

Conceptual Design Report  
**Red River Regional Consolidated Dispatch Center**  
Fargo, North Dakota



Short Elliott Hendrickson Inc.  
in association with  
Architects Design Group  
2022.11.14



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**Mr. Robert Wilson**  
**County Administrator**  
**Cass County**  
211 9<sup>th</sup> Street South  
Fargo, ND 58103

**RE: RRRDC**  
**Concept Design Report**  
ADG Project no. 1073-1.3

Dear Mr. Wilson:

Architects Design Group (ADG), in association SEH and our consultants, are pleased to present you with the Concept Design Package for the Red River Region Dispatch Center (RRRDC), to be located on Agassiz Crossing South near the Sanford Medical Center, Fargo. This submittal is based on information provided by Red River Regional Dispatch staff, representatives from the various public entities served by the dispatch center, and the design team's expertise related to layout, functional relationships, building massing, and systems design. Direct input from the staff and user groups has been invaluable to the design team for providing input into the project.

The information provided in this submittal provides the basis for functionality of spaces, operational adjacencies and considerations of day-to-day activities that are critical for a project of this type. It also explains and summarizes the approach for critical systems such as redundancy and backup infrastructure for:

- Emergency Power
- Sanitary Sewer
- Potable Water
- Communications Capabilities
- Specialized HVAC systems in critical areas such as the data center, server rooms, UPS room and Dispatch floor.

Furthermore, technology systems such as security systems, communications systems (both emergency and non-emergency), and audio-visual systems are of the utmost importance in facilities of this type. While highly advanced, these systems are only as good as the power that is supplied to them. Therefore, it is the design team's recommendation to provide an exterior equipment enclosure that will use the same survivability criteria as the main facility to protect the infrastructure located outside of the main structure.

The exterior equipment enclosure will include the following:

- Emergency generators
- Fuel tanks / pumps
- HVAC equipment
- Exterior electrical systems / equipment

As we move forward, these issues will be used as the foundation develop more detailed floor plans and a more refined design approach. While this package identifies and describes them, the size, details, and capacity will be unknown until loads are more clearly defined. Therefore, the cost impacts of these systems will only be accounted for in later phases. The design team will continue to refine these issues throughout the project.

Through the evaluation of site constraints and opportunities, program needs, survivability and redundancy design objectives, and the overall functionality of the facility, we have produced the following Concept Design Package. We feel this document addresses these issues and describes a critically important approach to a facility that will serve the County's needs well into the future.

Respectfully Submitted,

**Ian A. Reeves, AIA**  
**President**  
**Architects Design Group**

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**Principal, Project Manager**  
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# Preliminary Estimates of Probable Development Costs

The planning team has assembled this preliminary cost data which is based upon the current (2022-23) construction values associated with the budgeting for the proposed Red River Regional Dispatch Center, as defined in the planning report under a separate cover.

The planned RRRDC is comprised of five primary programmatic elements which are defined as the Public Access Areas, Administration, Dispatch Floor, Support, and Facility Support, as defined in the detailed spatial needs assessment (SNA). As this preliminary estimate is based upon very early planning, we have utilized a blended cost model for each program element. Parking for the visitors and the staff are also a development component which requires consideration as it pertains to the site development “hard costs”.

The following chart shows the anticipated growth for the project. As indicated, the primary growth occurs in the initial phase with modest increases to year 2043.

<b>RRRDC Spatial Needs Assessment:</b>	<b>Year 2023</b>	<b>Year 2033</b>	<b>Year 2043</b>
Public Access	1,950 SF	0 SF	0 SF
Administration	2,177 SF	114 SF	274 SF
Dispatch Floor	5,443 SF	0 SF	0 SF
Support	3,337 SF	0 SF	0 SF
Facility Support	2,046 SF	0 SF	0 SF
<b>Primary PSAP Facility Total</b>	<b>14,953 SF</b>	<b>15,067 SF</b>	<b>15,341 SF</b>

The total project development cost will include the total area for 2043. There has been discussion regarding particular areas and the anticipated size of spaces. The design team will further refine the SNA as the project moves forward. It is noted, however, that as the number of Dispatchers increases, administration will likely need to also increase to accommodate their support function.

**Development Summary:**

We have developed multiple bubble diagrams showing various adjacencies. All of the diagrams are based on the year 2043 phase and do not have a significant impact to the overall anticipated development costs. However, the Sanford Hospital representatives have indicated their preference for the RRRDC project to utilize as little of the site as possible. Furthermore, it is their hope that the project can primarily be located at the rear of the existing Ronald McDonald House and west of the Northern Tool and Equipment building.

With this in mind, we have prepared the development approach for the county to consider for the Sanford Hospital site. It is based on minimal utilization of the site depending on zoning issues and coordination with the surrounding existing buildings.

Site Development: approximately 2.75 acres (119,500 sf) of site utilization.

- Vacate the west access road of the Ronald McDonald House. Build a second access road to the site at the minimum distance allowed between curb cuts.
- **Note: Pending confirmation with zoning regulations and other requirements, the project access road may need to be relocated increasing the site usage even more.**

**Development Breakdown: approximately 2.5 acres (109,800 sf) of site utilization.**

**Project Development “Hard Costs”**

1.	<b>Building Construction:</b>	
1.1	Public Access Areas 1,950 SF @ \$435/SF.....	\$ 848,250.00
1.2	Administrative Areas 2,565 SF @ \$435/SF.....	\$ 1,115,775.00
1.3	Dispatch Floor 5,443 SF @ \$435/SF.....	\$ 2,367,705.00
1.4	Dispatch Center: Support 3,337 SF @ \$435/SF.....	\$ 1,451,595.00
1.5	Facility Support 2,046 SF @ \$435/SF.....	\$ 890,010.00
1.6	Central Utility Plant Allowance..... (Generator, ATS’s, Fuel Tanks, Fuel Pumps, HVAC Eqpt., Protective Cage, etc.)	\$ 750,000.00
1.7	<b>Subtotal Building Construction Cost .....</b>	<b>\$ 7,423,335.00</b>
2.	<b>Site Development Costs:</b>	
2.1	Utilities, Grading, Fill, Paving, Landscaping, etc. 2.75 acres @ \$300,000/acre allowance.....	\$ 825,000.00
2.2	<b>Subtotal Site Development Construction Cost.....</b>	<b>\$ 825,000.00</b>
3.	<b>Subtotal Project “Hard Costs” .....</b>	<b>\$ 8,248,335.00</b>
4.	<b>Project “Soft Costs”</b>	
4.1	Professional Design Fees, Miscellaneous “Soft” Costs (Includes survey, environmental, Geotech, technology, security, communications, etc.) \$8,478,450 @ 10.5% .....	\$ 866,075.00
4.2	FF&E Allowance: 15,341 SF @ \$40/SF.....	\$ 613,640.00
4.3	Dispatch Console Cost 14 new consoles @ \$25,000 .....	\$ 350,000.00
4.4	Technology Systems Allowance..... (Security, communications, data network, A-V, etc.)	\$ 1,300,000.00
4.4	Permitting & Impact Fees Allowance.....	\$ 65,000.00
4.5	Testing & Inspection Fees Allowance .....	\$ 75,000.00
4.6	Escalation Costs Allowance @ 8% Annually for One Year.....	\$ 659,866.00
4.7	Project Contingency Allowance @ 10% .....	\$ 824,833.00
4.8	<b>Subtotal Project “Soft Costs”:</b> .....	<b>\$ 4,754,415.00</b>
5.	<b>Total Estimated Project Development Cost .....</b>	<b>\$ 13,002,750.00</b>

It is anticipated that there will be a variety of additional costs associated with the proposed developments that may include the following:

- Final Site Coordination
  - Site Utilization – Ronald McDonald House and Northern Tool + Equipment discussions
  - Final Parking number requirements
- Moving
- 911 console furniture
- Cutover process
- Owner-furnished equipment and commissioning
- In-house project management

There are a few “allowances” in the projected cost data that we will need to qualify with the county’s building and permitting agencies including:

- Permitting fees
- Impact fees
- Testing and inspections requirements / fees





# Spatial Needs Assessment Narrative

The facility program has undergone various modifications as the Concept Design phase has progressed. Due to the complex nature of the facility and the numerous operational necessities required, this is as expected. Throughout the process of modifying the program, balancing efficiency and cost is always at the forefront of the effort.

During the Concept Design effort, ADG and the RRRDC went through multiple meetings and design modifications to make the project as efficient as possible. This process included multiple meetings, conference calls, plan diagram options, and space-by-space accounting.

Throughout the almost two dozen meetings, the team worked on the following:

- Discussed multiple sites and evaluation information for each
- Reviewed one-story and two-story building test-fits on each proposed site
- Analyzed the operational and functional relationships of the RRRDC
- Reconciled needs versus wants to better streamline the total area
- Compared existing space to requested operational efficiencies and needs to confirm that every item in the SNA was either dual-function or satisfied a direct critical need

The result of all this effort is an extremely functional and efficient design at 15,341 sq. ft. This calculation was based on the standard AIA spatial needs approach which only calculates fully conditioned spaces. Spaces like the Central Utility Plant (CUP) are calculated as ½ the actual square footage.

This spatial assessment recognizes direct input on requirements, a comprehensive and reasonable estimate of growth, and an overall conservative and efficient approach to sizing of spaces. ADG would like to thank the RRRDC and all those who participated in the meetings. While it was a complicated development process, it could not have been successful without their support and participation.

Below is a summary of the reductions and increases that were made over the course of this phase.

- Reduced Areas
  - Public Access Areas Reduction..... -1,950 S.F.
  - Dispatch Center Floor Reductions..... -114 S.F.
  - Facility Support..... -668 S.F.
- Increased spaces
  - Dispatch Center Support..... +480 S.F.
  - IT space request 7/22/22 meeting..... +236 S.F.

## Spatial Needs Assessment, September 6, 2022

- **YEAR 2041..... 15,341 S.F.**

General Notes	Space Designation		Space Requirements (square feet)		
	No.	Space Function	YEAR 2022	YEAR 2032	YEAR 2042
1.0-5.0: Reductions based on comparison of SNA dated April 18, 2022  NOTE: Sanford Hospital Group removed per email of 8/28/2022.	1.0	Public Access Areas <i>Reduced SF:</i>	1,950 <i>1,250</i>	0	0
	2.0	Dispatch Center: Administration <i>Reduced SF:</i>	2,177 <i>0</i>	114	274
	3.0	Dispatch Center: Dispatch Floor <i>Reduced SF:</i>	5,443 <i>114</i>	0	0
	4.0	Dispatch Center: Support <i>Reduced SF:</i>	3,337 <i>(480)</i>	0	0
	5.0	Facility Support <i>Reduced SF:</i>	2,046 <i>668</i>	0	0
	<b>Total</b>	<i>Total RRRDC Reduction:</i>	<b>14,953</b> <i>1,552</i>	<b>15,067</b>	<b>15,341</b>

**General Notes**

1.2: Reduced as spaces are no longer shared

1.3: Minimum number of restrooms to be provided based on more detailed plan and code review.

1.4: 34 people @ 1200sf; provide access window to kitchen.

1.4: Millwork storage to be provided in room

Space Designation		Space Requirements (square feet)		
No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
<b>1.0</b>	<b>Public Access Areas</b>			
1.1	Entry Vestibule	60	---	---
1.2	Public Lobby with public display millwork	100	---	---
1.3	All-Access Restrooms @ 100 SF Each	200	---	---
1.4	Training Room	1,200	---	---
1.5	Subtotal	1,560	---	---
1.6	Efficiency Factor @ 20%	390	---	---
<b>1.7</b>	<b>Total</b>	<b>1,950</b>	---	---
1.8	Cumulative Total		<b>1,950</b>	<b>1,950</b>

General Notes	Space Designation		Space Requirements (square feet)		
	No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
2.1: Requires 6 person oval conference table. 2.2: Performs HR functions and requires direct (in-suite) access to item 2.8.  2.3: Provide direct access to 4.15.          2.10: Accommodate 10-12 people.	<b>2.0</b>	<b>Dispatch Center: Administration</b>			
	2.1	Director's Office	200	---	---
	2.2	Assistant Director's Office	160	---	---
	2.3	Radio Systems Coordinator / Technology Office	160	---	---
	2.4	Open Staff WS's @ 36 SF Each	(4) 144	---	(2) 72
	2.5	Administrative Assistant WS w/Files	---	80	---
	2.6	Unassigned Offices @ 120 SF each	(2) 240	---	120
	2.7	Copy/Supply/Work Room w/ Small Break Alcove	140	---	---
	2.8	Secured Files Storage Room	80	---	---
	2.9	Storage Closet	40	---	---
	2.10	Meeting Room	360	---	---
	2.11	Subtotal	1,524	80	192
	2.12	Efficiency Factor @ 30%	653	34	82

General Notes	Space Designation		Space Requirements (square feet)		
	No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
	<b>2.13</b>	<b>Total</b>	<b>2,177</b>	114	274
	2.14	Cumulative Total		<b>2,291</b>	<b>2,565</b>

**General Notes**

3.1: Glass wall partition; 2 positions per office.

