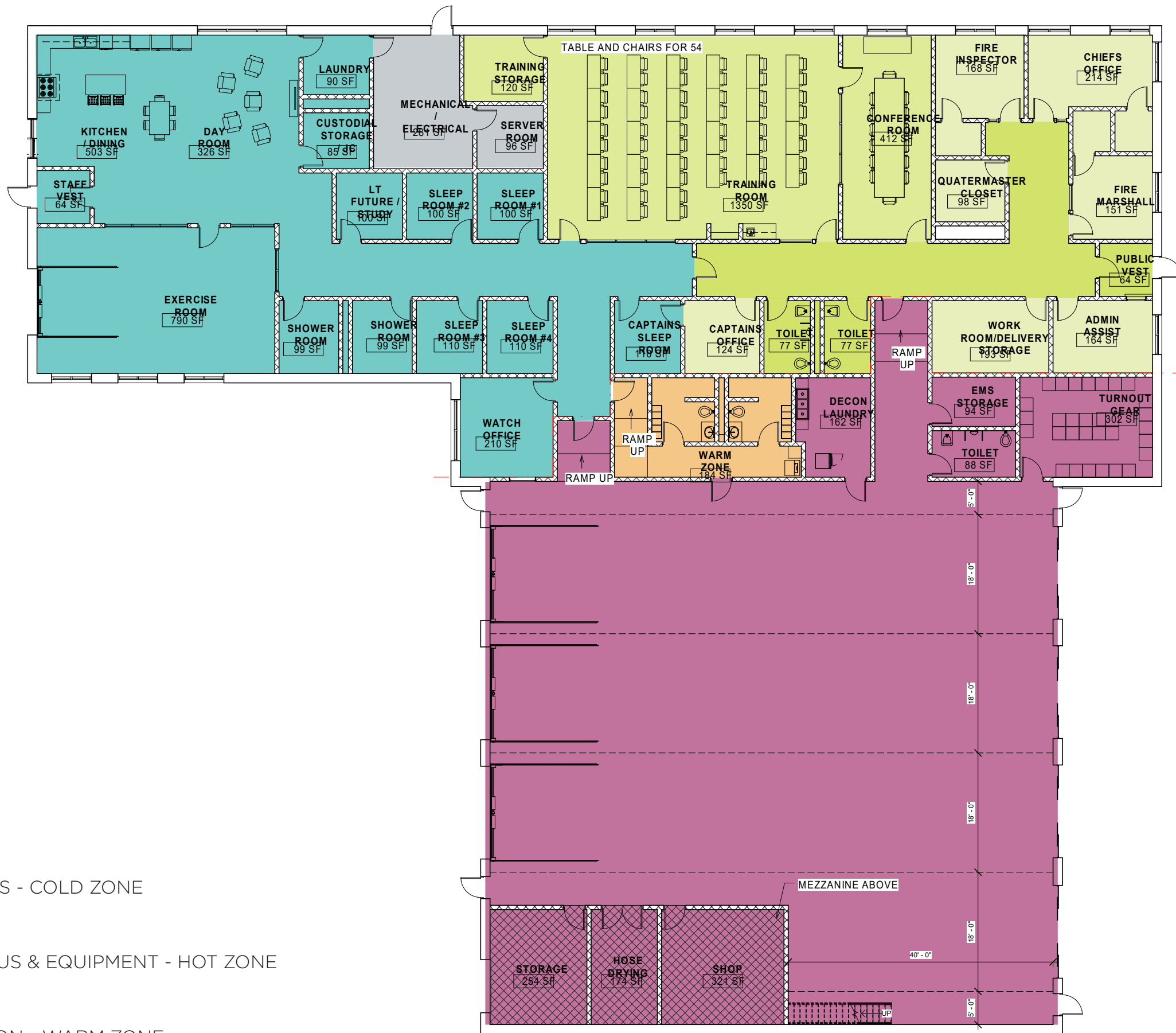
The proposed program is derived from an in-depth analysis of Cascade Township Fire Department Station 1's current conditions and strategic planning for the ideal future state work environment. Quantities and square footages are future thinking recommendations and projections.



### ADJACENCY DIAGRAM

Adjacency Diagrams use scaled bubbles to illustrate scale and relationships between spaces. Spaces that are touching have a critical relationship. The diagram does not indicate a floor plan.

Building Area Calculations	Current Staff	Planned Staff	Area Required
1. Public Spaces	0	0	2435
2. Fire Administration	4	5	2059
3. Suppression Operations	3	3	581
4. Staff Commons	12	12	4038
5. Apparatus Bay	0	0	6331
6. Maintenance and Support	0	0	360
7. Building Support Area	0	0	480
<b>Total</b>	<b>19</b>	<b>20</b>	
<b>Subtotal</b>			<b>16284</b>
10% Gross-Up Factor (Common circulation, structure, shafts, etc.) (Use additional 5% Gross-Up Factor for Renovation)			1628
<b>Total Main Building Area</b>			<b>17912</b>
			with Mezzanine
			19620
CONDITIONED STORAGE BUILDING: NEEDS TO BE DETERMINED; SEPARATE FROM MAIN BUILDING			70' x 45'
Lawn Equipment:			
	2 Blowers		
	Standing Lawn Mower		
	Trimmers		
	Plow (possible on pallet rack)		
	Truck spreader		
Event materials:			
	Room inside storage building with shelving to keep event materials clean		
Generator			
	Generator on double axel trailer		
Search Training Materials			
	Items that can be stored on pallet racks		
Seasonal Storage-Salt			
Reserve Truck 35' long (Engine 5)			
	SUV		
	SUV		
	Plow Truck with plow and spreader attached approx. 30'		
	Brush Truck and Boat for seasonal storage		
	Extra Hoses		



- ENTRY
- OFFICES
- MEETING
- QUARTERS - COLD ZONE
- APPARATUS & EQUIPMENT - HOT ZONE
- TRANSITION - WARM ZONE

# CONCEPT PLAN



## Site Analysis

The purpose and intent of the site analysis is to encourage and ensure the proper use and preservation of land and natural resources within Cascade Charter Township with their character and adaptability. The analysis is also intended to support and promote the health, safety and welfare of the individuals living within the Township and those who visit it.

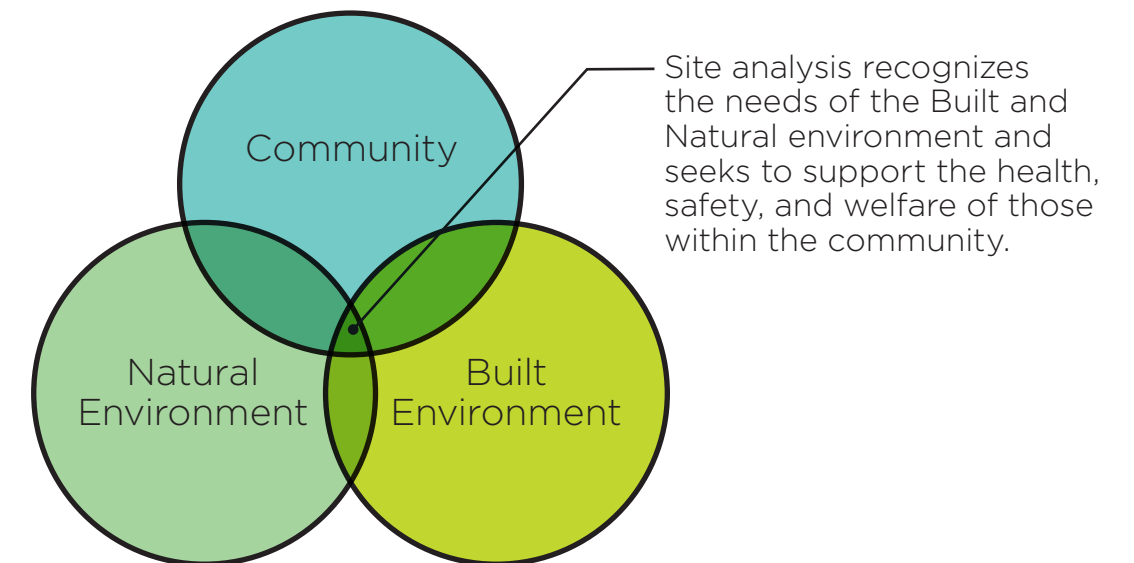
Multiple sites within the geographic response area we considered reviewed for feasibility. Of those, three were selected for analysis to identify which location is best suited to support the new fire station. Prior to starting that analysis all ordinance provisions were identified, understood and documented. Several of those provisions included the following:

- Front, rear and side yard setbacks
- Off street parking areas and space requirements (staff, public, and barrier-free)
- Land use zoning classification
- Zoning district lot area, and building placement standards
- Bufferyard and required landscaping
- Ingress and egress provisions

Next an inventory of all existing natural and built features on the three sites as well as those surrounding them were documented. Those features were studied to identify any opportunities and constraints they may have on influencing the placement of the building and its associated support facilities (i.e., staff parking areas, public parking areas, mechanical equipment areas, outbuildings, outdoor gathering areas, etc.).

The outcome of the site analysis are the site diagrams as well as a list of pros and cons for a specific location. The intent of the site diagrams is to provide the Township with a visual understanding of the spatial requirements for the new station and its associated support facilities. It is also to understand the physical relationship of the various site elements.

The intent of the pros and cons is to provide the Township the necessary information to make an informed decision on which location will best serve the community as well as support the individuals who will be working in the new station.



THORNHILLS AVENUE



View from Thornhills Avenue



Key Plan



Aerial Perspective looking NW



Aerial Perspective looking SW

**EXISTING CONDITIONS**





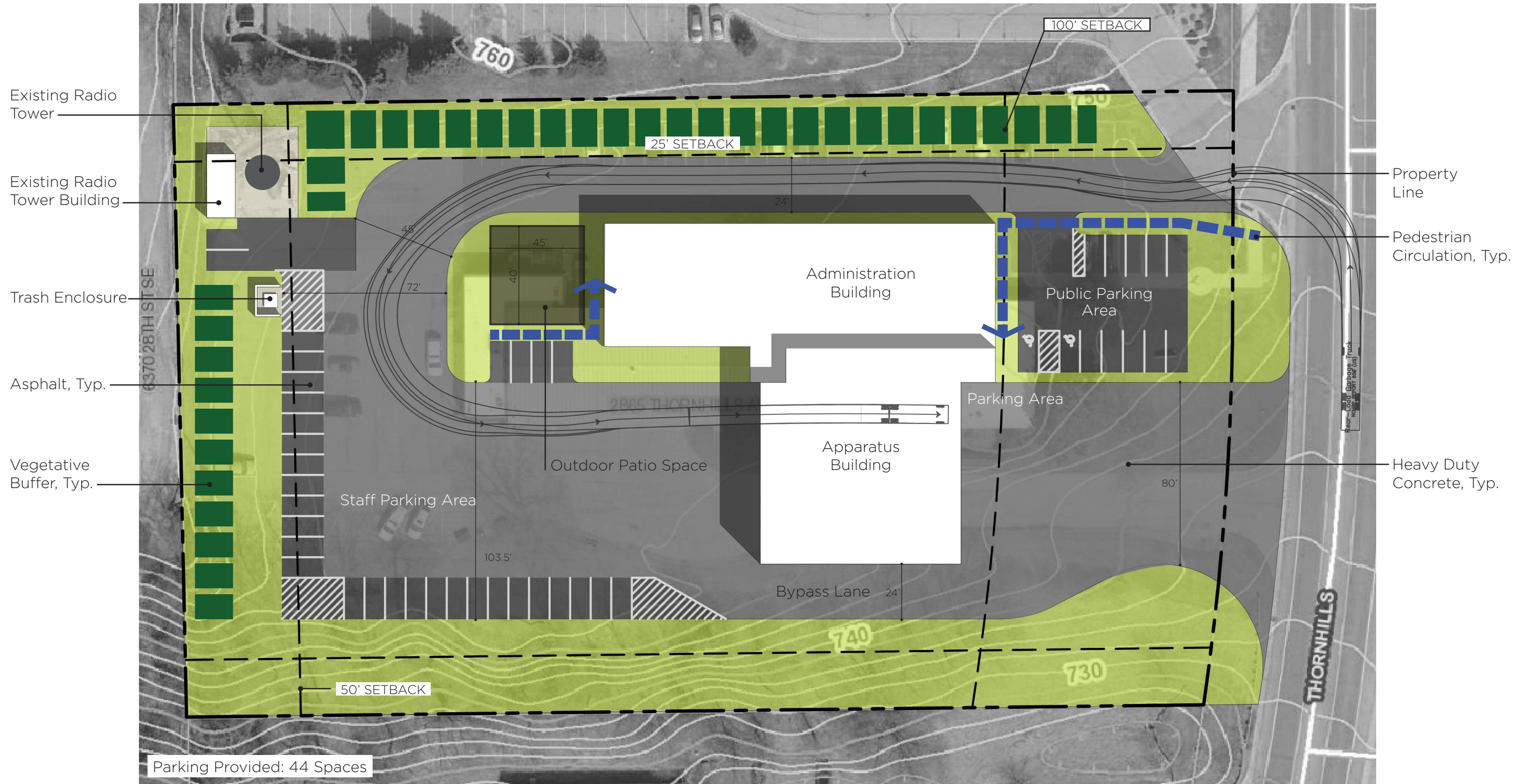
**PROS:**

- The existing fire station is currently located on this parcel
- The parcel is in close proximity to 28th Street
- The parcel is large enough to support the stations program requirements
- Land use for the parcel complements surrounding land uses
- Parcel does not have any unique requirements or restrictions
- The parcel is large enough to support the separation of public and staff parking and navigate an apparatus vehicle without major restrictions
- Quick access to main response routes (North, South, East, West, Highway)
- Access to traffic light at 28th Street