3.3: Any future agencies?

3.4: Centrally located elevated platform.

3.5: Nana Wall separation to the Dispatch Floor.

3.9: On Dispatch floor

3.11: 3.3 - 3.4 calculated at 40% efficiency factor. Remaining spaces calculated at 30% efficiency factor.

Space Designation		Space Requirements (square feet)		
No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
<b>3.0</b>	<b>Dispatch Center: Dispatch Floor</b>			
3.1	Shift Supervisor's Office @ 160 SF each	(3) 480	---	---
3.2	Administrative Supervisor's Office	120	---	---
3.3	Dispatch Consoles @ 100 SF each	(18) 1,800	---	---
3.4	Supervisor Consoles @ 150 SF Each	(2) 300	---	---
3.5	Training Consoles @ 100 SF each	(6) 600	---	---
3.6	Hydration Station	40	---	---
3.7	Chair Corral	60	---	---
3.9	Copy Alcove	60	---	---
3.10	Subtotal	3,460	---	---
3.11	Efficiency Factor Varies	1,983	---	---
<b>3.12</b>	<b>Total</b>	<b>5,443</b>	---	---
3.13	Cumulative Total		<b>0</b>	<b>0</b>

General Notes
4.1: Separation of Dispatch Floor from support spaces. 4.2: Kitchen to accommodate (3) refrigerators and (1) freezer.  4.4: Provide service window to the training window.  4.5: Balcony if on second level.         4.9: Added Destress room per 7/12/2022 email 4.9: Include a sink with an undercounter fridge.  4.12: Includes a Liebert unit. 4.12: Size revised based on 7/22/22 meeting. 4.12: Combine with 4.14.  4.13: FM-200 tank storage.

Space Designation		Space Requirements (square feet)		
No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
<b>4.0</b>	<b>Dispatch Center: Support</b>			
4.1	Internal Corridor	140	---	---
4.2	Kitchen	120	---	---
4.3	Storage	40	---	---
4.4	Break Room	180	---	---
4.5	Exterior Break Area	80	---	---
4.6	Locker Alcove	60	---	---
4.7	RR/SR's @ 110 SF Each	(2) 220	---	---
4.8	Staff Restrooms @ 64 SF Each	(2) 128	---	---
4.9	Destress / Lactation / Bunk Rooms @ 80 SF Each	(4) 320	---	---
4.10	Central Vacuum Equipment Closet	32	---	---
4.11	Miscellaneous Storage Room	40	---	---
4.12	Server / Radio Equipment Room	536	---	---
4.13	Fire Suppression Equipment Room	60	---	---

General Notes
4.14: Combine with 4.12.  4.15: Co-locate with 2.3 4.15: Reduced to 60 sf due to layout in plan diagram Option 3 (resize to 120 sf if possible in floorplan)  4.16: Revised per RRRDC meeting of 7/22/22 and Sanford Health meeting on 7/25/22.  4.16: As identified in meetings, server rooms for RRRDC and Sanford Health should be separate. This space will act a the central cable termination for distribution to each entity.

Space Designation		Space Requirements (square feet)		
No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
4.14	UPS Equipment Room	200	---	---
4.15	Radio Lab	60	---	---
4.16	IT Storage/ Network Demark	120	---	---
4.17	Subtotal	2,336	---	---
4.18	Efficiency Factor @ 30%	1,001	---	---
<b>4.19</b>	<b>Total</b>	<b>3,337</b>	---	---
4.20	Cumulative Total		<b>0</b>	<b>0</b>

**General Notes**

5.5: Assumes separate janitorial staff for Hospital Group and RRRDC.

5.7: Emergency generator, fuel tanks / pumps, HVAC. Calculated at 50%.

5.8: Not included in GSF.

5.9: Added per Technology Review 7/22/22.

Space Designation		Space Requirements (square feet)		
No.	Space Function	YEAR: 2022	YEAR: 2032	YEAR: 2042
<b>5.0</b>	<b>Facility Support</b>			
5.1	Mechanical Room	320	---	---
5.2	Primary Electrical Room	140	---	---
5.3	Fiber/Telephone Demark	100	---	---
5.4	Building Maintenance WR w/Storage	180	---	---
5.5	Janitorial Closets @ 60 SF Each	(2) 120	---	---
5.6	Mud Room / Staff Entry	60	---	---
5.7	Central Utility Plant	400	---	---
5.8	Communications Tower	Exterior	---	---
5.9	BDS Room	112		
5.9	Subtotal	1,432	---	---
5.10	Efficiency Factor @ 30%	614	---	---
<b>5.11</b>	<b>Total</b>	<b>2,046</b>	---	---
5.12	Cumulative Total		<b>0</b>	<b>0</b>



# Design Criteria Recommendations

## Construction Codes

The following documents have been used to develop the basis for code compliance for the facility:

- 2021 International Energy Conservation Code
- 2021 International Building Code
- 2021 International Mechanical Code
- 2018 North Dakota State Plumbing Code
- 2020 National Electrical Code
- ICC/ANSI A117.1 (Latest Edition)

## Standards and Guidelines

ADG has developed best practices based on our decades of experience with these project types. The process is derived from other nationally recognized standards and guidelines. The following documents have been used to develop the approach for this project:

- FEMA 361: Design and Construction Guidance for Community Safe Rooms
- ICC-500: ICC/NSSA Standard for the Design and Construction of Storm Shelters
- NFPA 75: Standard for the Protection of Electronic Computer/Data Processing Equipment
- NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, Version 2019

The overall methodology as it relates to both code-mandated requirements and other guidelines must be confirmed with the authority having jurisdiction (building department, engineering, planning/zoning etc.).

## Further development of facility systems and requirements

The following recommendations are meant to establish a baseline from which further discussions and information can be based. It is the design team's recommendation to follow the most stringent requirement based on the codes and guidelines mentioned above.

Furthermore, these recommendations do not consider budgetary issues as the building's electrical, mechanical and data loads are not fully known at this time. To increase the options, as the project progresses, these recommendations can and will be modified to balance budgetary issues and functional requirements.

We have included "Additional Redundancy Options" as items that can be included if budget allows or to provide greater flexibility. Please note that these items may need additional research and design effort that may be beyond the current scope of the design team and require an Additional Services proposal.

The following is a summary of the analysis for this facility.

## Survivable Design Best Practices

- WIND SPEED:
  - Based on the IBC 2020, table 1604.5, this facility is designated as an Occupancy Category IV "Essential Facility." Due to the nature of the critical functions of the facility, the building will be designed for a 124 mph 3-sec wind gust (reference figure 1609.3(2)).
  - **Most Stringent Criterion:**
    - **ICC 500 – Tornado Shelter, 200mph 3-sec wind gust (reference figure 304.2(1))**
- IMPACT LEVEL:
  - IBC 2020: site is not located in a windborne debris region.
  - **Most Stringent Criterion:**
    - **ICC 500 – Tornado Shelter, 15-lb. 2x4 missile fired at 90mph for vertical surfaces (reference table 305.1.1).**
- FLOOD ELEVATION:
  - Per ASCE 7 Hazard Tool, the site is in a Zone X.
  - **Most Stringent Criterion:**
    - **ICC 500 – Minimum floor elevation of a community shelter (reference section 401.1.1).**
- FOUNDATION TYPE:
  - The foundation will be designed in accordance with data and recommendations contained in the Geotechnical report and is anticipated to be a traditional shallow foundation, unless the Geotechnical report indicates the need for a deep foundation due to less than adequate soil conditions present at the site.
- SNOW LOADS:
  - **Most Stringent of the following criterion:**
  - Per ASCE 7 Hazard Tool, Ground Snow Load: 85 lb/ft<sup>2</sup>
  - ICC 500, Section 303.2 Roof live loads. Storm shelter roofs shall be designed for minimum live loads specified in ASCE 7, but not less than 100 lbs/ft<sup>2</sup>
  - IBC 2021, Section 1608, Snow Loads



- SEISMIC LOADS
  - **Most Stringent of the following criterion:**
  - NFPA 1221, Section 4.3.9: required to comply with NFPA 5000 or local building code whichever is more restrictive.
  - Additional seismic issues will be addressed as outlined by the Geotechnical report.

### Emergency Systems and Redundancy Approach

The facility is recommended to be equipped with redundant systems for HVAC, sanitation and potable water, and electrical power.

**The facility should be designed to operate for a minimum of 72 hours of continuous “off-the-grid” operation for vital systems and areas. Refer to ICC 500, chapter 7 and the NFPA 1221, section 4.7.4.12.**

### Electrical Power

NFPA 1221, Section 4.7.1.2: required to have (2) independent, reliable power sources (primary and emergency) both of adequate size to supply the facility.

- Facility Primary Power: utility power
- Facility Emergency Power: An emergency generator should be provided to allow normal operation with fuel/capacity for 72 hours sustained use.
- A ship-to-shore connection should be provided allowing a portable or vehicle-mounted generator connected to the facility (per NFPA 1221, Section 4.7.1.4).
  - Ship-to-shore connection and space should be provided within protected Central Utility Plant. A future permanent generator can be purchased and located in this location.
- Load shedding should be provided to extend critical load duration if necessary
  - All administrative and non-critical facility support area loads should have the ability to be shed when on emergency power.
  - Critical loads include emergency communications related loads and server, data, UPS and IDF rooms.

#### Additional Redundancy Options

- A second emergency generator can be provided in the Central Utility Plant.
- A second utility feed from a separate transfer station/provider can be incorporated (if available).

### UPS System

The facility should be equipped with an uninterruptable power supply system to power all critical communications systems.

**Per NFPA 1221, section 4.7.8.2, the UPS system shall be sized to operate for a duration determined by the AHJ, but in no case less than 15 minutes.**

The UPS system should consist of (2) modular UPS components. Each UPS component should be designated as ‘A’ and ‘B’ and will be connected to each communications system such that if either UPS component is not operational, the other will supply power.

### HVAC System

It is the design team’s recommendation to design the entire building’s HVAC system to be capable of running off both the primary and secondary power sources.

- NFPA 1221, Section 4.4.1.5: requires a backup HVAC system for the Communications Center
- It is the design team’s recommendation to supply only the Dispatch floor, Data Center and support spaces with redundant/backup HVAC units (Liebert or similar systems) to supply the areas capable of running off both the primary and secondary power source.

### Potable and Sanitary Water Backup Systems

Required per NFPA 1221, section 4.3.8.1: no capacity given

- A potable water tank and sanitary tank will be provided per ICC 500, Table 703.2
- Potable backup capacity should be calculated based on reasonable use during emergency occupancy but not less than a duration of 72 hours at 1 gallon/per occupant/per day.
- Sanitary backup capacity should be calculated based on reasonable use during emergency occupancy but not less than a duration of 72 hours at 1.5 gallons/per occupant/per day.

### Central Utility Plant

All exterior emergency equipment will be housed in a secure enclosure within the secured perimeter and be monitored with the facility access control system. The enclosure will be designed to the wind, impact, snow and seismic criteria.

### Building Security System

This is a secured facility. A building access control system will be provided and be on backup emergency power to continuously maintain:

- Site Access Control
  - Designed to prohibit unauthorized access into the facility. Site access control is applied to secured parking facilities, secured by automated vehicle gates with visual and electronic authentication of access. A perimeter fence is planned for the facility where any pedestrian ingress/egress points will be controlled by physical or electronic locking means.
- Building Perimeter Access Control
  - Card reader-controlled access to all door openings at the exterior of the building.
- Internal Access Control
  - Card reader-controlled access to interior areas of the building, at various levels of access, as determined specific to this project. The project approach is to control access at the public lobby to prohibit unauthorized access into the non-public areas. Additional access control is provided to facilitate operations between various departments to prohibit unauthorized access (i.e. access to data center, access to communications center, etc.)
- Perimeter surveillance by video camera, with recording, and 24-hour monitoring by staff. Video surveillance is planned for the facility to compliment the access control system to protect the facility from unauthorized intrusion on the site as well as within the facility.