**CONS:**

- The existing radio antenna will not allow for another support building on the parcel without a variance
- Topography at the southern edge of the parcel poses challenges for construction
- Temporary operations shift during construction

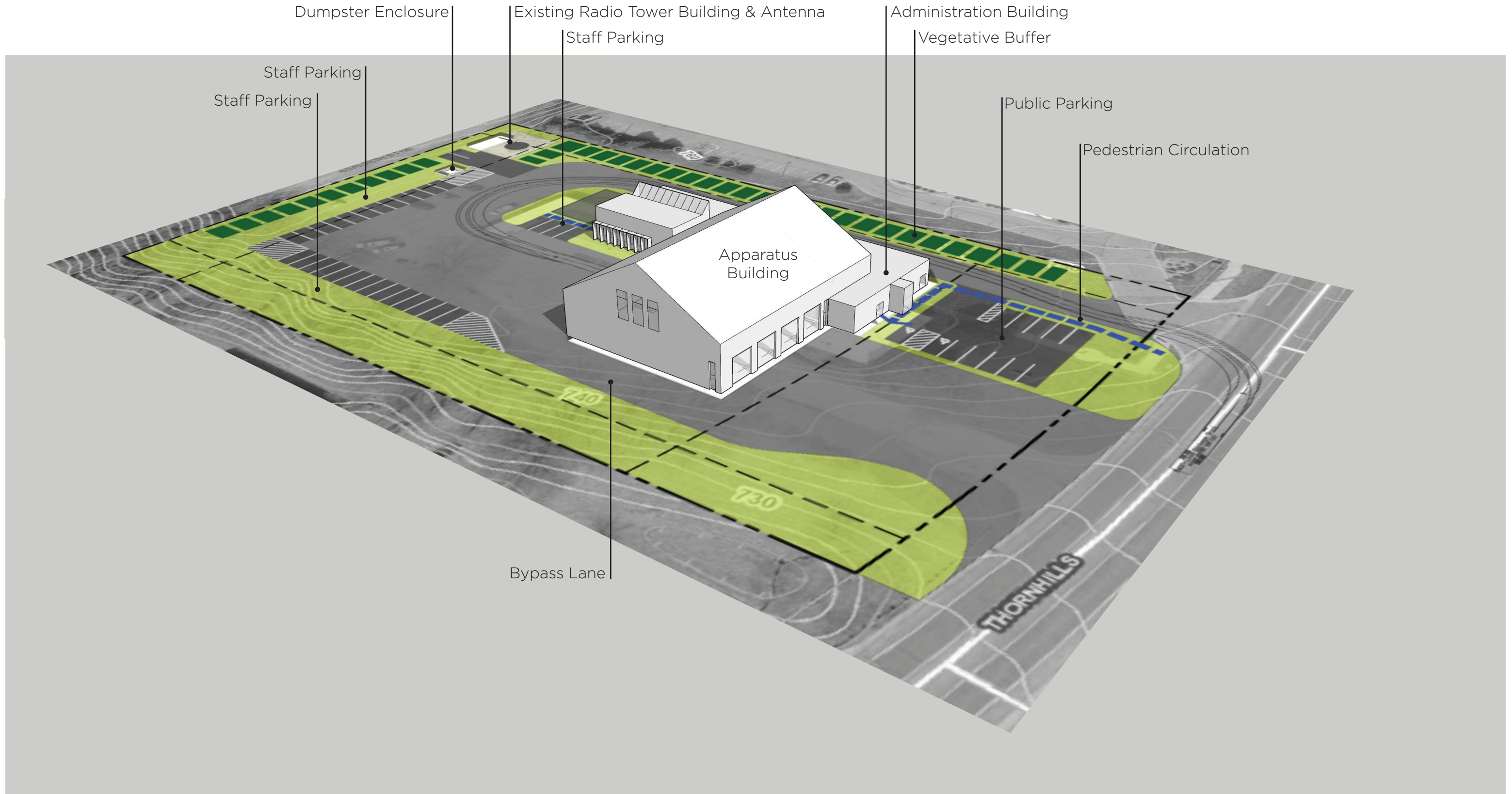
**PROS & CONS**



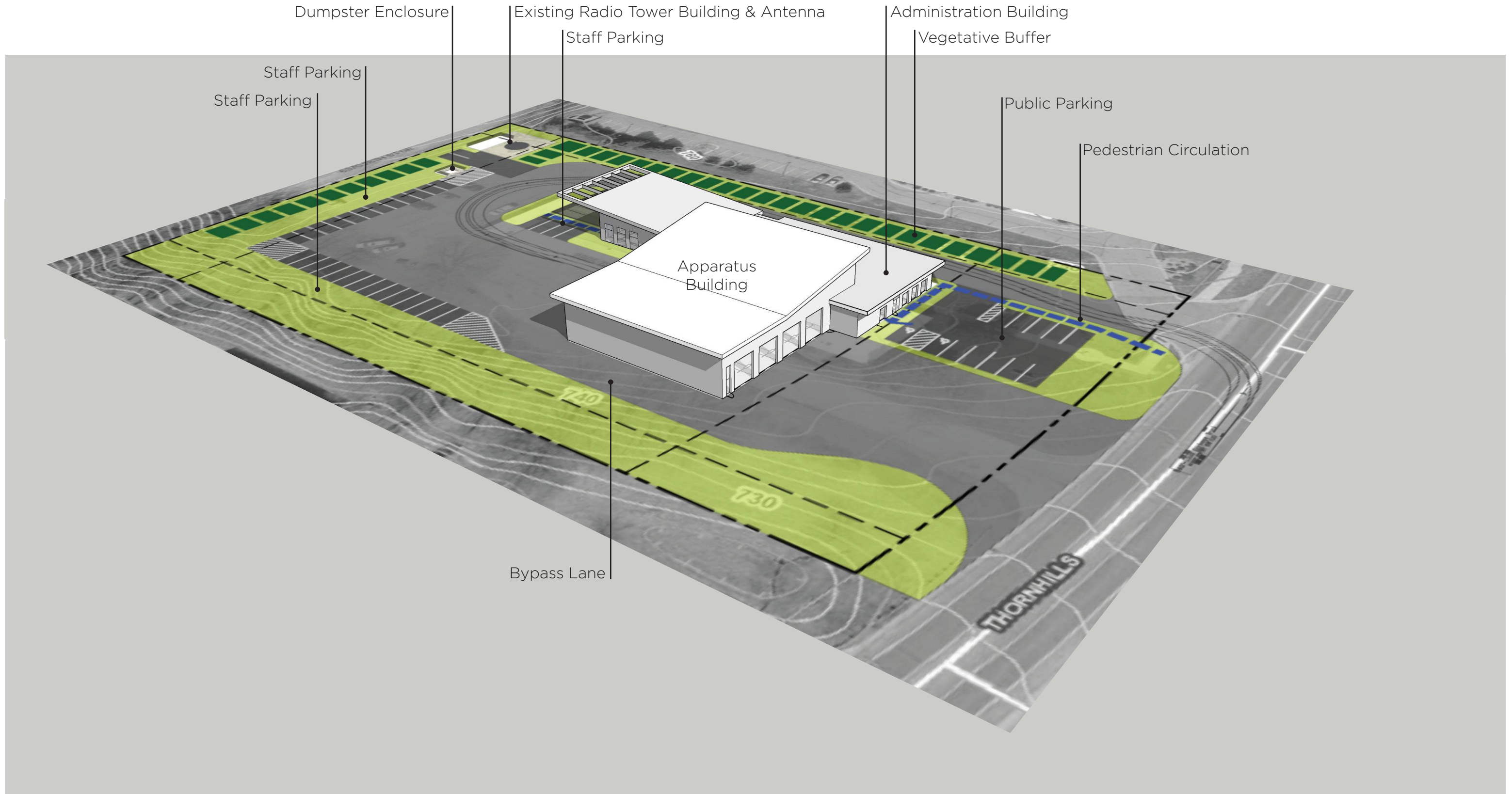
Parking Provided: 44 Spaces



# CONCEPT A

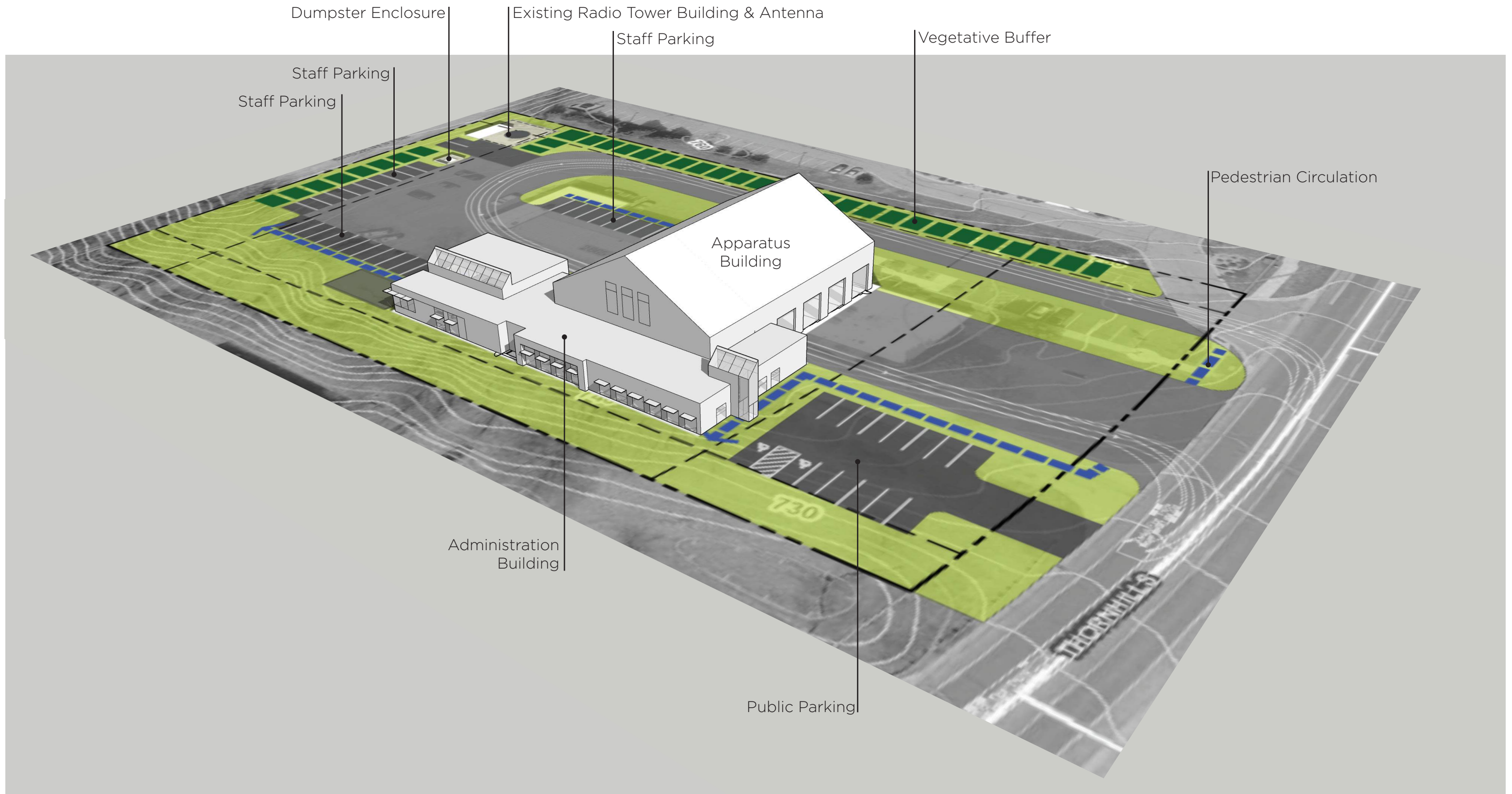


**CONCEPT A GABLE MASSING**

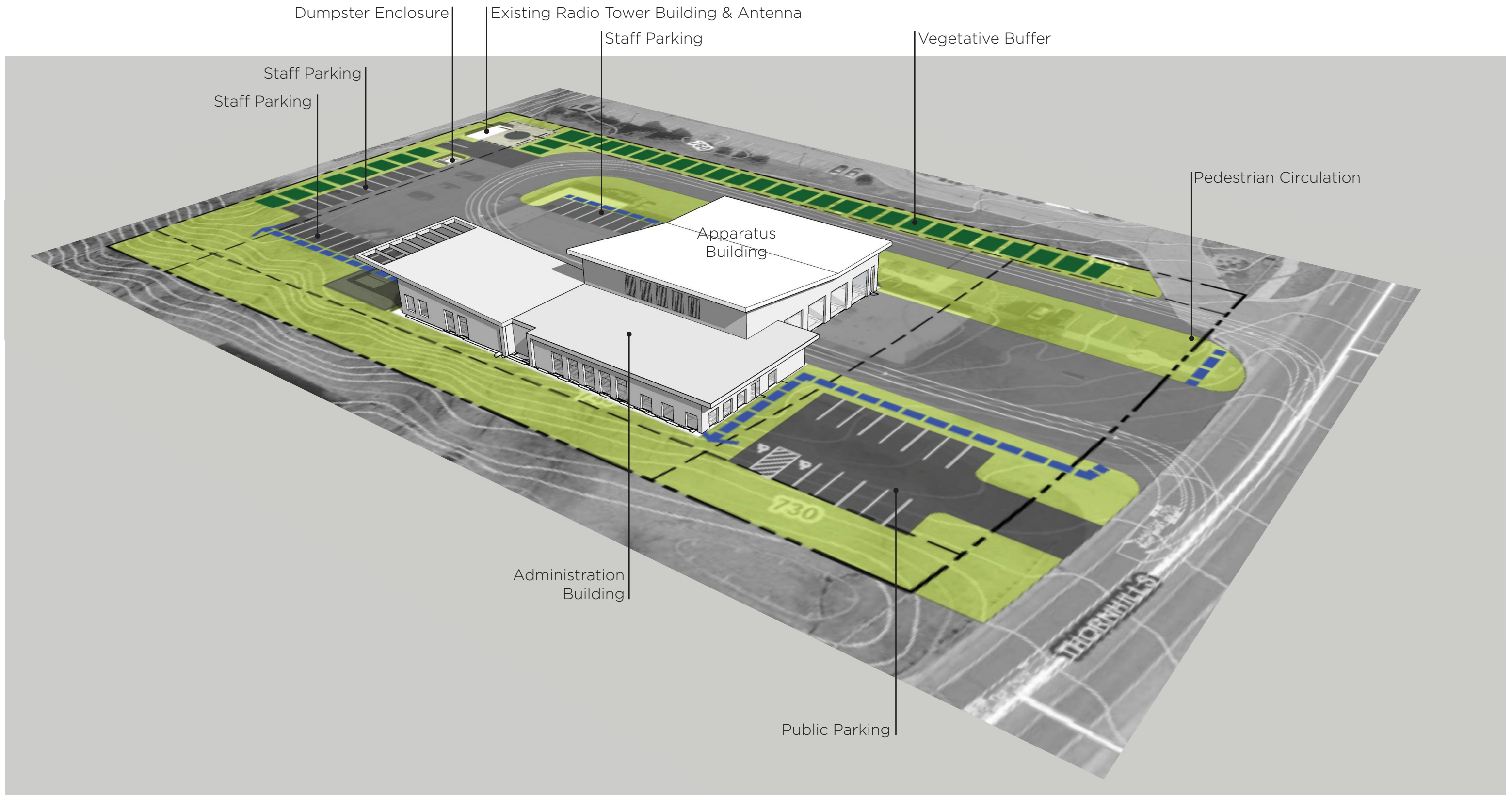


**CONCEPT A LOW SLOPE MASSING**

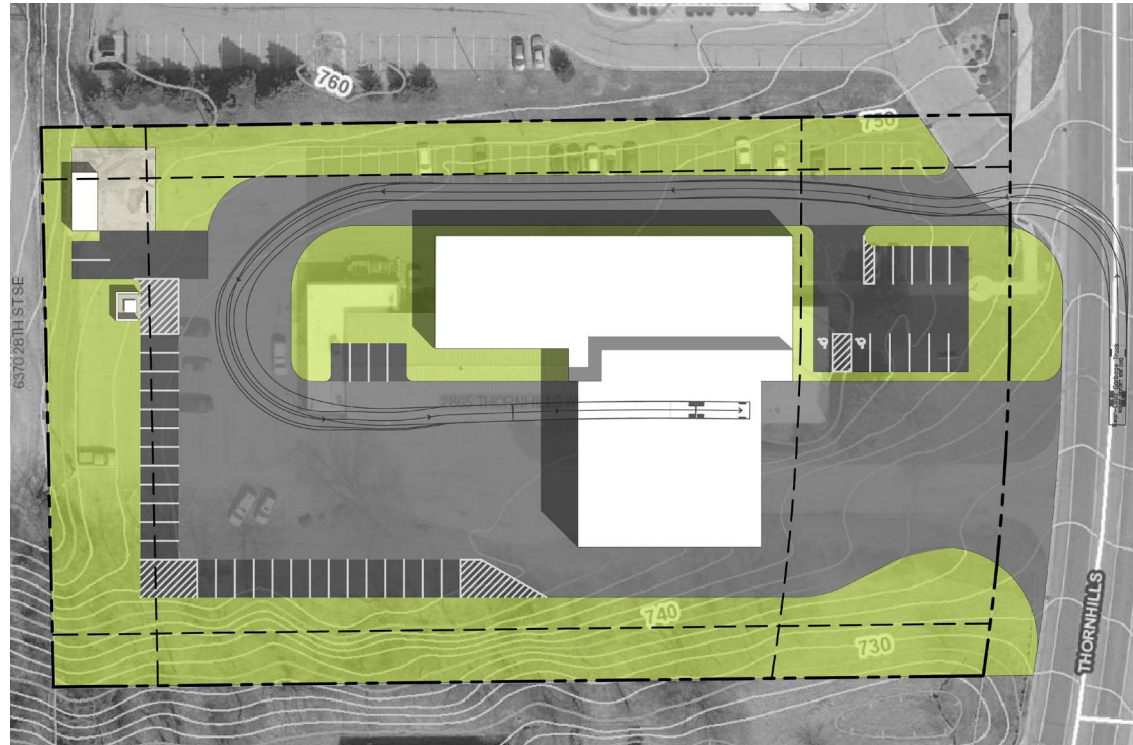




**CONCEPT B GABLE MASSING**



**CONCEPT B LOW SLOPE MASSING**



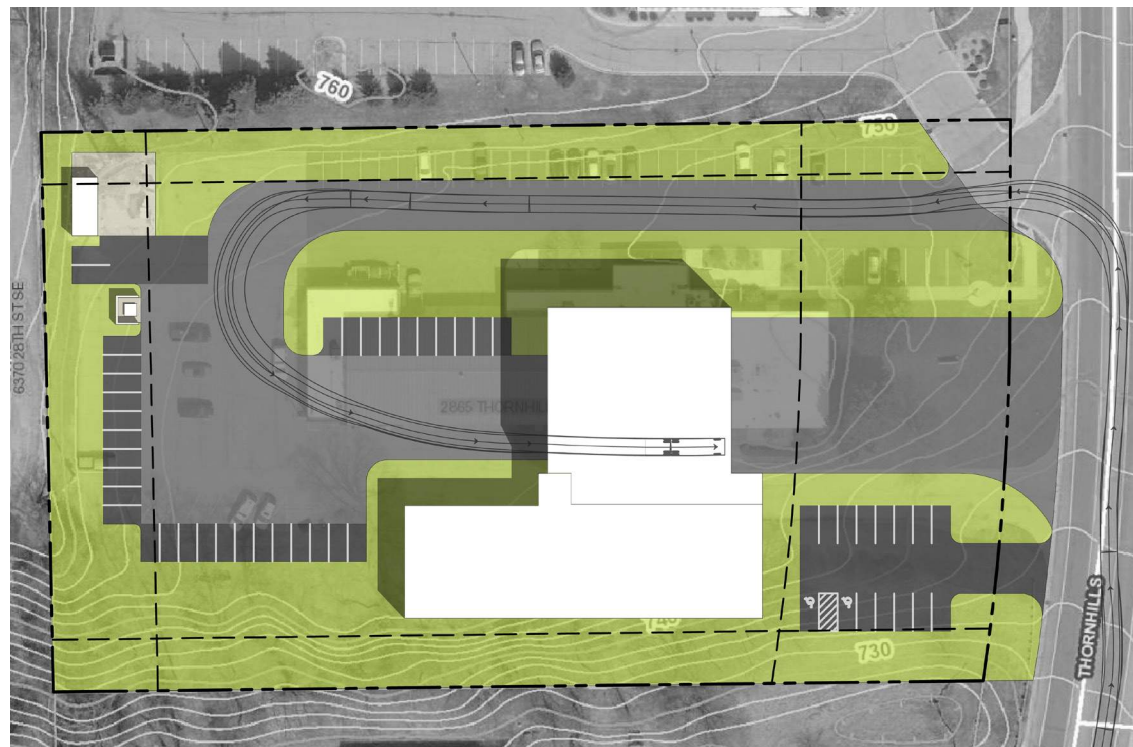
CONCEPT A

**PROS:**

- Meets parking program requirements
- Includes separate public parking
- Provides separate (apparatus & public) curb cuts
- Good apparatus turning radius
- Returning apparatus turn towards driver's side
- Includes bypass drive for emergencies
- Two spaces available for visiting apparatus
- Minimum site work on the wooded slope on south
- No variance required

**CONS:**

- Overflow parking for fire department training on rear apron
- Administrative parking is in the back for overflow public parking
- Administration wing with living quarters engages with the backside of commercial development on north



CONCEPT B

**PROS:**

- Meets parking program requirements
- Includes separate public parking
- Good apparatus turning radius
- Returning apparatus turn towards driver's side
- Provides separate (apparatus & public) curb cut
- Includes landscape screen on the north
- Administration wing with living quarters engages with the wooded slope

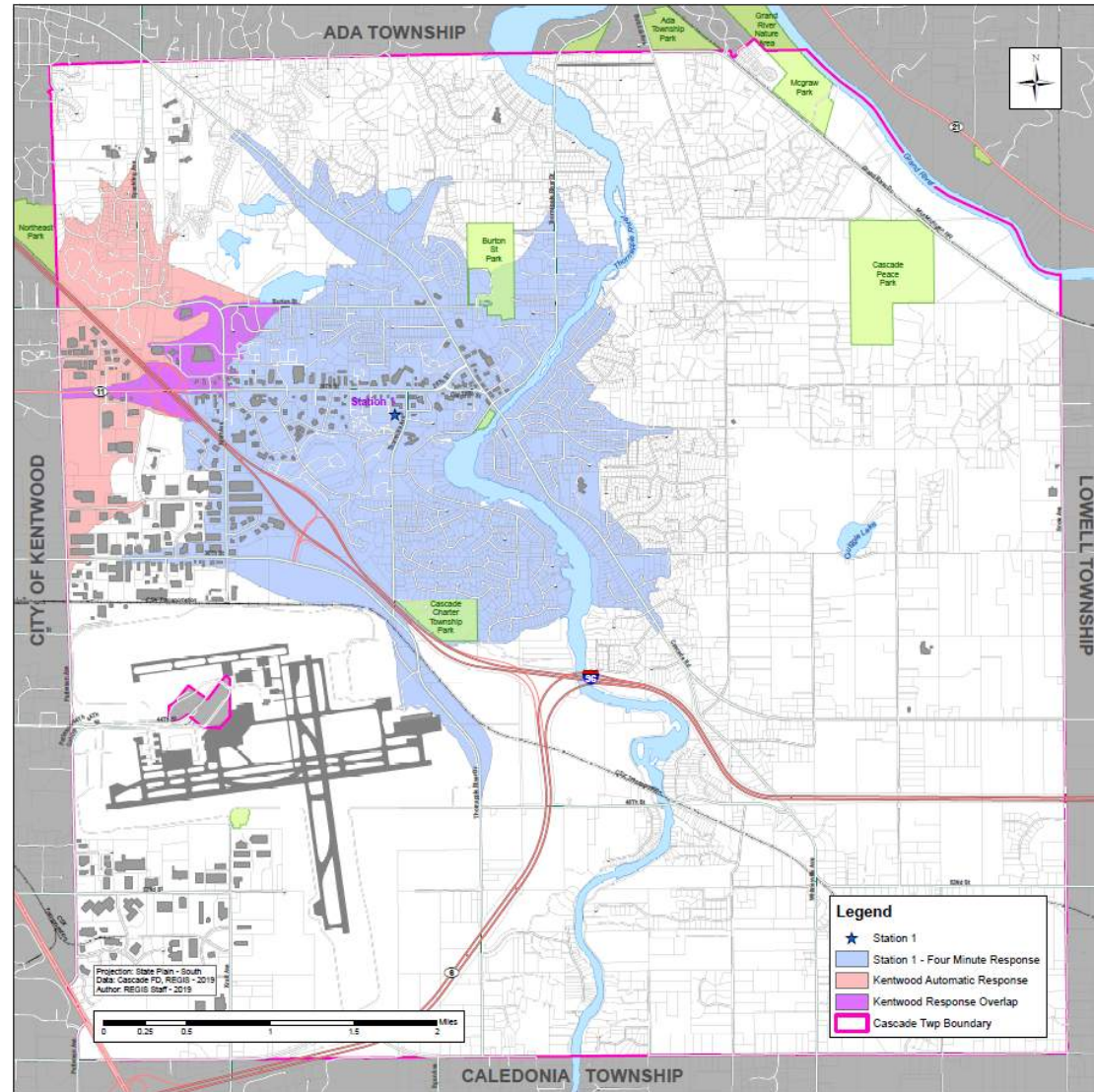
**CONS:**

- No by-pass drive for emergencies
- One space available for visiting apparatus
- Overflow parking for fire department training on rear apron
- Administrative parking is in the back for overflow public parking
- Added site work with the wooded slope on south
- Variance required for third curb cut

**PROS & CONS**

## THORNHILLS AVENUE

Current Fire Station 1 Location (Recommended)



This map shows our current location at 2865 Thornhills, along with highlighted blue area representing a 4 minute response. Also note that it shows Kentwood Fire department's 4 minute response capability (pink) into our area as well. Kentwood and Cascade have established an automatic mutual aid agreement in place. We feel this is our most efficient location for fire station 1 based on the following criteria:

- Easy access to North/South/East/West response routes
- Access 28<sup>th</sup> street safely using a traffic light
- Easy access to the highway
- Ideal lot size
- Publicly known location/visibility
- Strategically located to maximize mutual aid coverage as well as support for fire station 2
- Township owned, zoned for a fire station, no variances needed
- Appropriate location for future township growth and support of a possible station 3
- Adequate coverage for both residential and commercial properties in station 1 response area

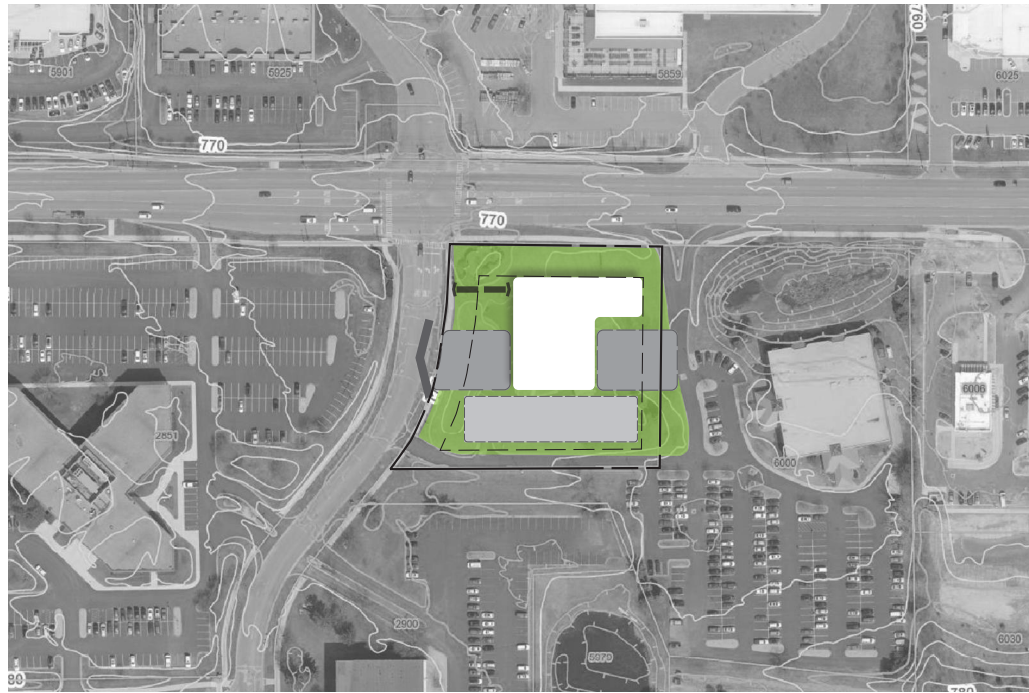


# ALTERNATE SITE 1



## ALTERNATE SITE 2

## ALTERNATE SITES



ALTERNATE SITE 1

### PROS:

- The parcel is adjacent to and has easy access to 28th Street
- Access to traffic light
- No interruptions to operations during construction

### CONS:

- The size of the parcel is small and will not support all of the stations program requirements
- Apparatus vehicles returning to the station will have difficulty navigating the right turn off of 28th Street
- The front apparatus apron is located in close proximity to a major intersection at 28th Street and an internal roadway along Charlevoix Drive
- The rear apparatus apron is located on an internal roadway that supports public vehicular traffic
- The site contains a large gateway feature at the corner of 28th Street and Charlevoix Drive limiting buildable area
- The parcel is part of the Centennial Park Planned Unit Development and has unique requirements and restrictions
- The parcel is not large enough to support the separation of public and staff parking
- Parcel not owned by Township; acquisition cost



ALTERNATE SITE 2

### PROS:

- The parcel is large enough to support the fire stations program requirements
- The parcel is large enough to support the separation of public and staff parking and navigate an apparatus vehicle without major restrictions
- No interruptions to operations during construction

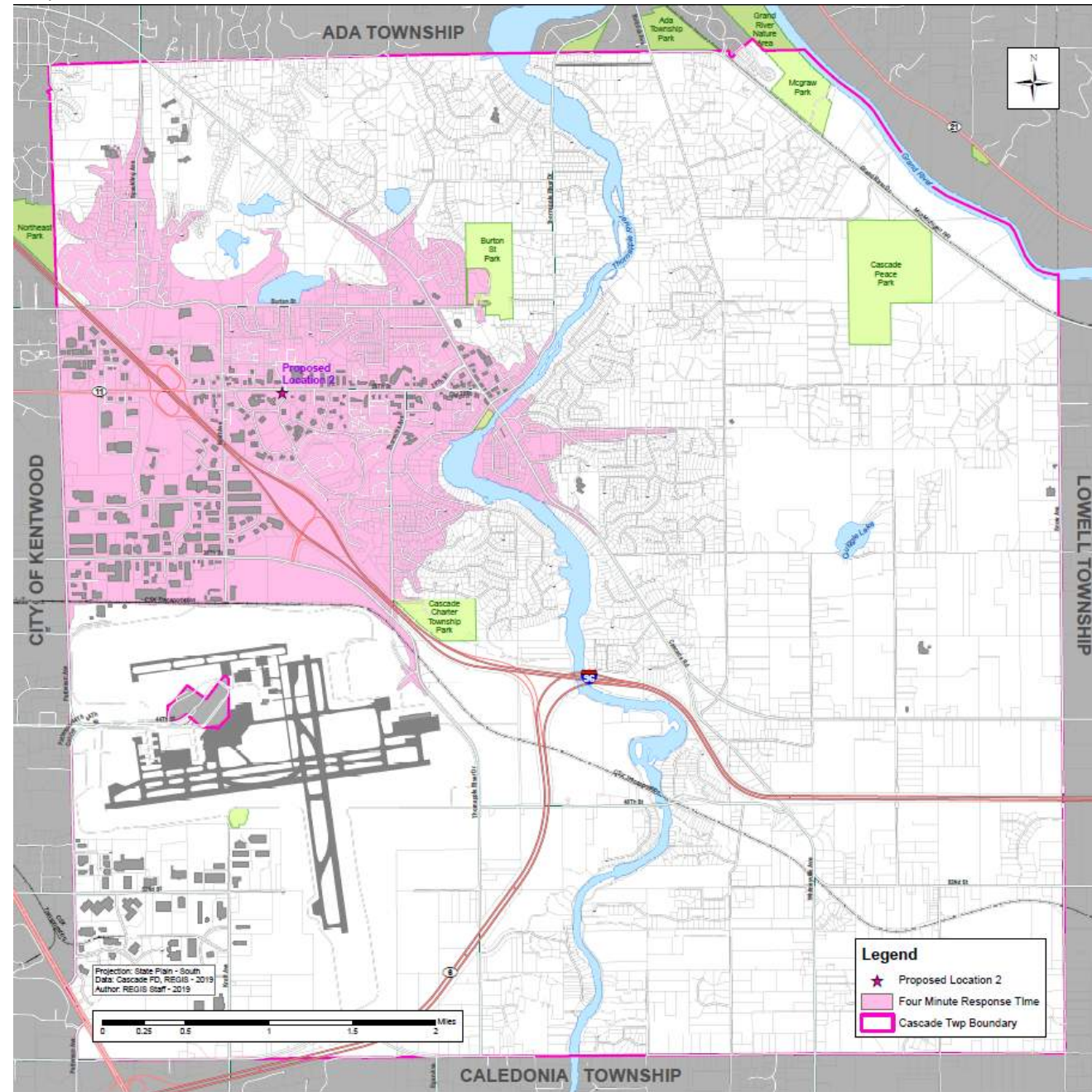
### CONS:

- The parcel is located adjacent to a Senior Living Facility
- The use of the parcel for a fire station does not conform with the Centennial Park Planned Unit Development land use requirements
- Boulevard treatment of Charlevoix Drive poses navigability challenges for apparatus vehicles
- The parcel is part of the Centennial Park Planned Unit Development and has unique requirements and restrictions
- Parcel is located more than a 1/4 of a mile from 28th Street
- Front apparatus apron is located in close proximity to a major intersection along Charlevoix Drive
- Topography at the western half of the parcel poses challenges for construction
- Speed limit (25 mph) in area can slow emergency response
- Parcel not owned by Township; acquisition cost

## PROS & CONS

## ALTERNATE SITES

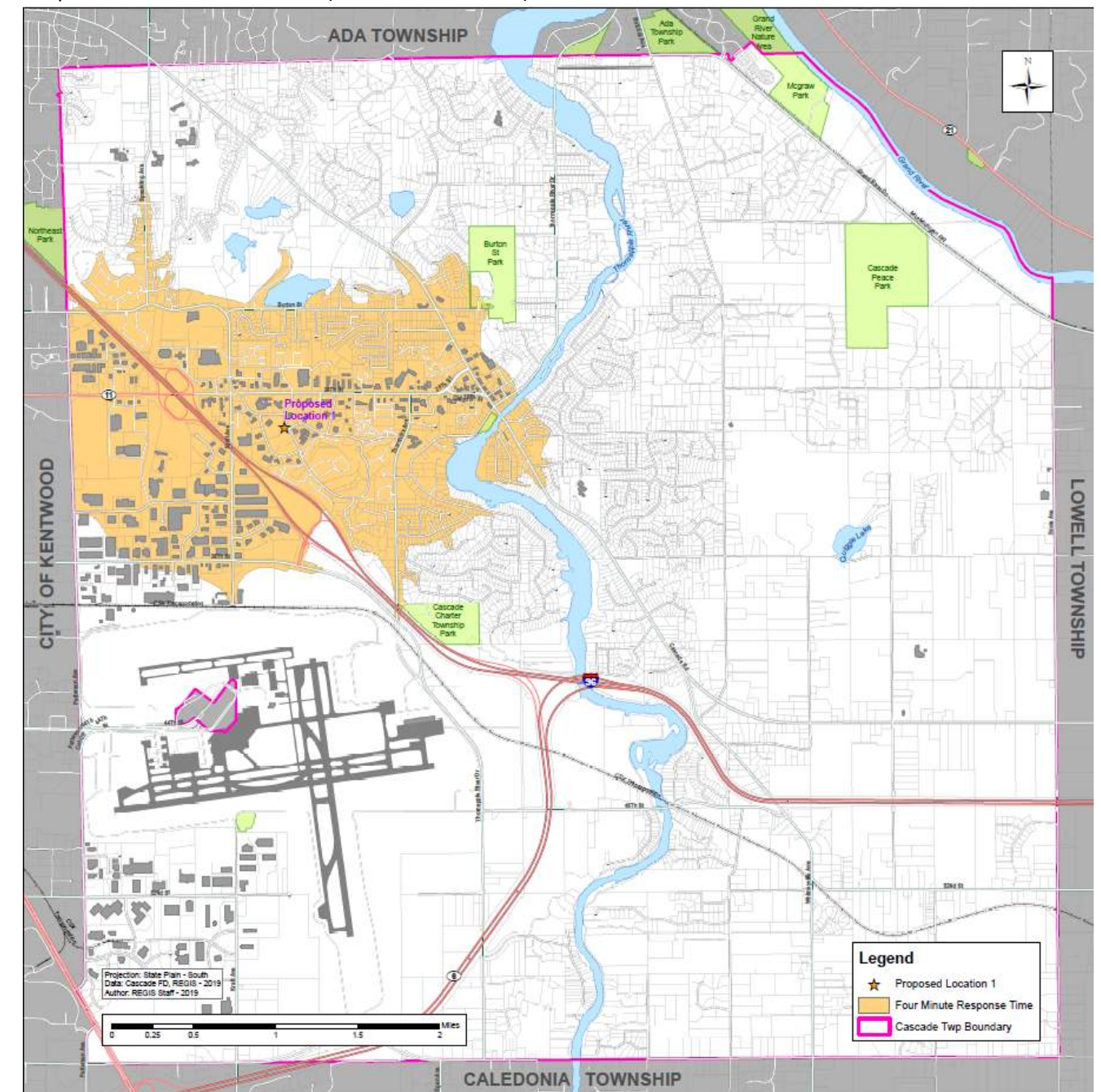
Proposed Alternate Location 1 (Not Recommended)



This map shows a possible alternate location on 28<sup>th</sup> St, along with highlighted pink area representing a 4-minute response area. This location is not recommended based on the following criteria:

- Lot size too small for needed operations
- Location negates Kentwood mutual aid benefits
- Location vacates 4-minute response coverage to critical residential neighborhoods
- Acquisition cost/zoning/variances
- Delayed response to support station 2 district
- Not Ideal for future township growth, possible station 3 support

Proposed Alternate Location 2 (Not Recommended)



This map shows a possible alternate location on Charlevoix Dr, along with highlighted yellow area representing a 4-minute response area. This location is not recommended based on the following criteria:

- Charlevoix Dr is a residential speed road with a boulevard (delayed response)
- Location negates Kentwood mutual aid benefits
- Large Acquisition cost/zoning/variances
- Location vacates 4-minute response coverage to critical residential neighborhoods
- Delayed response to support station 2 district
- Not Ideal for future township growth, possible station 3 support

## FIRE STATION #1 CONSTRUCTION DISPLACEMENT OPTIONS

1. Consolidate station 1 operations at a leased facility on Air Cargo Dr. during construction. (Recommended)

PROS: Simple  
Cost Effective  
Emergency Response in station 1's district  
Facility meets minimum space and functional needs  
Free up space at station 2  
Apparatus and firefighters safe/warm/dry

CONS: Lease cost  
Some operations would still need to be displaced to station 2  
Facility is small, needs cosmetic work, not ideal for public visitation/meetings



2. Consolidate all operations at station 2. (Not Recommended)

PROS: Simple  
Cost effective  
Apparatus and firefighters safe/warm/dry

CONS: Too far away/response time from bulk of calls in 1's district  
Not enough beds/desks/admin/space  
Public expectation of service in 1's area  
Over-burden Kentwood mutual aid

3. Contract company to erect/set up temporary fire station. (Not Recommended)

PROS: Capable fire station during transition  
Fire suppression capability/expectations met in 1's district  
Apparatus and firefighters safe/warm/dry  
Free up space at station 2

CONS: Cost - Million+  
Available lot?  
Planning/zoning/neighbor considerations  
Still need to run utilities/etc.



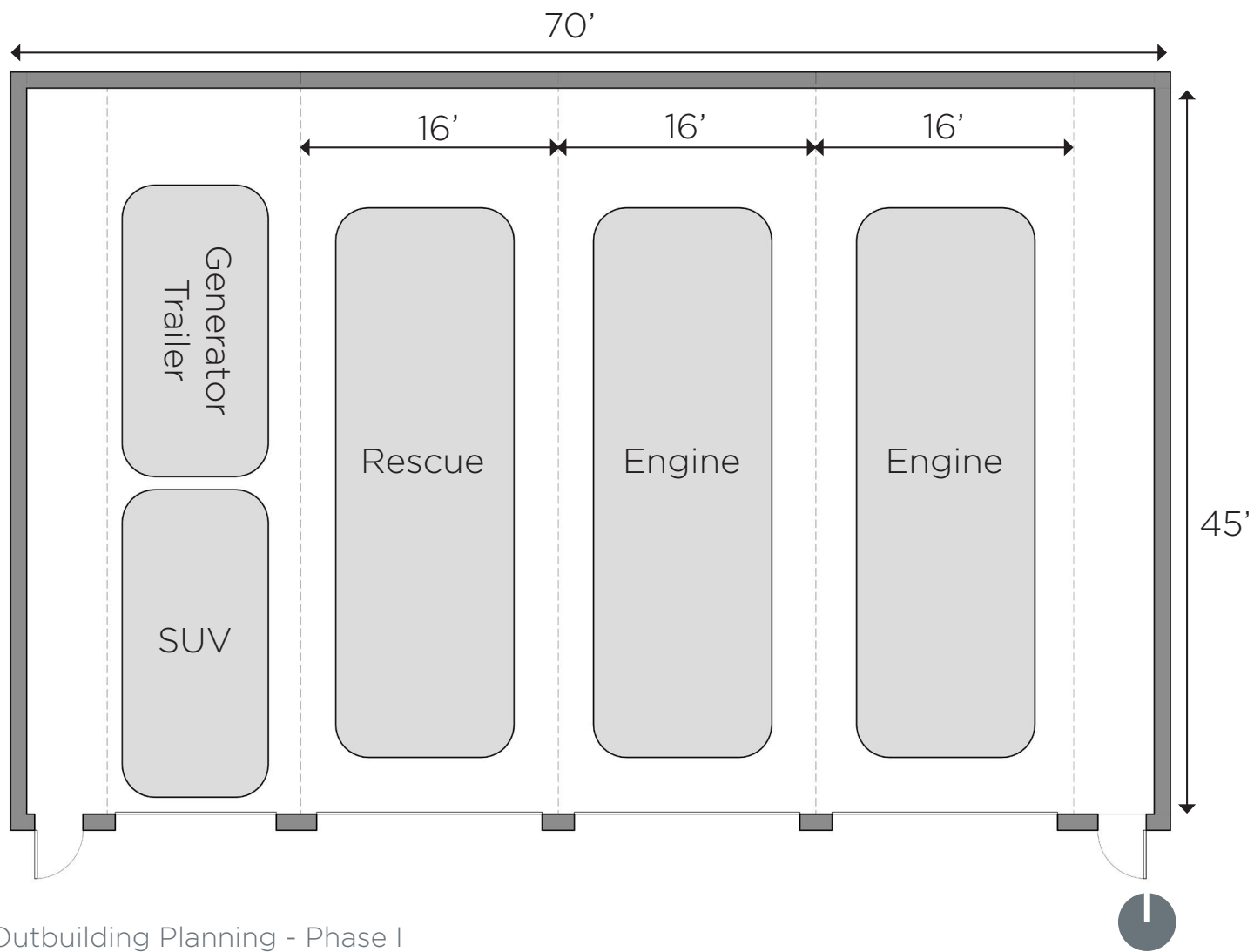
# Appendix

Includes:

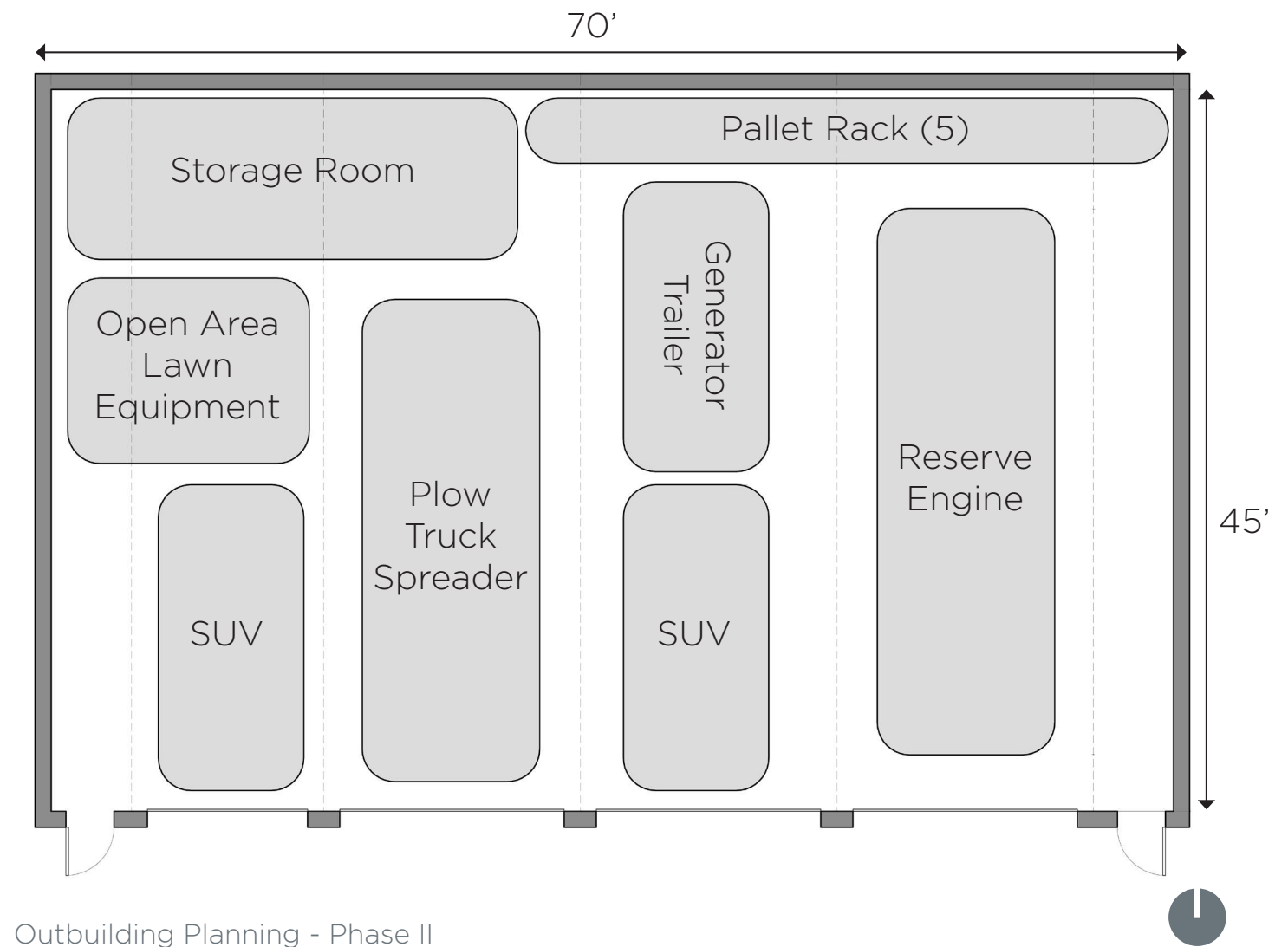
- Outbuilding
- Site Analysis Concept C
- Needs Assessment and Programming Detail

APPENDIX - OUTBUILDING

An outbuilding was identified to meet all the needs of Fire Station Number 1, however the ordinance did not allow for the scale of building required on the Thornhill's site based on current zoning designations. With further review, the outbuilding was located at Fire Station Number 2 where it met ordinance requirements. In addition, by locating the building at the Buttrick site, the outbuilding can be used to temporarily house the apparatus from Fire Stations Number 1 while the new building is under construction. Therefore, phase one would be the outbuilding on Buttrick, and phase two would be the new building on Thornhills.