### Fire Protection System

The vital server, data and IT rooms will be equipped with an inert gas suppression system as well as a dry pipe "pre-action" system for redundancy and NFPA 1221 requirements.

# Architectural Design Narrative

## Program

The building program consists of the accommodation for a new facility supporting the RRRDC. The new facility will include Public Access Areas, Administration, the Dispatch Floor, Dispatch Support, and Facility Support. The site will be developed to include Secured Staff Parking, Public Parking and a Central Utility Plant.

## Site

The program describes a 15,341 square foot building with future growth and flexibility on an approximately 2.5 acre site (depending on finalized development options) located at the Sanford Medical Center on Agassiz Crossing South. The project will be located North of the Ronald McDonald House and to the West of Northern Tool and Equipment.

It is the goal of the site plan found herein to have a well identified site entry, public entry plaza, public and secured parking. The direction from the Sanford Medical Center is to use as little of the site as possible to retain it for future development. Therefore, while stand-off distances are important to consider, the Design Team assumes that site security will have to be provided by vehicular bollards, planters and benches.

A secure site perimeter is critical to the functioning of the project. As a best practice, the site will be equipped with an anti-climb galvanized steel security fence. Entrances to the secured parking areas will have visually screened, cantilevered, aluminum dual sliding gates with pedestal mounted access control.

## Landscaping

The site will incorporate native and low-maintenance landscaping. This intent is to provide visual buffers and shading which will enhance the public entry plaza. The Design Team will incorporate local zoning requirements and landscape directives for all parking areas on the site.

## Exterior Envelope

The exterior envelope of the main building will be designed in accordance to the Survivable Design Standards listed in the Design Criteria Narrative. Meeting this requirement offers an enhanced level of survivability while limiting specialty construction practices.

The facility will have the primary material of architectural precast, tilt-wall concrete or reinforced CMU walls. The development of the envelope will consider local materials, availability, economic and hardening concerns to select the most efficient approach.

Glazing assemblies will meet the designated impact standards and testing criteria. It is the Design Team's recommendation that the window placement will be designed to allow for day light, views, and the well-being of staff. Roofing systems are specified to meet the stringent wind uplift factors and will be accomplished with high reflective single-ply systems.

## Sustainable Design Objectives

The Design Team plans to implement general industry-based best practices to foster sustainable design, employee health and wellness. Overall, consideration for a sustainable site design, efficient use of materials and resources, efficient use of water, consideration of overall energy use and atmosphere impact of building systems, creating positive work environments with indoor air quality considerations, and design innovation where appropriate is the basic outline to a successful sustainably designed project.

Regarding sustainable design for Emergency Communications projects, the building should be sited to balance security and sustainable issues. Access to public infrastructure and multiple means of ingress/egress is typically supported by the sustainable objective to build buildings in pre-developed areas. Given the goal of minimal site utilization, the Design Team will further develop the site ingress and egress with RRRDC and Sanford Health.

Window shading, appropriate envelope, and glazing material selection and proper analysis of exposure are important elements to ensure a sustainable survivable structure that functions efficiently in the very cold area of climate Zone 7. Because of the 24/7 nature of an Emergency Communications Facility, efficient energy use, access to natural lighting, and quality indoor environments are very important for functional reasons, long term operational costs, and to create a positive and productive work environment.

# Architectural Design Narrative

## Program

The building program consists of the accommodation for a new facility supporting the RRRDC. The new facility will include Public Access Areas, Administration, the Dispatch Floor, Dispatch Support, and Facility Support. The site will be developed to include Secured Staff Parking, Public Parking and a Central Utility Plant.

## Site

The program describes a 15,341 square foot building with future growth and flexibility on an approximately 2.5 acre site (depending on finalized development options) located at the Sanford Medical Center on Agassiz Crossing South. The project will be located North of the Ronald McDonald House and to the West of Northern Tool and Equipment.

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### Architectural Design Standards

The new facility is designed to be a signature building for the County and RRRDC, meeting stringent survivability and functional criteria. Toward those goals the following are the design considerations:

- **Conceptual Massing**
  - Readily identifiable Civic Entry Plaza
  - The entry and egress to public versus secured parking will be clearly identified.
  - The primary elevation should include signage and identifiable access.
  - The overall conceptual diagrams reflect a double-loaded corridor with primary program on one side and utility support spaces on the rear.

The concept and overall approach will be further developed with the County and RRRDC to ensure the design will meet all operational requirements, participatory design input, budget constraints and functional flexibility for the future.

# Interior Design Narrative

## Design Direction

As a reflection of the RRRDC's approach to integrating community services across ND and MN county and state lines, ADG's interior design will foster collaboration within the facility to accommodate the day-to-day operations with the influx of additional personnel during emergency scenarios. Wide corridors and enclave areas will be considered in the facility to provide areas of respite. Break rooms and dining areas will address the various food service needs while providing fellowship areas. The design direction will support the dispatcher's need to react in a focused manner to calls of distress while remaining calm in an environment, which by the nature of the work, may have moderate noise and activity.

Transparency, with glass at some offices and conference rooms, will encourage visual interaction and allow natural light to transmit to inner spaces. Ballistic rated glazing will address the security criteria between public vestibules and work areas.

As a sustainable approach, facility finishes will focus on durable, timeless materials intended to withstand the rigors of twenty-four hour use and ease of maintenance.

- Porcelain tile, with through-body and coefficient of friction characteristics, will be used for flooring in high-traffic areas. Carpet tile, rather than broadloom, will be specified to provide an easy approach to replacement without disruption to office functions. Durable commercial grade carpet fiber and ounce weight will be selected. Where raised floors are located, anti-static carpet tile will be specified. Static dissipative vinyl floor with grounding strips will be indicated in technology rooms. Other flooring materials will include porcelain tile for restrooms and vinyl tile for less heavy traffic areas.
- Counter top materials will include quartz for kitchens and solid surface in wet areas, such as restrooms or coffee stations.
- High-pressure plastic laminates will be specified for base and upper cabinets. Worktop counters will be HPL laminates. The number and type of cabinets will be thoroughly reviewed to address function of various areas throughout the facility.

In the space design layout, furniture will indicate the function and number of occupants. Conference and Training rooms will orient the users to the feature wall of monitors or marker boards. Tables will be selected to integrate technology. Offices will be sized for either an L-shape or U-shape desk configuration. Requirements will be reviewed with RRRDC to determine the need for additional office storage, bookcase or meeting areas. Support staff workstations with panel enclosures will be located and sized for the user's program criteria.

Seating will be considered for the various functions, whether for 24/7 heavy-duty, office and task chairs with multiple user adjustments, guest, conference, training, breakroom, enclave lounge and waiting areas.

Areas for rest, wellness, and rejuvenation will be considered to balance the rigors of public safety communications and dispatch services. Outdoor areas will be designed for breaks during shifts. Quiet rooms will be isolated from high-traffic areas. Lockers for personal items will be near dressing and shower areas. Bunk rooms provide rest during long shifts and emergency activation. Accessible spaces and furniture dimensions will be used throughout to meet ADA compliance.

Visual interest for the design approach will include selections of decorative pendant and ambient light fixtures. Furniture and fabrics will enhance the material, pattern, and texture options. Accent paint colors, wallcoverings, decorative tile mosaics, and acoustical panels will provide variety in wall finishes. Window shades will allow control of light.

The Dispatch control consoles will be designed to provide ergonomic workstations that support the challenge of 24/7 shifts and the prompt, efficient response to public safety concerns. Custom configurations will meet the varied ergonomic needs of the dispatchers including flat panel display mounting solutions that easily lift monitors off the worksurface. Electronic height-adjustable worksurfaces provide options for sit-to-stand applications. A control system allows the operator to maintain personal settings for temperature, airflow, lighting, and acoustic attenuation.

## Additional Services

Additional interior design services are available, if requested, to address relocation and refurbishment of existing furniture. FF&E specification documents for new furniture, suitable for bidding from local dealers, can be provided with an indication of quantity, manufacturers, and material selections based on products reviewed in the design development phase. Items listed in construction documents as OPOI, owner purchased/owner installed, can be coordinated. Evaluation of bid responses and procurement assistance can be provided.

## Civil Design Narrative

The civil design for the proposed Red River Regional Dispatch Center will follow the guidelines and requirements from NDDOT and City of Fargo construction specifications. To begin the civil design process geotechnical exploration and site topographical survey will need to be conducted to obtain the existing conditions of the site. The following is the civil design scope:

- Civil Design Scope
  - Site grading and drainage design.
    - Develop slopes, ditches, and grades around site
    - Locate extent of topsoil stripping and area of topsoil respread. There is a large stockpile of existing soil onsite that will need to be moved/removed before grading can begin.
    - Provide soil excavation and compaction requirements.
  - Stormwater design and management.
    - Control site stormwater runoff to follow city and state specifications through ponding, ditches, and/or storm sewer systems.
    - Perform hydrological calculations to ensure site meets local and state requirements.
  - Provide site erosion control and turf establishment measures.
  - Develop a construction storm water pollution prevention plan (SWPPP).
  - Parking lot and entrance road design.
    - Provide pavement design sections and curbing details.
    - Assist with parking lot stripping layout.
    - Provide sidewalk design layout and sections.
      - ADA ramp design and details.
  - Provide underground utility connections and routes. This includes sanitary sewer, potable and fire water, natural gas, and fiber/power.
    - Pipe sizing and slopes based on flow rates.

# Mechanical Electrical Design Narrative

## 1.1.0 REGARDING THIS DOCUMENT

- A. This document describes the design intent of the mechanical scope of work at the Preliminary Design phase. It conveys expectations in terms of design standards, level of quality, and overall Electrical scope.
- B. The mechanical design parameters must be continually reviewed and refined through all phases of the project. Comments from the design team and owner are expected and must be incorporated into the design throughout the project as necessary.
- C. The design shall provide for complete mechanical, electrical, fire protection and plumbing infrastructure for the building. All heating, ventilation and air condition (HVAC) systems serving the dispatch floor, supporting spaces and Data/UPS room will have full redundancy. The sanitary system and potable water supply will also have redundant capabilities.

## 1.2 CODES AND STANDARDS

- A. Codes: The design of the Mechanical systems shall conform to the requirements of the currently adopted versions of following codes:
  - 1. 2021 International Mechanical Code
  - 2. 2021 International Energy Conservation Code
  - 3. 2021 International Fuel Gas Code
  - 4. 2018 North Dakota State Plumbing Code
  - 5. Occupational Safety and Health Administration (OSHA)
  - 6. Life Safety Code (NFPA 101)
  - 7. Americans with Disabilities Act (ADA)
  - 8. State of North Dakota Building Code
  - 9. Applicable Local Building Codes and Amendments
- B. Standards: The design of the electrical systems shall conform to the requirements of the following standards:
  - 1. Underwriters Laboratories (UL)
  - 2. National Electrical Manufacturer's Association (NEMA)
  - 3. Institute of Electrical and Electronics Engineers (IEEE)
  - 4. National Fire Protection Association (NFPA)
  - 5. American National Standards Institute (ANSI)
  - 6. TIA Standards (Commercial Building Telecommunications Wiring and Spaces)
  - 7. Building Industry Consulting Services International (BICSI)

## 1.3 PROJECT OVERVIEW

- A. The project consists of construction of a new, standalone 911 Dispatch Center.
- B. The building will be approximately 15,000 square feet.

## 1.4 MECHANICAL SCOPE

- A. Primary Heating, Ventilating and Air Conditioning (HVAC) Systems:
  - 1. An indoor, modular air-handling unit (AHU) will deliver conditioned forced-air to the entire building. Zoning will be provided via variable air volume terminal boxes with reheat coils.
  - 2. An air-cooled chiller will be used to serve the cooling coil in the air handling unit. The chiller will be located in the secured exterior central utility plant area and protected from damage and vandalism. A redundant set of pumps will be housed in the mechanical room and serve chilled water to the AHU cooling coil.
  - 3. Two high-efficiency, condensing gas-fired water boilers will be the primary heating source for the building. A redundant set of pumps will be housed in the mechanical room and a two-pipe distribution system will serve hot water to the AHU, VAV box reheat coils and various terminal heating units.
- B. Redundant HVAC Systems:
  - 1. The server/UPS room, Dispatch Room and the dispatch supervisor offices will be served by fully redundant, independent HVAC systems to serve as a backup to the primary variable air volume AHU.
  - 2. The server/UPS room will be provided with a refrigerant based (DX), split system air conditioner specifically designed for data centers. It will be capable of operating independently from the other HVAC systems and controls. The outdoor condenser for this unit will be located in the secured central utility plant area. The indoor unit will be located directly in the server room.
  - 3. The Dispatch Room and adjacent supporting spaces will be provided with a refrigerant based (DX), split system air conditioner specifically designed for data centers. It will be capable of operating independently from the other HVAC systems and controls. The outdoor condenser for this unit will be located in the secured central utility plant area. The indoor unit will be located above a ceiling and ducted to these rooms.