Outbuilding Planning - Phase I

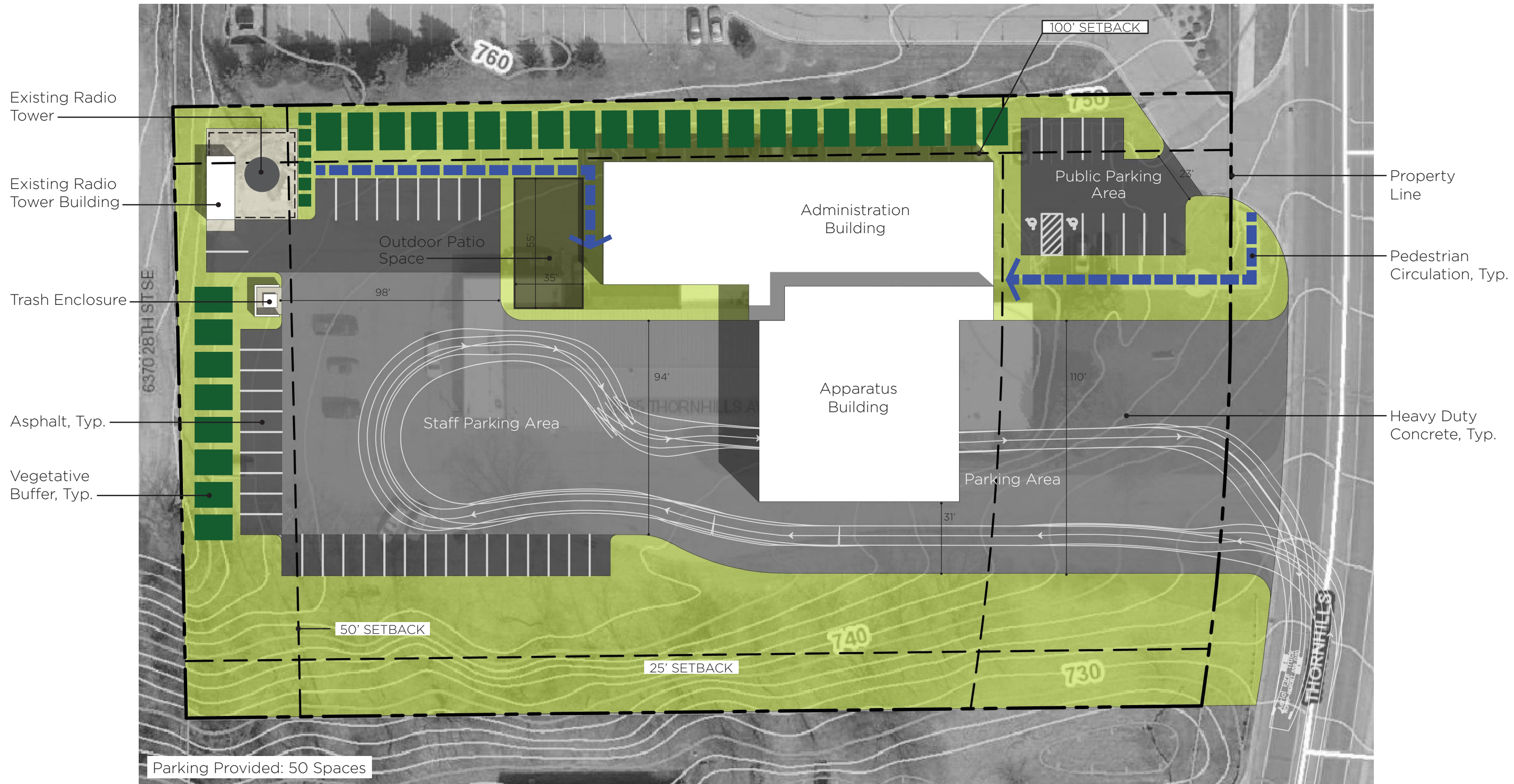


Outbuilding Planning - Phase II

**2990 BUTTRICK AVE. STATION #2**

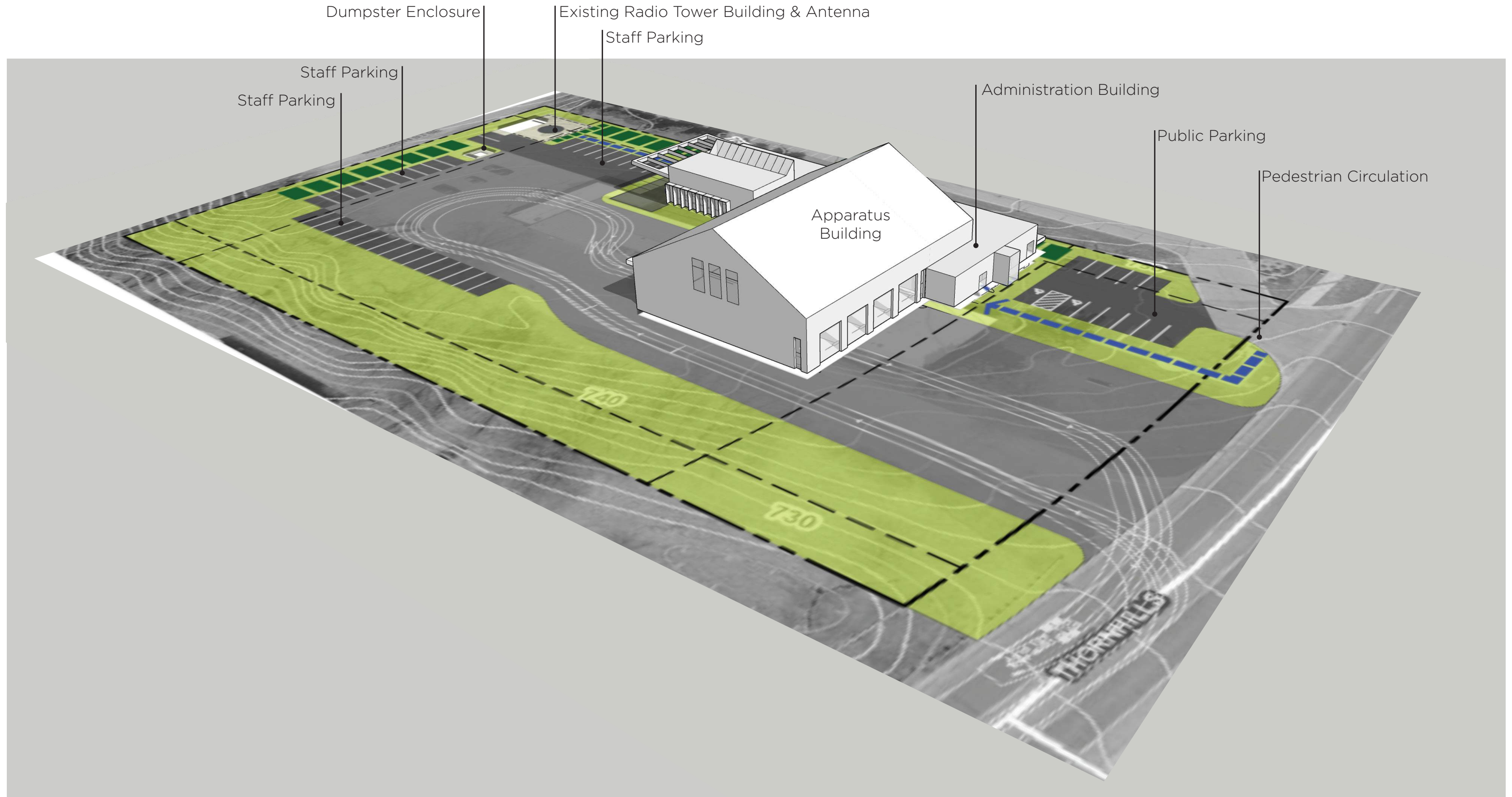


## 2990 BUTTRICK AVE. STATION #2

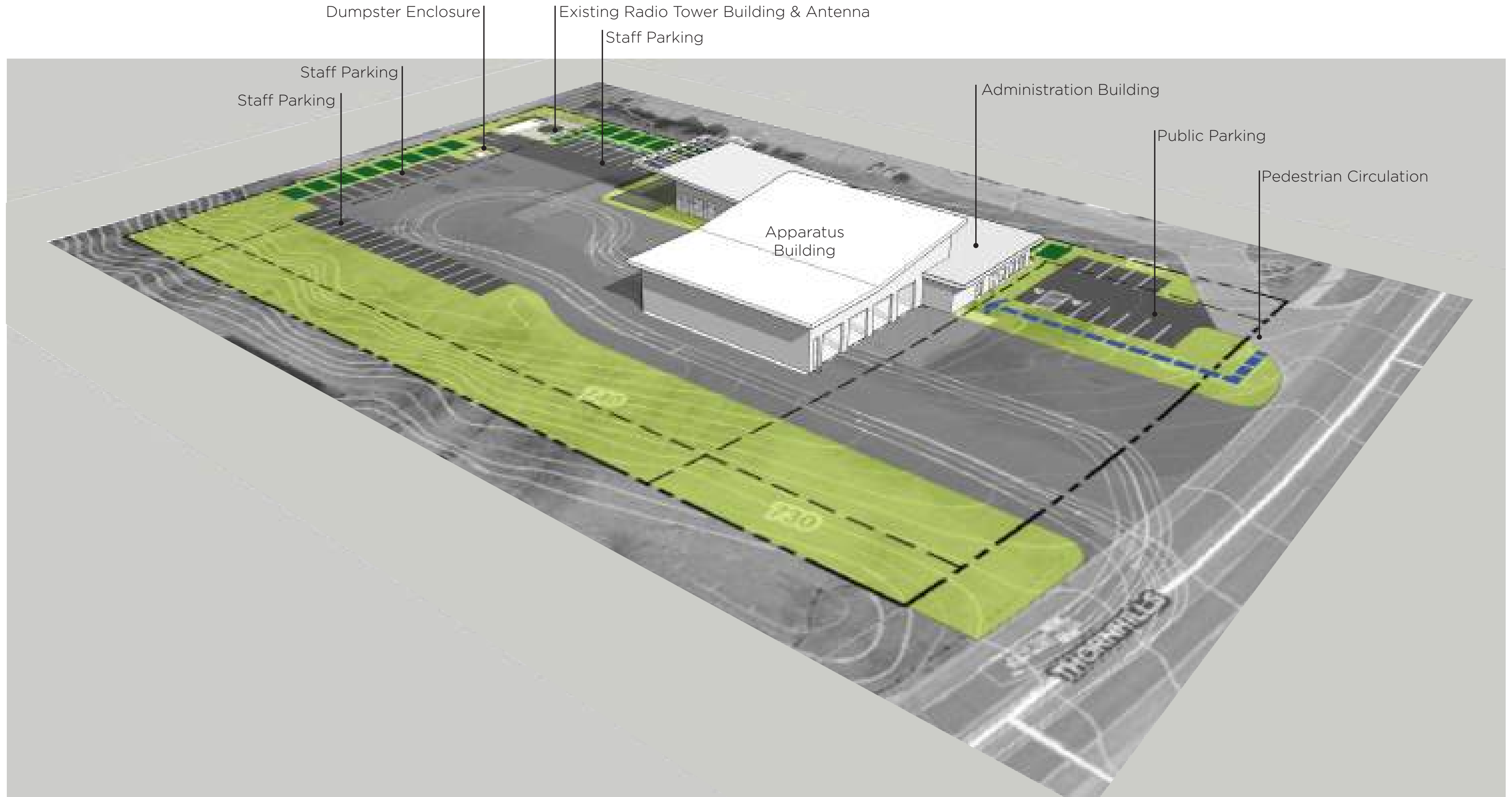


Parking Provided: 50 Spaces

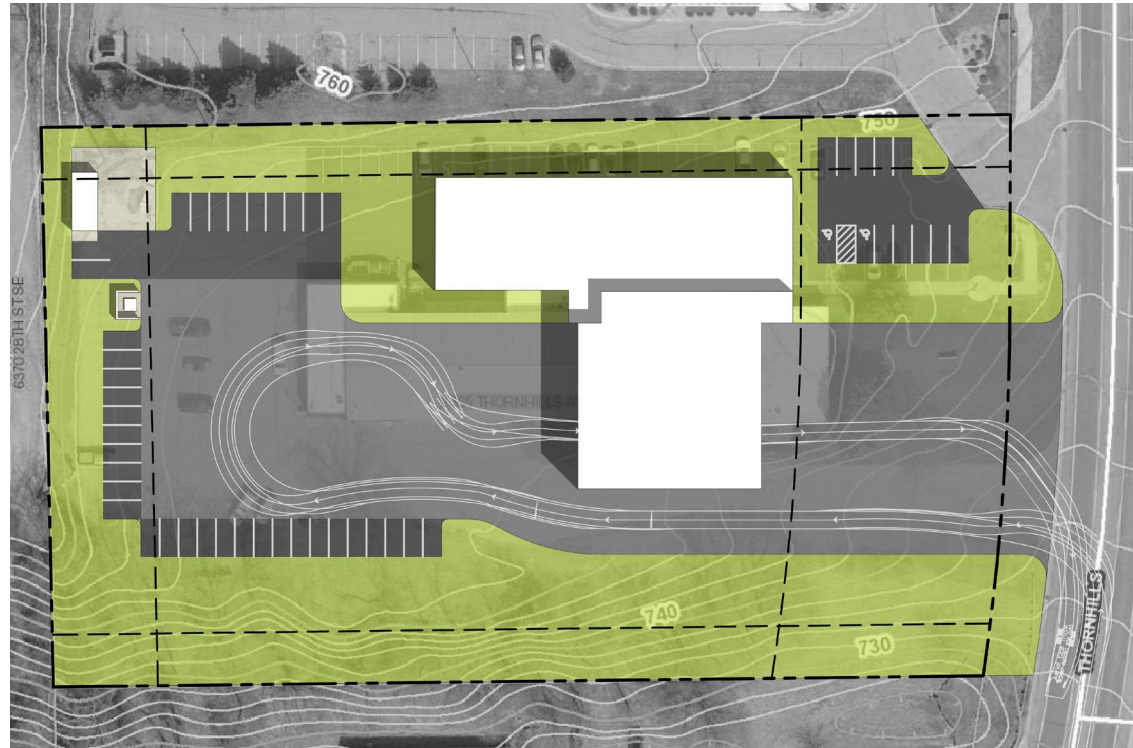
CONCEPT C



**CONCEPT C GABLE MASSING**



**CONCEPT C LOW SLOPE MASSING**



CONCEPT C

**PROS:**

- Meets parking program requirements
- Includes separate public parking
- Includes landscape screen on the north
- Provides separate (apparatus & public) curb cuts
- Minimum site work on the wooded slope on south

**CONS:**

- Site turning radius is tight at 360 degrees for returning apparatus
- Returning apparatus turn towards passenger side
- One space available for visiting apparatus
- No by-pass drive for emergencies
- Overflow parking for fire department training on rear apron
- Administrative parking is in the back for overflow public parking
- Administration wing with living quarters engages with the backside of commercial development on north

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg#		
<b>1. Public Areas</b>								
Public Vestibule & Lobby	LOBBY			1	100		100	*Front Counter
	Vestibule			1	80		80	*Fire Administration
	Waiting area			1	50		50	* Community Room
	Small Display Case							
	Floor Mat						0	
	Intercom/Buzzer						0	
	After Hours 911 Phone						0	
	Subtotal:						230	
Training-Community Room	Training Room	60		1	1,300	sim06.02a	1,300	
	Training Tables						0	
	Credenza						0	
	Equipment:						0	
	White Board						0	
	Projector						0	
	Projector Screen						0	
	TV						0	
Subtotal:						1,300		
Training Storage	Storage Room			1	120		120	*Training Room
	Misc. Item Storage						0	
	Subtotal:						120	
AV Storage	Storage Room			0	0		0	*Training Room
	Misc. Item Storage						0	
	Subtotal:						0	
Public Restroom	ADA Visitor Restroom	2		2	77		154	
	Toilet	x					0	
	Urinal	x					0	
	Lavatories (w/ ADA)	x					0	
	Subtotal:						154	
Net Area							1,804	
35% Internal Circulation Factor							631	
Subtotal: Public Areas		0	0				2,435	

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg#		
<b>2. Fire Administration</b>								
Fire Chief -Adam Magers	Private Office	1	1	1	225	3.03	225	*Fire Inspector
	Four-shelf bookcase						0	*Administrator
	Closet			1	20		20	
	Two-drawer file cabinet						0	
	Subtotal:						245	
Fire Inspector-Colin Forzley	Private Office	1	1	1	150	3.05	150	*Chief
	Closet			1	10		10	
	Include Plan Review Table			1	20		20	*Administrator
	Subtotal:						180	
Fire Marshall Office	Private Office	1	1	1	150	3.05	150	*Chief
	Closet			1	10		10	
	Include Plan Review Table			1	20		20	*Administrator
	Subtotal:						180	
Lt. Future/ Study Room	Private Office	0	1	1	100	3.07	100	*Chief
	Desk w/ Credenza						0	*Administrator
	Subtotal:						100	
Cynthia Holzhei-Administrator	Private Office	1	1	1	150	3.05	150	*Chief
	Desk w/ Credenza						0	*Fire Inspector
	Subtotal:						150	*Work area
Work Room (copier)	Work Room			1	120		120	*Administrator
	Subtotal:						120	
Storage/ Delivery Storage	Storage Room			1	50		50	*Work area
	Metal Shelving						0	*Administrator
	Subtotal:						50	

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg#		
Conference Room Use for Plan Review & Training	Conference Room	12		1	500	05.02a	500	*Chief
	Conference Table						0	*Fire Inspector
	Credenza						0	
	Equipment:						0	
	White Board						0	
	Projector						0	
	Projector Screen						0	
	TV						0	
Subtotal:							500	
Net Area							1,525	
35% Internal Circulation Factor							534	
Subtotal: Fire Administration		4	5				2,059	

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies	
		Current	Planned	Qty	Size	Reference Pg #			
<b>3. Suppression Operations (Cold Zone)</b>									
Captain's Room-	Private Office			1	150	3.05	150	*Lockers Room	
	Desk						0		
	Chairs						0		
	Equipment:						0		
	Computer						0		
	Subtotal:							150	
	Captains' Sleeping Quarters	Sleep Room	3	3	1	100	07.07b	100	*Lockers Room
Bed				1			0	Assumes 3- 24 hr shifts	
Armoire (3)				3			0		
Linen Storage							0		
Subtotal:							100		
Watch Office	Work Carrels	4		1	180		180	*Apparatus Bay	
	Work Area						0	*Administration	
	Desk						0	Window to App Bay	
	File Cabinets	1					0		
	Table w/ Chairs						0		
	Mailboxes								
	Bank charger								
	Radio Equipment	1					0		
Subtotal:							180		
Net Area							430		
35% Internal Circulation Factor							151		
Subtotal: Suppression Operations		3	3				581		

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
<b>4. Staff Commons (Cold and Warm Zones)</b>								
Firefighters' Sleeping Quarters	Sleep Room		12	12	4	100	07.07b	400 *Lockers Room
	Bed		-		1			0 Assumes 3- 24 hr shifts
	Armoire (3)	X			3			0
	Linen Storage	X						0
								0
	Subtotal:							400
Open Locker Area	Lockers (2'x2'x6')				4	10		40
								0 *Adjacent to Warm Area Shower Can be area or enlarge Captains sleep room to accommodate
	Subtotal:							40
Day Room	Day Room				1	300		300
	Recliners	6						0
	Chair							0
	Table							0
	Telephone							0
	TV							0
	Desk							0
	Book case							0
	Subtotal:							300
Exercise Room	Exercise Room				1	800		800 Roll up door to exterior
	Universal Gymnasium							0 High Ceiling 9' clearance
	Storage				1	50		50
	Athletic flooring							0
	Exercise Equipment:							
	Exercise machines							0
	Treadmills							0

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
	Free Weights							0
	Subtotal:							850

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies	
		Current	Planned	Qty	Size	Reference Pg #			
Kitchen	Kitchen			1	400		400	*Locker Rooms	
	Food Pantry	3		1	25		25	*Exercise Room	
	Snack Bar & Food Prep Counter						0	*Patio access	
	Solid Surface						0	Ice Machine	
	Cabinets						0		
	Countertop w/ sink						0		
	Refrigerators/Freezer	3					0		
	Commercial-grade Microwave	1					0		
	Commercial Range	1					0		
	Commercial Hood w/ fire suppression	1					0		
	Dishwasher	1					0		
		Subtotal:						425	
	Dining Room	Dining Room			1	175		175	*adjacent to Day Room:
Table for 8							0		
Chairs							0		
Sideboard							0		
		Subtotal:						175	
Shower Rooms and small lockers (intermediate Decon) Warm Zone	Shower Room	x		2	85		170		
	Toilet	x			included				
	Sink	x			included				
	1"x1'x3' Lockers			20	4		80		
	Bench						0		
	Subtotal:						250		
Laundry (intermediate Decon)	Laundry Room			1	80		80		
	Residential Washer								
	Residential Dryer								

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
Warm Zone	Laundry Sink							
	Casework/counter top						0	
		Subtotal:						80

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
Laundry Cold Zone	Laundry Room			1	75		75	Residential Units large enough for bedding
	Residential Washer							
	Residential Dryer							
	Laundry Sink							
	Casework/counter top						0	
	Subtotal:						75	
Shower Room Cold Zone	Shower Room			2	108	07.10a	216	
	Toilet							
	Sink							
	Bench						0	
Subtotal:						216		
Custodial Storage/Janitors Closet	Shelves for supplies			1	100		100	
	Subtotal:						100	
Quartermaster Closet	Locked Closet			1	80		80	Note: Part of Mechanical Room or possibly Decon Laundry
	Storage Shelves						0	
Subtotal:							80	
Net Area							2,991	
35% Internal Circulation Factor							1047	
Subtotal: Staff Commons		12	12				4,038	

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
<b>5. Apparatus Bay (Hot Zone)</b>								
Apparatus Bay (18'x85' each-Double)	Apparatus Bay			3	1,530		4,590	*Drive-Thru
	Partial Bay			1	700			
	14'x14' Bi-fold Doors						0	*Site Issue
	Overhead Doors							
	Engine Truck			2			0	
	Tanker						0	
	Ambulance / EMS Truck						0	Bay Depth can accommodate 4-fold doors
	Aerial (Ladder) Truck			1			0	
	Misc. Vehicle (grass truck, boat, trailer)			1			0	
	Command Car / Pick-up Truck			1			0	
	Space Ventilation						0	
	Vehicle Exhaust Connection- or AIRVAC						0	
	2" Fill & Washing Connection						0	
	Compressed Air Lines over each bay	x					0	
	Hose Bibs & Reels						0	
	Oil Interceptor	x					0	
	Trench Drain Connected to Interceptor	x					0	
	Utility Sink						0	
Infrared Linear Ceiling						0		
Subtotal:							4,590	
Turn Out Gear Room	Gear Room						0	*Apparatus Bay
	Mesh Open Racks (3'	30		30	9		270	Need power at lockers
	Potential Storm Shelter Space							
Subtotal:							270	

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
Hose Drying, Washing and Storage	Dehumidification Room			1	80		80	*Apparatus Bay
	Hose Towner w/ platform						0	8' tall doors
	Mechanical Dryer						0	double leaf door
	Dehumidification Room X						0	
	Storage Racks for Hoses x						0	
	Exhaust Fan x						0	
	Coiling Table						0	
	Hose Washer						0	
	Floor Drain x						0	
	Water Supply						0	
	Subtotal:						80	
Washing Area/Laundry	40lb wash/Extractor x			1	100		100	*Apparatus Bay
	30 Gal Disposal Can							
	4'x6' Gear Dryer							
	Exhaust Duct x						0	
	Subtotal:						100	
Decontamin. Area	Area			1	100		100	*Apparatus Bay
	Dual Compartment Stainless Steel Sink x						0	*Laundry
	Floor Type Slope Sink x						0	*Decontamination Shower
	Floor Drain x						0	
							0	
	Subtotal:						100	
Toilet- Hot Zone	Toilet			1	56		56	
	Sink							
							0	
	Subtotal:						56	

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
EMS Supplies/Storage	Lockable Storage room			1	80		80	*Apparatus Bay
							0	Could be Lockable Cabinets
							0	
							0	
		Subtotal:						80
SCBA Cascade Room	Room			0	0		0	*Apparatus Bay
	Oxygen Filling Station						0	
	Oxygen Bottles Storage						0	Bottles Filled at Station #2
	Air Bottles Storage						0	
	Working Counter						0	
	Writing Desk						0	
	Lockable Cabinets w/ Sink						0	
	Work Counter w/ Vices						0	
	Subtotal:						0	
Mezzanine	Mezzanine			0	0		0	*Above App Bay support spaces.
	Storage						0	
	Possible Mechanical Training						0	
							0	
	Subtotal:						0	
Air/Compressor Room	Room			0	0		0	To be included in Shop
	Fresh Air Intake						0	
	Exhaust build up heat to outside						0	
	Concrete pad						0	
							0	
	Subtotal:						0	
Exterior Storage	Exterior Storage			1	250		250	*Above App Bay support spaces.
	Overhead Doors						0	

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
	Door to bay						0	
							0	
	Subtotal:						250	
Net Area							5,276	
20% Internal Circulation Factor							1055	
Subtotal: Apparatus Bay		0	0				6,331	

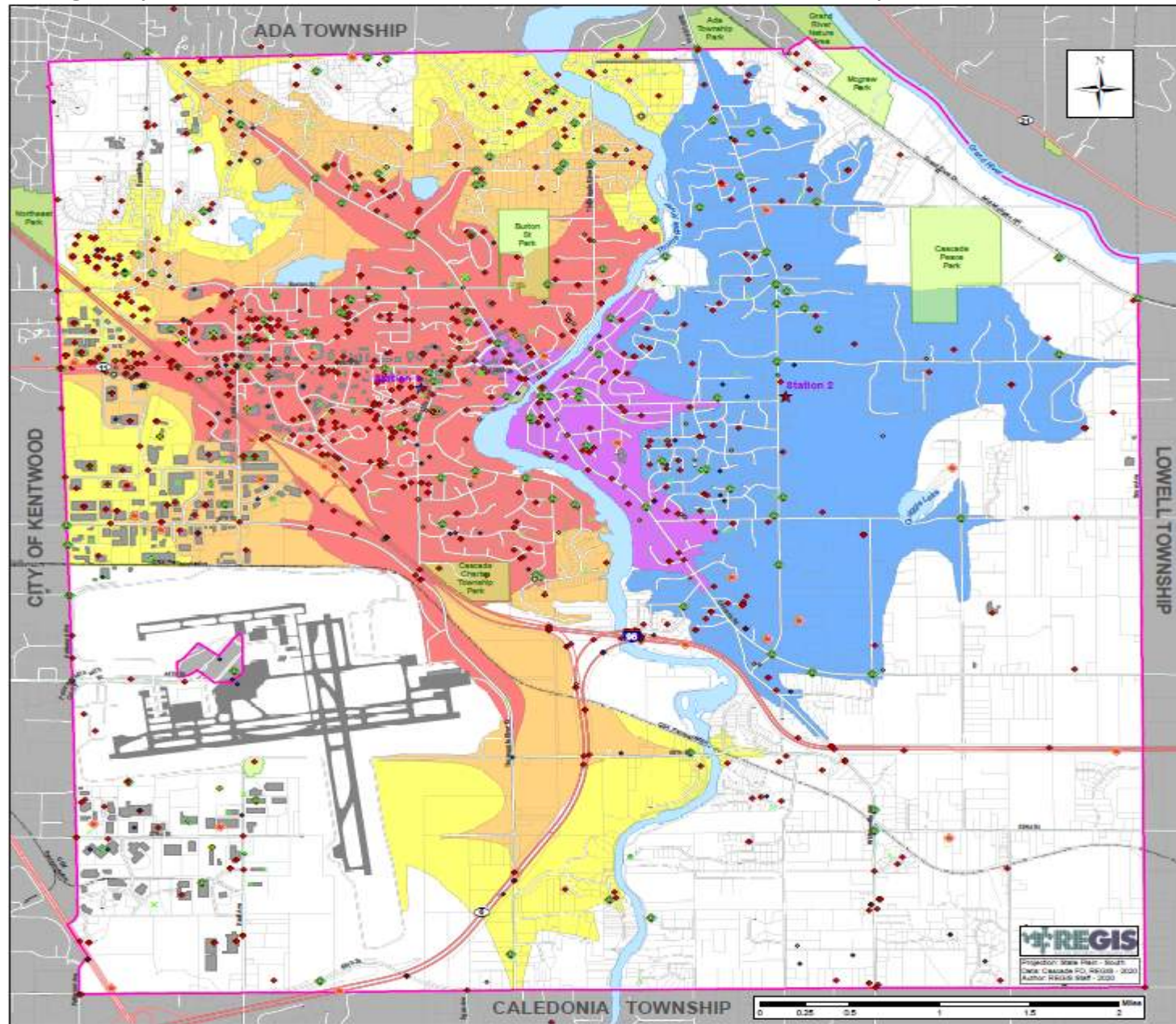
Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
<b>6. Maintenance and Support (Hot Zone)</b>								
Shop/Tools	Room			1	300		300	*Apparatus Bay
	Spare Parts							
	Work Bench							
	4' Metal Cabinet							
	Flammable Cabinet							
	Station compressor							
	SCBA Bottle Storage							
	Eye wash station							
	Oil/Filters							
		Subtotal:						300
Net Area							300	
20% Internal Circulation Factor							60	
Subtotal: Maintenance and Support		0	0				360	

APPENDIX - NEED ASSESSMENT

Space	Description	Staff		Space Needs			Net Sq. Ft.	Comments / *Adjacencies
		Current	Planned	Qty	Size	Reference Pg #		
<b>7. Building Support Areas</b>								
Mechanical / Electrical Room	Room			1	300		300	
	Subtotal:						300	
Server Room	Room			1	100		100	*System Administrator
	Equipment:							*Secure room
	911 Server						0	
	UPS unit						0	
	Switch Box						0	Note:
	Equipment racks						0	
	Storage cabinet						0	No water in fire suppression system in this room
	Radio cabinet						0	
	Electric panels						0	
	Printer						0	
	Computer / Keyboard stand						0	
	Climate Controlled						0	
	Subtotal:						100	
Net Area							400	
20% Internal Circulation Factor							80	
Subtotal: Building Support Areas		0	0				480	

Parking Requirements:	Spaces
Peak demand for secure parking	0
Other outdoor parking	
Staff Parking (10'x20' spaces)	40
Public (Visitor) Parking (10'x20') spaces	10
<b>Total Spaces</b>	<b>50</b>

Apparatus Parking for Training Events when Station 2 participates in Training- One Engine minimum



Comparable New Fire Station Construction in Michigan:

- Portage Fire: 18,000 sq. ft - 6 Million
  - <https://www.mlive.com/news/kalamazoo/2019/08/portage-breaks-ground-on-new-6m-fire-station.html>
  
- Highland Fire: 14,000 sq. ft - 5.6/7.6 Million
  - <https://www.hometownlife.com/story/news/local/milford/2018/01/23/highland-seeks-proposals-demolish-then-build-2-new-fire-stations/1027258001/>
  
- Monroe Fire: 15,560 sq. ft - 6.35 Million
  - <http://www.redstonearchitects.com/portfolio/fire-stations/>
  
- Dexter Fire: Proposed 31,000 sq. ft - 7+Million

Adam,

Our Dexter Township Station is a 3 bay, 2 bunkroom station and 12,000 SQFT and ran about \$2.8M. It was completed in 2016. It is a satellite station.

Our Webster Township Station is under construction. It is a 2 bay, 2 bunkroom station and 9,500 SQFT and is budgeted for \$2.5M. It is also a substation.

We are planning a new headquarters station in the City of Dexter that will be a 5 bay, 4 bunkroom station and is projected to be 31,400 SQFT and cost approximately \$7M. This is a highly contentious situation so I don't know what the final outcome will be.

Hope this helps. Do not hesitate to call if you need anything else.

**Robert L. Smith**

Robert L. Smith, EFO, CFO

Fire Chief, Dexter Area Fire Department

8140 Main Street

Dexter, MI 48130

Tele: 734-426-4500

- Meridian Fire: 10,000 sq. ft - 3.5 Million
  - <https://www.lansingstatejournal.com/story/news/local/2016/01/22/new-meridian-fire-station-up-and-running/79170472/>
  
- GR Ford Airport Fire: Proposed 21,600 sq. ft - estimated 8+Million
  - See attached email documents (unsure if released for public consumption)



## Contact Us

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