C. Building Automation System:

1. A central, computerized controls system will control and monitor all HVAC systems. This system will have a web-based, graphical interface.

D. Plumbing Systems:

1. The building's primary domestic water services will be served from the City of Fargo water distribution system. The water meter will be located in the mechanical room. A storage tank and pump will be provided to serve as an emergency water source if needed. The tank will be sized to provide 1 gallon/occupant per day for a 72 hour period.
2. An electric water heater will provide hot water for the entire building. A recirculation pump will be provided.
3. Fixtures will be provided as requested by Owner and coordinated with the Architect in the restrooms, Janitor room and breakroom.
4. The primary sanitary service will be routed to the City of Fargo' municipal sanitary system. An underground sanitary tank will be provided to serve as an emergency sanitary service. The tank will be sized to provide 1.5 gallons/occupant per day for a 72 hour period.
5. Interior roof drains will be provided as required by the building's roof design. The primary drains will be piped to the City of Fargo's municipal storm sewer system. Overflow drains will be provided and directed to grade as required.

## 2.1 FIRE PROTECTION SCOPE

A. Automatic Fire Sprinkler Systems:

1. A new minimum 6-inch underground water main shall be routed into the building adjacent to an exterior wall. The pipe type shall be ductile iron or PVC (C900) and terminate with a flange approximately 1'-0" AFF.
2. A new double check backflow assembly shall be provided as required by the North Dakota Plumbing Code and be located after the lead-in flange. A backflow test outlet shall be included with a normally closed butterfly control valve sized to flow the full system demand and routed to the exterior. The test outlet shall be flush-type with 2 ½" NPT male hose threads and escutcheon.
3. A wet-pipe system riser shall be provided including a butterfly control valve with tamper switch, a flow switch, and a test & drain valve with relief valve and gauge.

4. The wet-pipe, automatic fire sprinkler system shall protect all areas not considered 'vital' to the Dispatch Center Operations. Rooms with a drop ceiling shall be protected with concealed type sprinklers with a flat, round cover plate with a white finish. All rooms without a drop ceiling shall be provided with upright sprinklers with a brass finish.
5. Meeting rooms, offices, restrooms, corridors, and similar spaces shall be designed to Light Hazard (LH) parameters as per NFPA 13. Mechanical, electrical, and janitorial spaces shall be designed to Ordinary Hazard Group 1 (OH1) parameters per NFPA 13. Storage rooms shall be designed to Ordinary Hazard Group 2 (OH2) parameters per NFPA 13.
6. A new single interlock preaction system shall be provided in areas considered 'vital' to the Dispatch Center operations. The Dispatch Floor, Server/UPS rooms, and all communicating spaces shall be protected with the preaction system. The preaction system shall be initiated utilizing an early warning air sampling smoke detection system (e.g., VESDA or approved equal).
7. A new fire department connection (FDC) will be located as required by NFPA 13 and approved by the local fire department.
8. The automatic fire sprinkler systems will be designed to meet NFPA 13.

B. Clean agent Suppression System:

1. The Server/UPS room, Dispatch Floor and all communicating spaces will be provided with a clean agent suppression system. The system will be either NOVEC 1230 or an inert gas suppression system. Initiation of this special hazard suppression system will be by an early warning air sampling smoke detection system (VESDA). Both special hazard suppression system options will be evaluated to determine which will be best to protect this hazard.
2. Location and size of the agent cylinders will need to be considered as it is advantageous for the NOVEC 1230 cylinders to be located as close as is possible to the protected hazard.
3. Protection of the above ceiling space and any raised floor spaces will need to be evaluated also.
4. A releasing panel will be included with the clean agent suppression system that will be connected to the building fire alarm control panel (FACP) for monitoring.
5. The clean agent suppression system will be designed to meet the current edition of NFPA 2001.

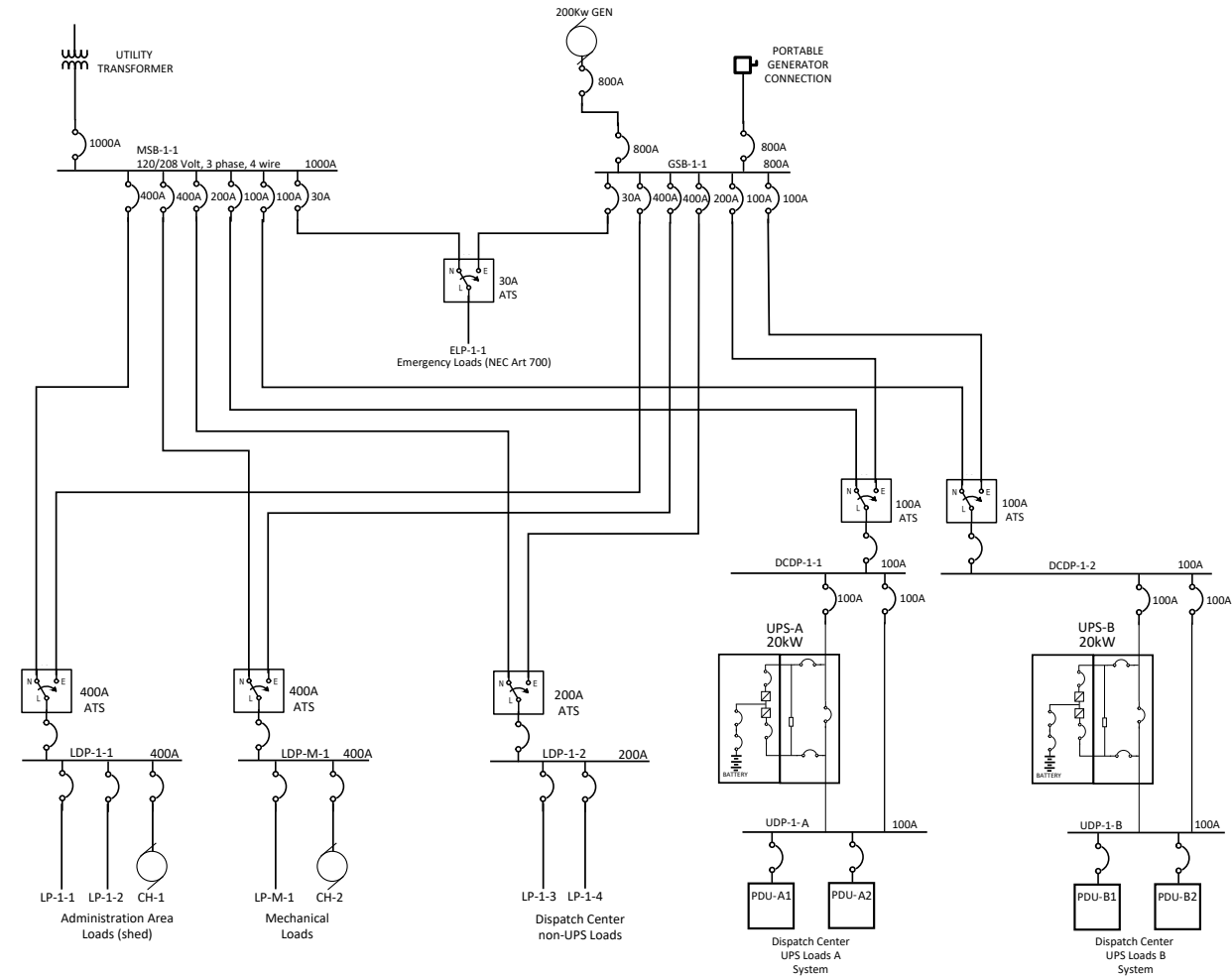
## 2.2 ELECTRICAL SCOPE

- c. Provide a 1000 amp, 120/208 volt, 3 phase, 4 wire, 65KAIC electrical service. Coordinate connection cabinet and transformer pad requirements with utility. Utility metering shall be incorporated into the connection cabinet.
- d. A 10' X 15' Main Electrical Room will be incorporated into the design. The main electrical room shall have an outward swinging door equipped with panic hardware.
- e. One (1) smaller 6' X 8' remote electrical room will be incorporated into the design.
- f. Provide a 1000-amp 120/208 volt, 3 phase 4 wire main switchboard in the main electrical room. The switchboard shall consist of:
  - 1. A utility section. Coordinate requirements with utility.
  - 2. Main 1000-amp circuit breaker.
  - 3. Distribution sections containing circuit breakers to feed Automatic Transfer Switches (ATS's).
- g. Provide a 3-1/2" housekeeping pad.
- h. Emergency power:
  - 1. Provide a 200kW 12/208 Volt 3 phase, 4 wire, diesel generator complete with an insulated exterior enclosure, integral fuel tank and silencer.
    - a. Fuel tank shall be sized to provide 72 hours of run time fully loaded.
    - b. The generator shall have an 800 amp output circuit breaker.
  - 2. Provide an 800 amp 120/208 volt, 3 phase, 4 wire distribution board with an 800 amp main breaker fed from the generator.
  - 3. Provide an 800 amp portable generator connection cabinet near the emergency generator. The cabinet shall be connected to the generator distribution board with an 800 amp breaker
    - a. The main breaker and the connection cabinet breaker shall be interlocked with a Kirk-Key interlock. The main breaker must be opened before the connection cabinet breaker can be closed.
- i. Administration Distribution (non-critical Loads - Shed)
  - 1. Provide a 200A ATS for the non-critical, building administration area loads. These loads could be shed to extend critical load duration.
    - a. The ATS shall be fed from the normal building switchboard and the generator switchboard.
  - 2. Provide a 120/208 volt, 3 phase, 4 wire, 200A distribution panel fed from the ATS.

- 3. Provide two (2) 120/208 volt, 3 phase, 4 wire, 200A, MCB, 42 circuit branch circuit panelboards fed from the distribution panel. Rated 42KAIC.
- j. Dispatch Center Non-UPS distribution
  - 1. Provide a 200A ATS for dispatch center non-UPS loads.
    - a. The ATS shall be fed from the normal building switchboard and the generator switchboard.
  - 2. Provide a 120/208 volt, 3 phase, 4 wire, 200A distribution panel fed from the ATS.
  - 3. Provide two (2) 120/208 volt, 3 phase, 4 wire, 200A, MCB, 42 circuit branch circuit panelboards fed from the distribution panel. Rated 42KAIC
- k. Mechanical Distribution
  - 1. Provide a 400A ATS for mechanical loads.
    - a. The ATS shall be fed from the normal building switchboard and the generator switchboard.
  - 2. Provide a 120/208 volt, 3 phase, 4 wire, 400A distribution panel fed from the ATS.
  - 3. Provide a 120/208 volt, 3 phase, 4 wire, 225A, MCB, 42 circuit branch circuit panelboard fed from the distribution panel. Rated 42KAIC.
  - 4. Provide a breaker in the distribution panel to feed the chiller.
- l. Emergency Distribution (NEC article 700)
  - 1. Provide a 30A ATS for emergency loads (egress lighting, fire alarm systems etc.).
    - a. The ATS shall be fed from the normal building switchboard and the generator switchboard.
  - 2. Provide a 120/208 volt, 3 phase, 4 wire, 60A distribution panel fed from the ATS.
- m. Dispatch Center UPS Distribution.
  - 1. The dispatch center loads shall be dual cored and fed from two separate UPS distribution systems A & B.
  - 2. Each UPS distribution system shall include the following:
    - a. Provide a 100 amp ATS for each UPS distribution system.
    - b. Provide a 120/208 volt, 3 phase, 4 wire, 100A data center distribution panel fed from the ATS. The distribution panel shall have two (2) 100 amp breakers.
    - c. Provide a 20Kw UPS with internal maintenance by-pass fed from the distribution panel. The output of the UPS shall feed a UPS distribution panel.
    - d. Provide a breaker in the data center distribution panel to feed the UPS distribution panel directly for UPS by-pass.

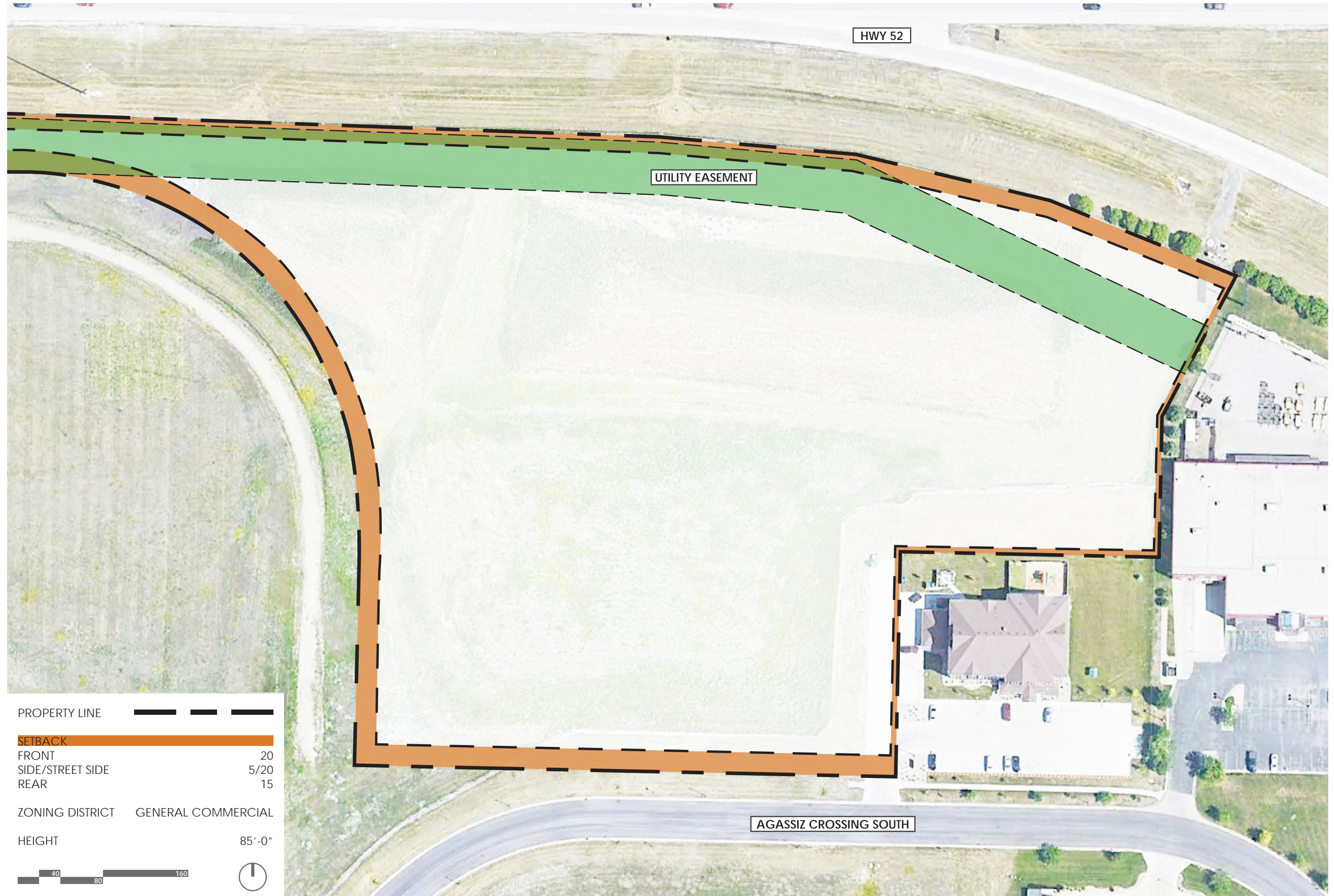
- e. Provide a 120/208 volt, 3 phase, 4 wire, 100A UPS distribution panel fed from the UPS and the Data Center Distribution Panel.
  - f. Provide two (2) Power Distribution Units (PDU's) fed from the UPS Distribution Panel.
  - g. The PDU's will provide power to the critical 911 loads.
- N. Provide LED lighting throughout the building.
- O. Provide lighting controls to meet the Energy Code throughout the building.
- P. Provide exterior LED lighting at building exits and in the Parking lot.
- Q. Make power connections to mechanical equipment. Refer to mechanical narrative for additional information.
- R. Provide an addressable Fire Alarm system.
1. Fire alarm system shall monitor the buildings fire suppression systems and connect to central station monitoring.
  2. Shall include required detection and annunciation devices.
- S. Provide rough-in for low voltage systems including: voice/data/video structured cabling system, access control system, video surveillance system, A/V systems, CCTV systems, etc. Refer to technology's narrative for additional information.


*End of Schematic Design Narrative*




RED RIVER REGIONAL DISPATCH CENTER  
ELECTRICAL ONE-LINE DIAGRAM





PROPERTY LINE 

**SETBACK** 



FRONT 20

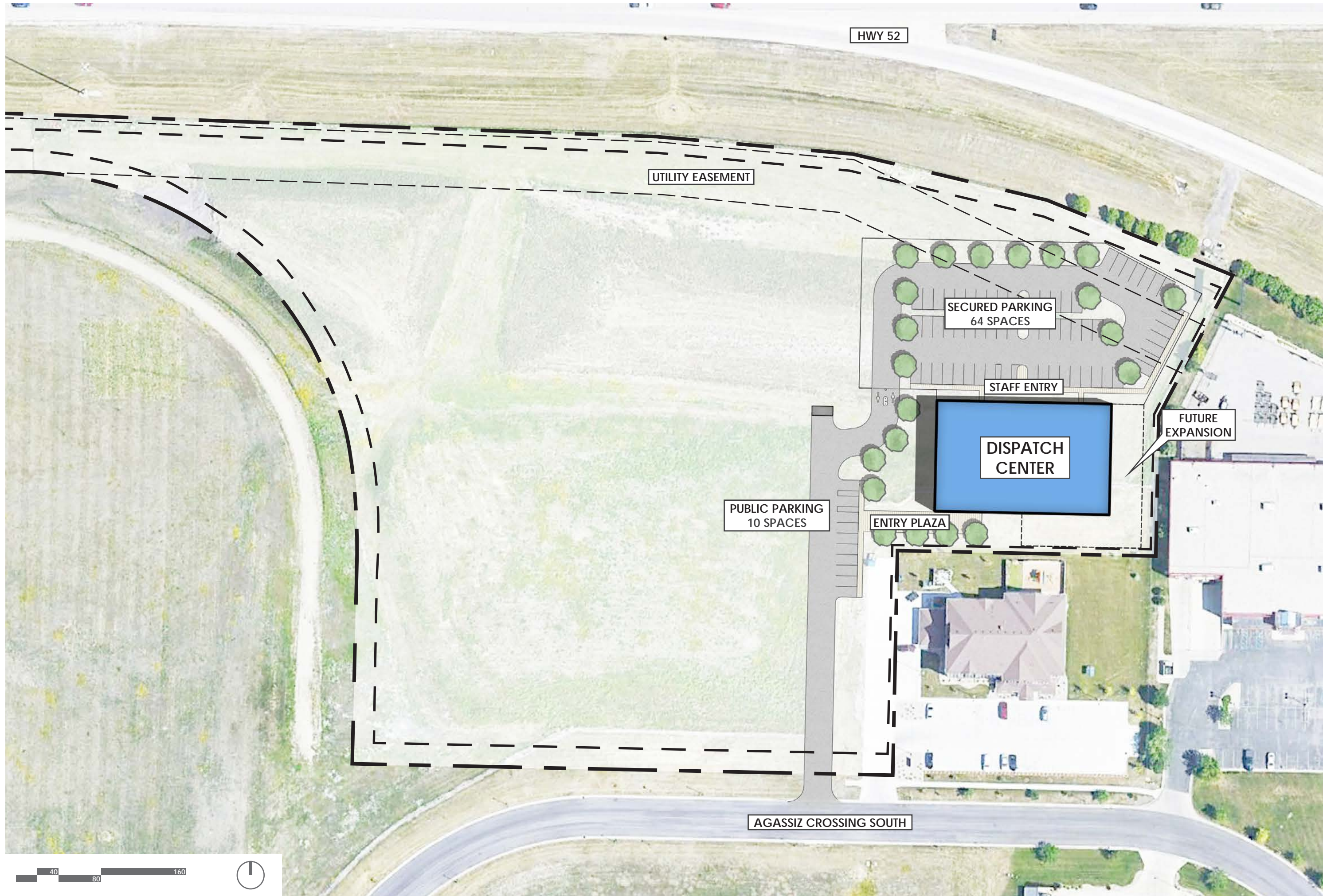
SIDE/STREET SIDE 5/20

REAR 15

ZONING DISTRICT GENERAL COMMERCIAL

HEIGHT 85'-0"









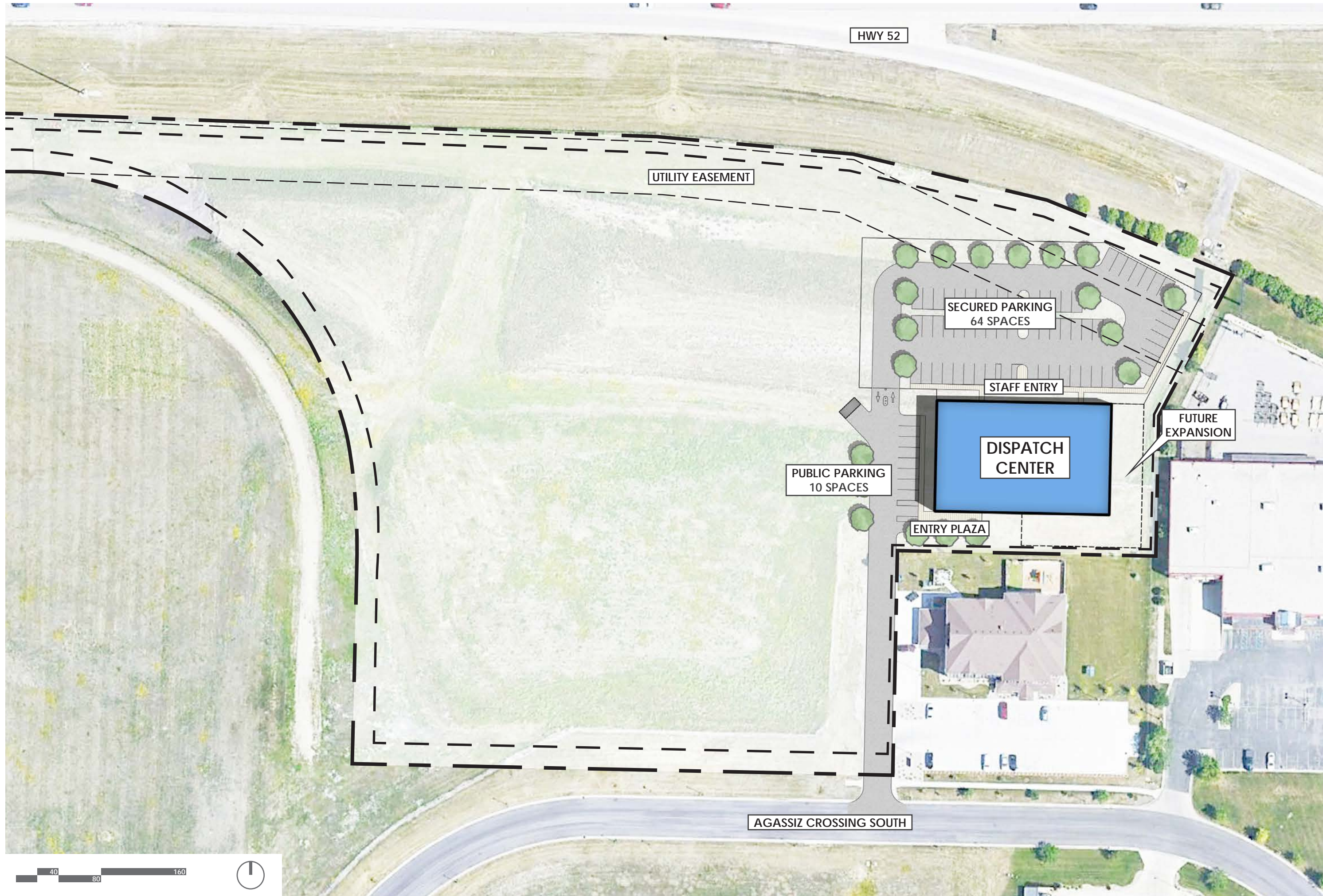


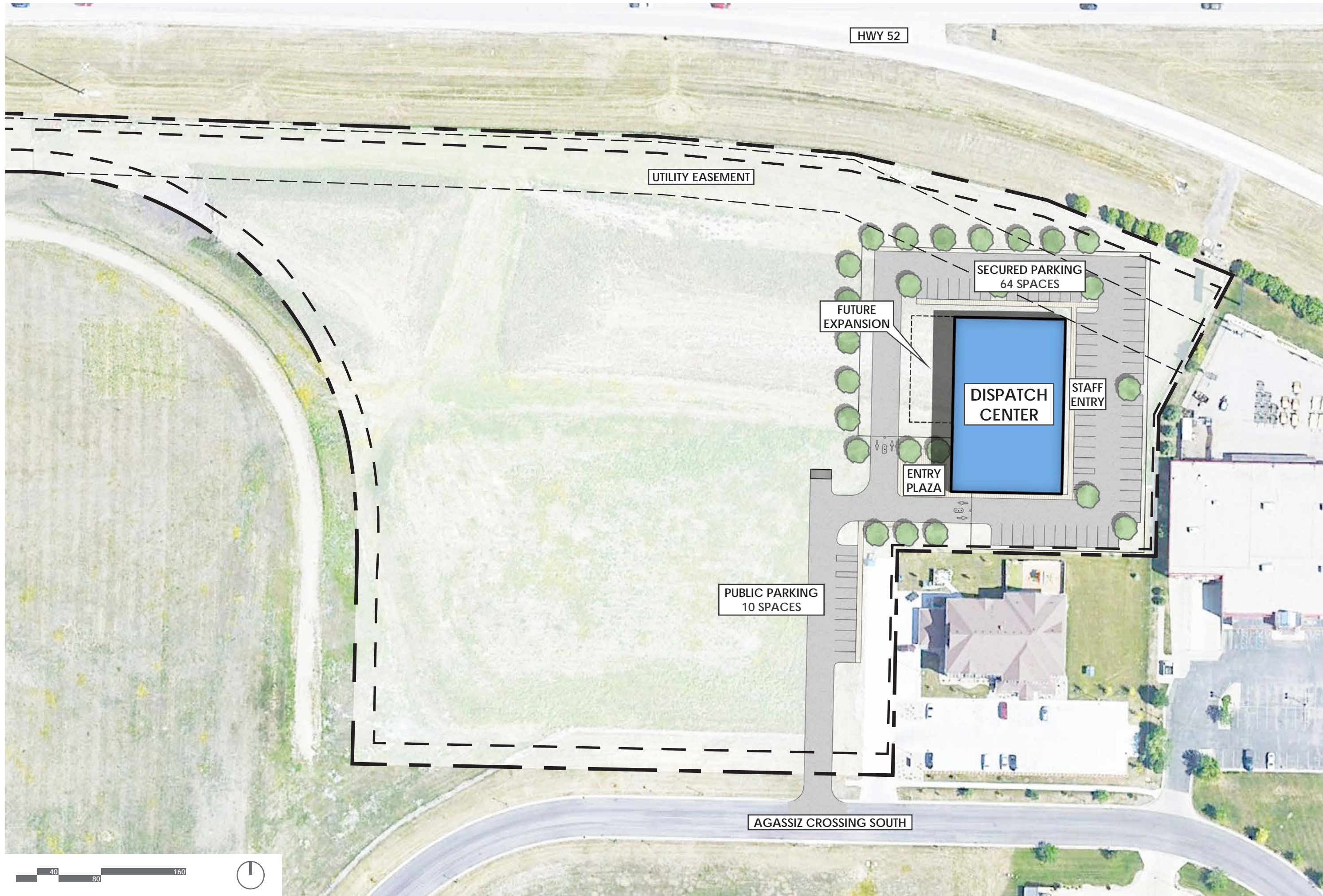


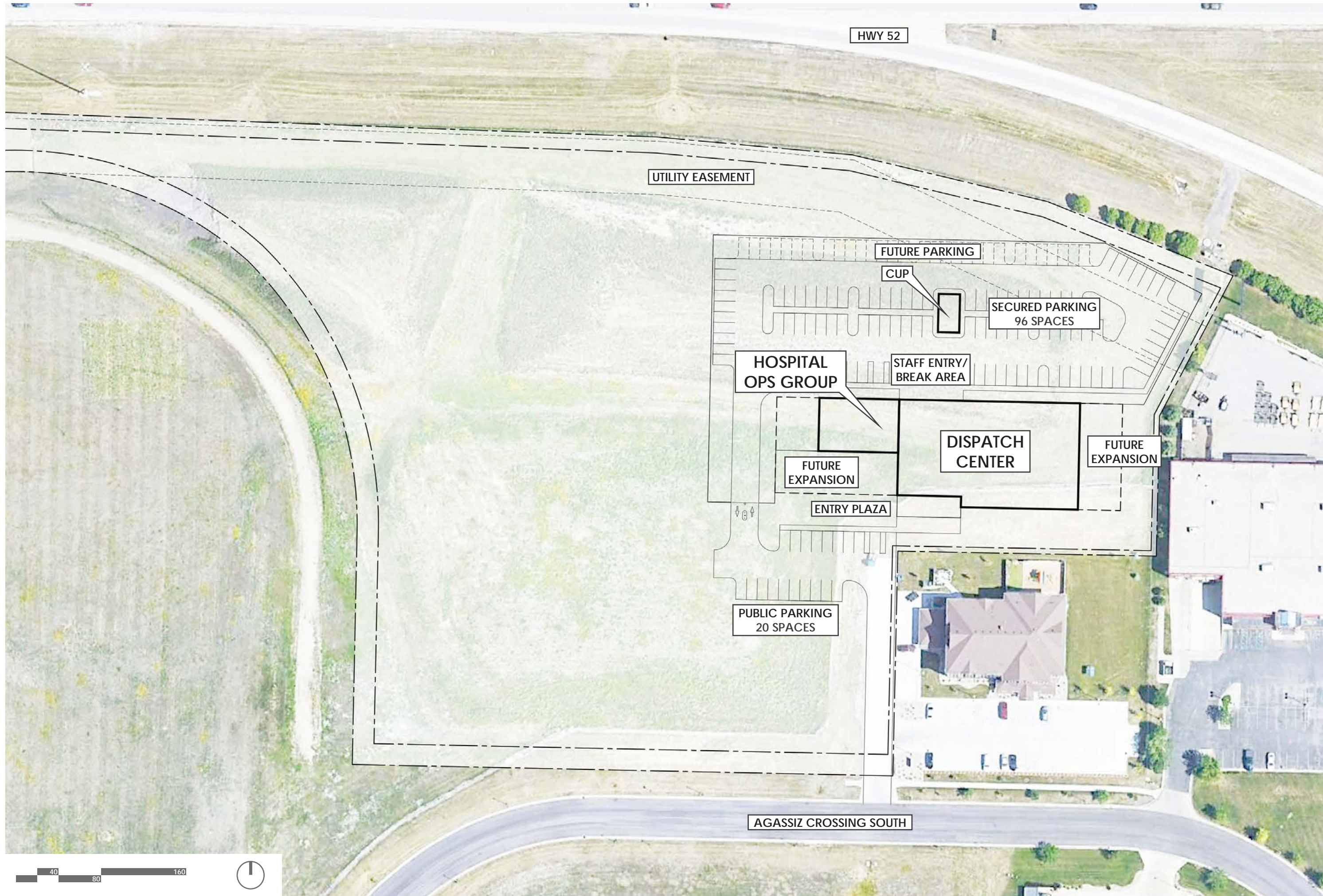




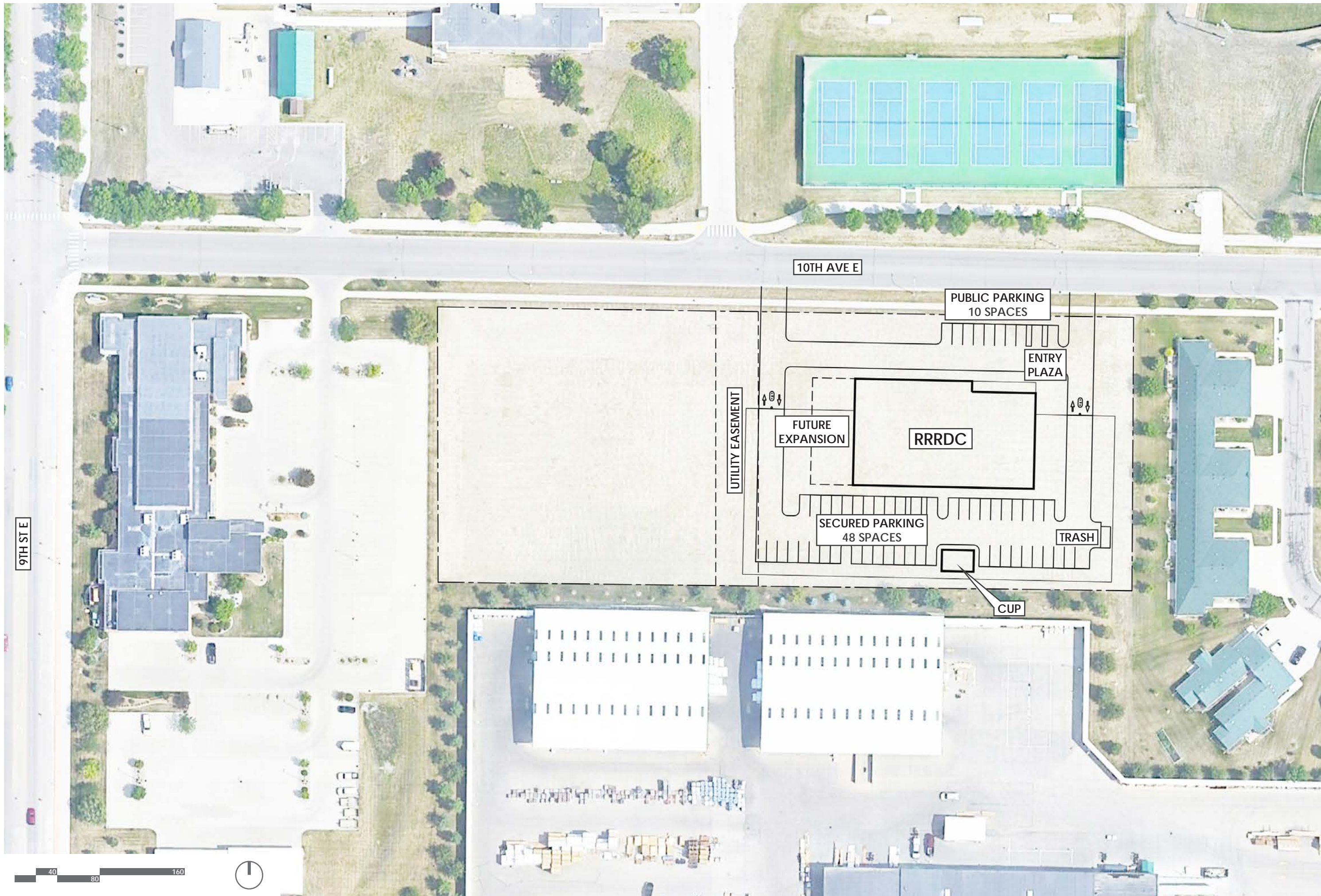


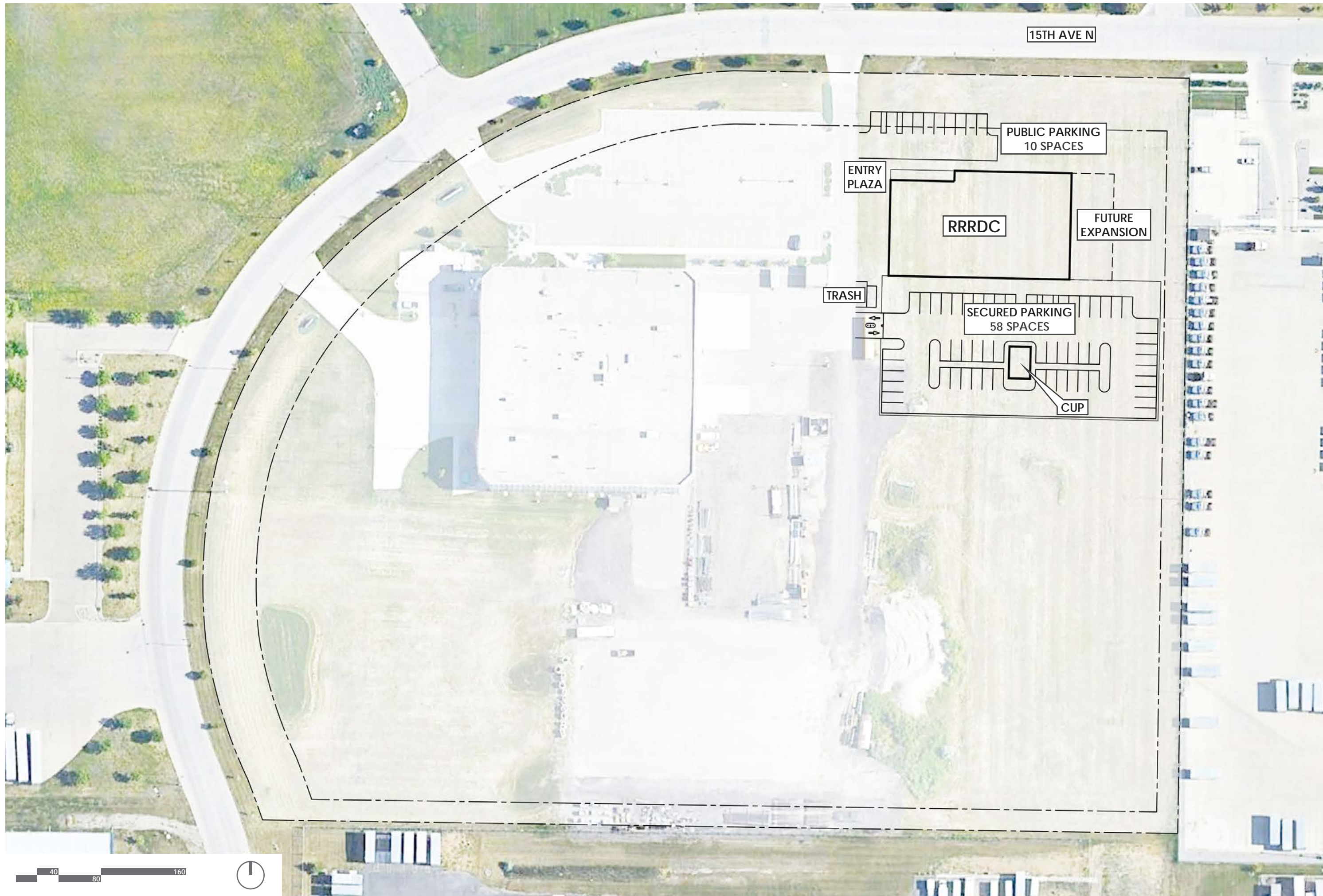












15TH AVE N

PUBLIC PARKING  
10 SPACES

ENTRY  
PLAZA

RRRDC

FUTURE  
EXPANSION

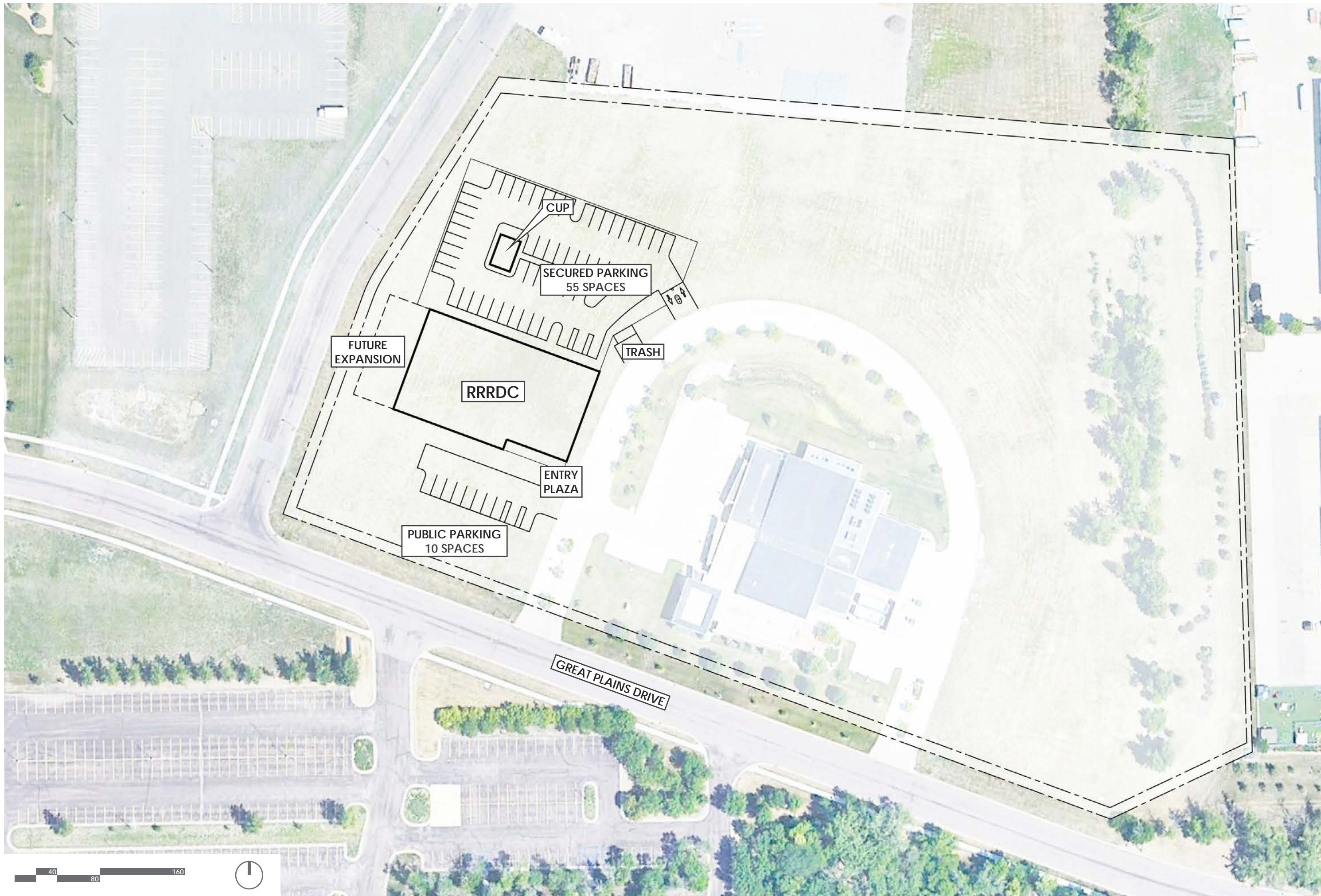
TRASH

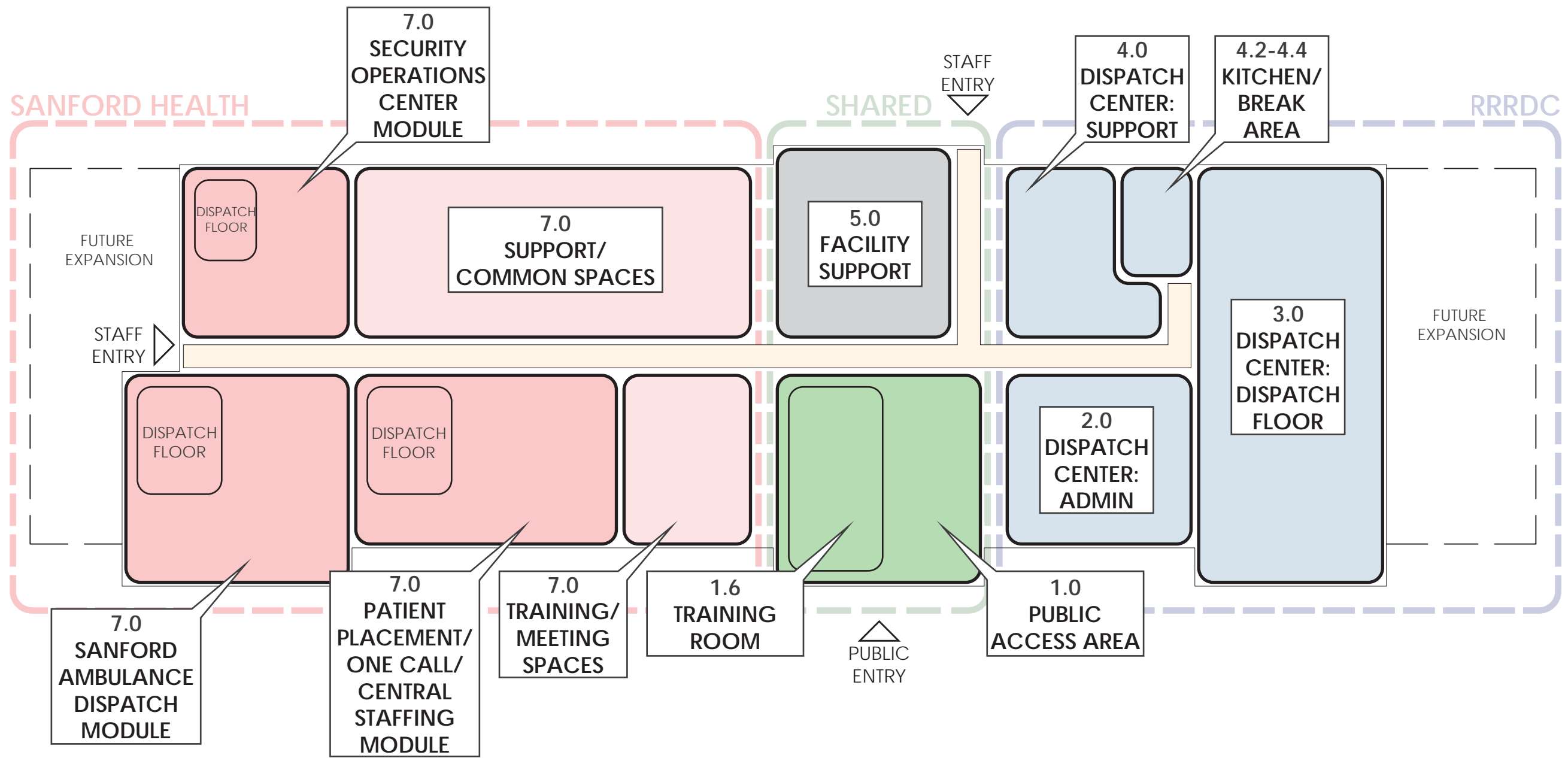
SECURED PARKING  
58 SPACES

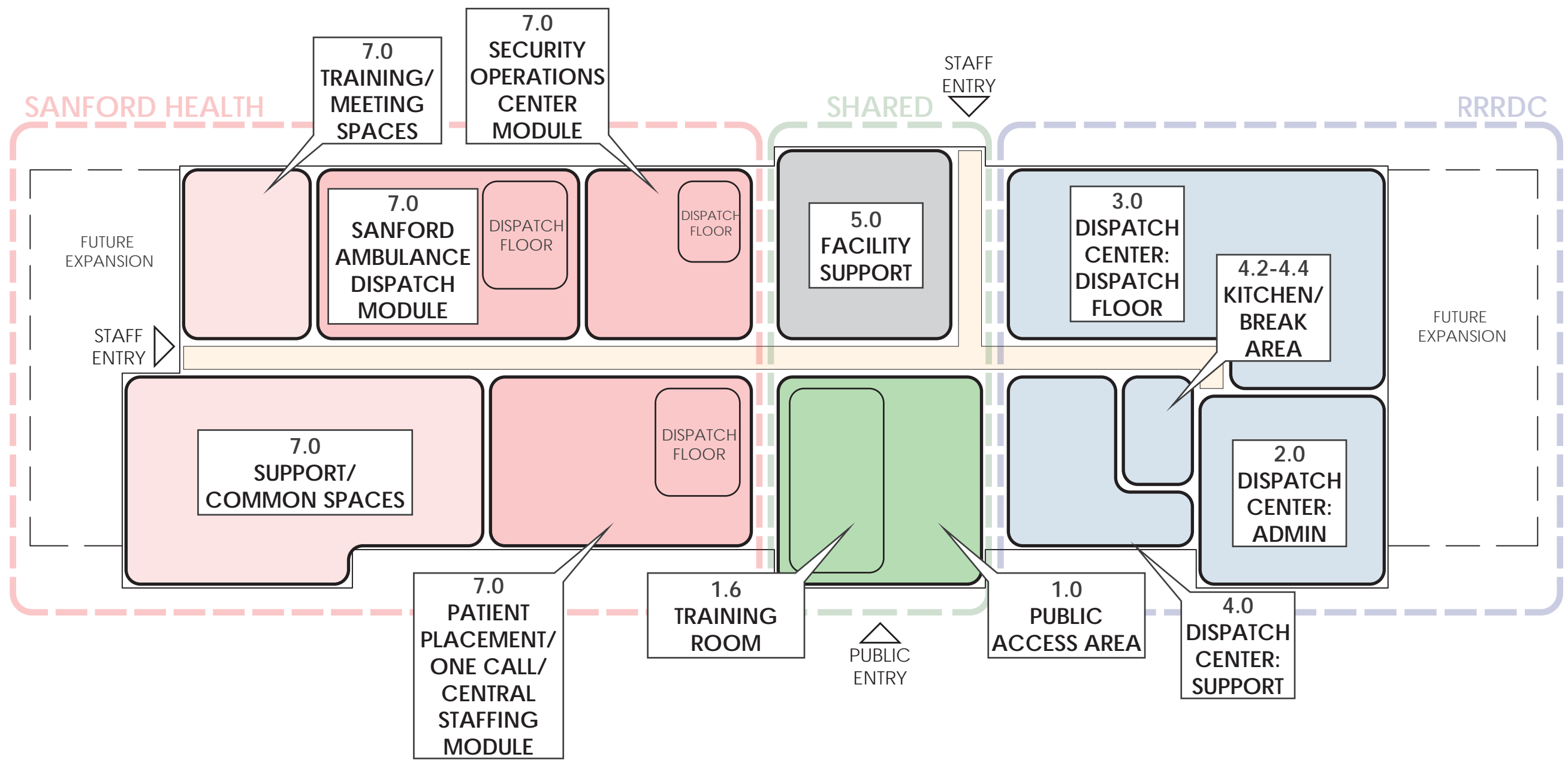
CUP

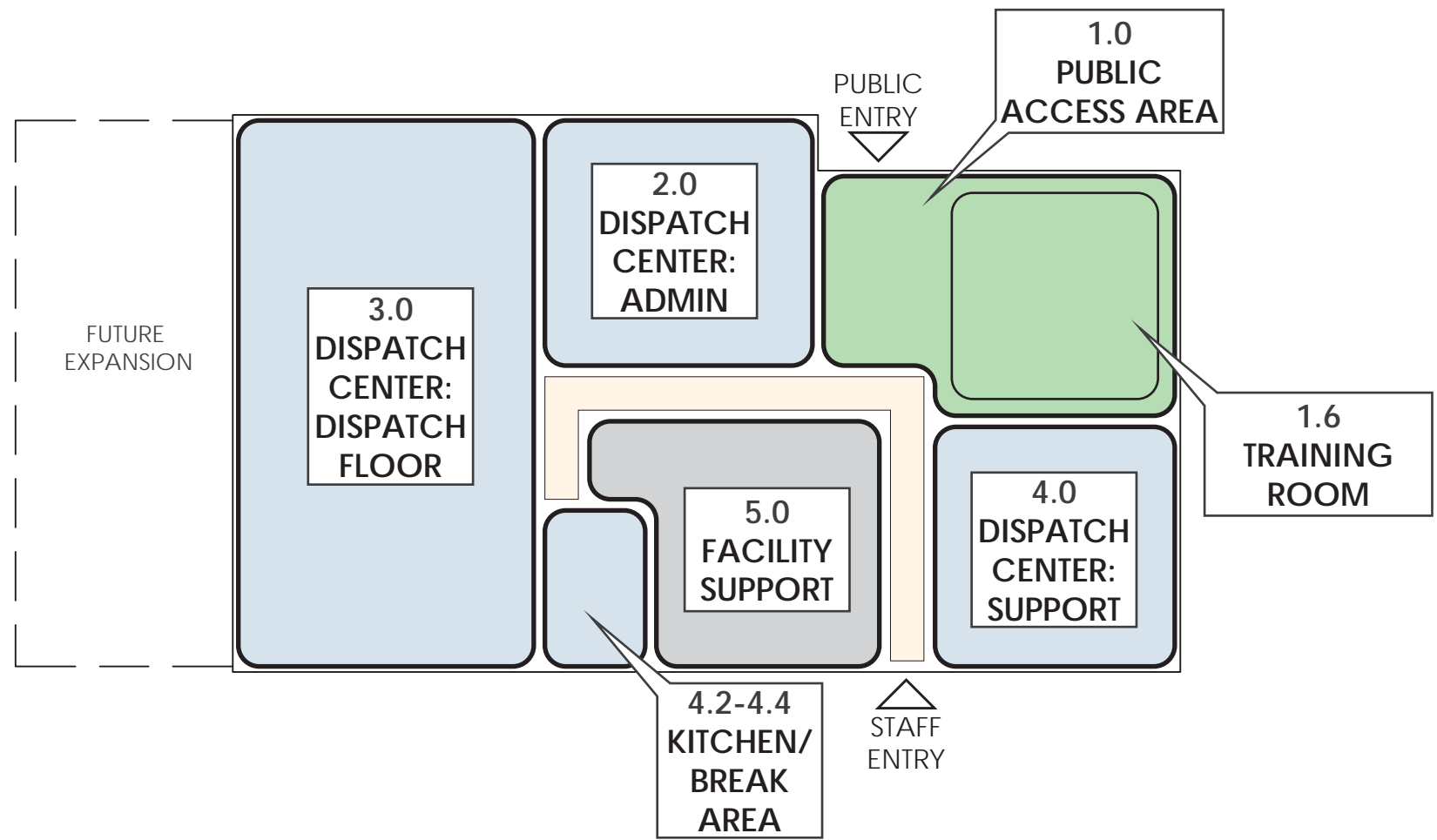
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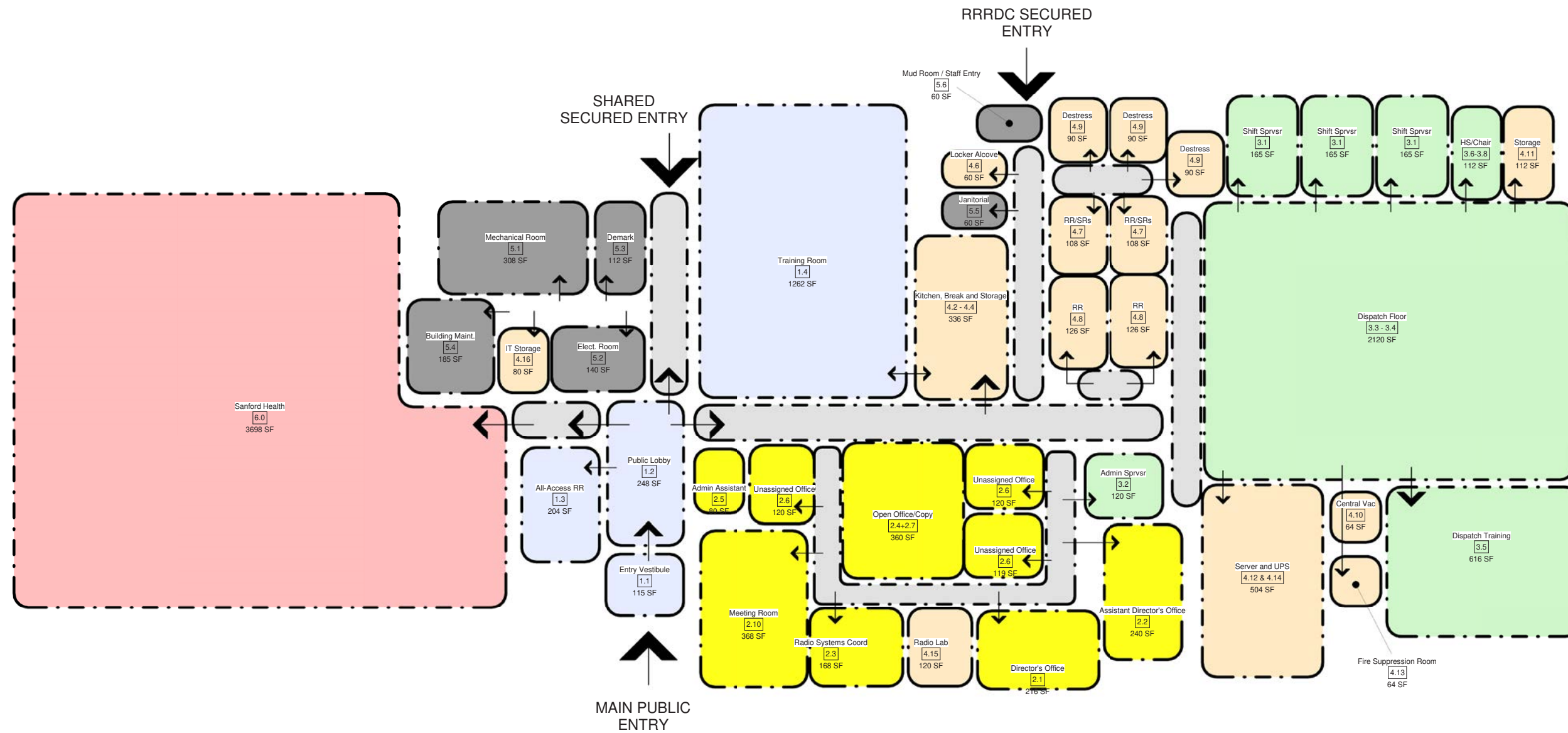








- 1.0: Public Access Areas
- 2.0: Dispatch Center: Administration
- 3.0: Dispatch Center: Dispatch Floor
- 4.0: Dispatch Center: Support
- 5.0: Facility Support
- 6.0: Sanford Health



- 1.0: Public Access Areas
- 2.0: Dispatch Center: Administration
- 3.0: Dispatch Center: Dispatch Floor
- 4.0: Dispatch Center: Support
- 5.0: Facility Support
- 6.0: Sanford Health







**Legend**

- |   |  |
|---|--|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> 1.0: Public Access Areas             | <span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> 4.0: Dispatch Center: Support |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> 2.0: Dispatch Center: Administration | <span style="display: inline-block; width: 15px; height: 15px; background-color: #808080; border: 1px solid black; margin-right: 5px;"></span> 5.0: Facility Support         |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 3.0: Dispatch Center: Dispatch Floor | <span style="display: inline-block; width: 15px; height: 15px; background-color: #FFB6C1; border: 1px solid black; margin-right: 5px;"></span> 6.0: Sanford Health           |
| <span style="display: inline-block; width: 15px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Secured entry   |  |

**NOTE:**

1. One Distress Room (4.9) added (@100 SF). This was offset by Radio Lab (4.15) reduced from 120 sf to 66 sf.
2. The Server and UPS Room (4.12 & 4.14) increased from 500 sf to 736 sf.
3. This option assumes a larger Server and UPS Room (4.12 & 4.14) dedicated to RRRDC. IT Storage was enlarged to accommodate a Network Demark.
4. The Sanford Health (Department 6.0) was increased to 4,910 sf based on the 7/25/2022 programming meeting.



**Legend**

<span style="display: inline-block; width: 15px; height: 15px; background-color: #d9e1f2; border: 1px solid black; margin-right: 5px;"></span> 1.0: Public Access Areas	<span style="display: inline-block; width: 15px; height: 15px; background-color: #f4a460; border: 1px solid black; margin-right: 5px;"></span> 4.0: Dispatch Center: Support
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff2cc; border: 1px solid black; margin-right: 5px;"></span> 2.0: Dispatch Center: Administration	<span style="display: inline-block; width: 15px; height: 15px; background-color: #cccccc; border: 1px solid black; margin-right: 5px;"></span> 5.0: Facility Support
<span style="display: inline-block; width: 15px; height: 15px; background-color: #d9ead3; border: 1px solid black; margin-right: 5px;"></span> 3.0: Dispatch Center: Dispatch Floor	<span style="display: inline-block; width: 15px; height: 15px; background-color: #f4cccc; border: 1px solid black; margin-right: 5px;"></span> 6.0: Sanford Health
<span style="display: inline-block; width: 15px; border-bottom: 2px dashed red; margin-right: 5px;"></span> Secured entry	

**NOTE:**

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**Legend**

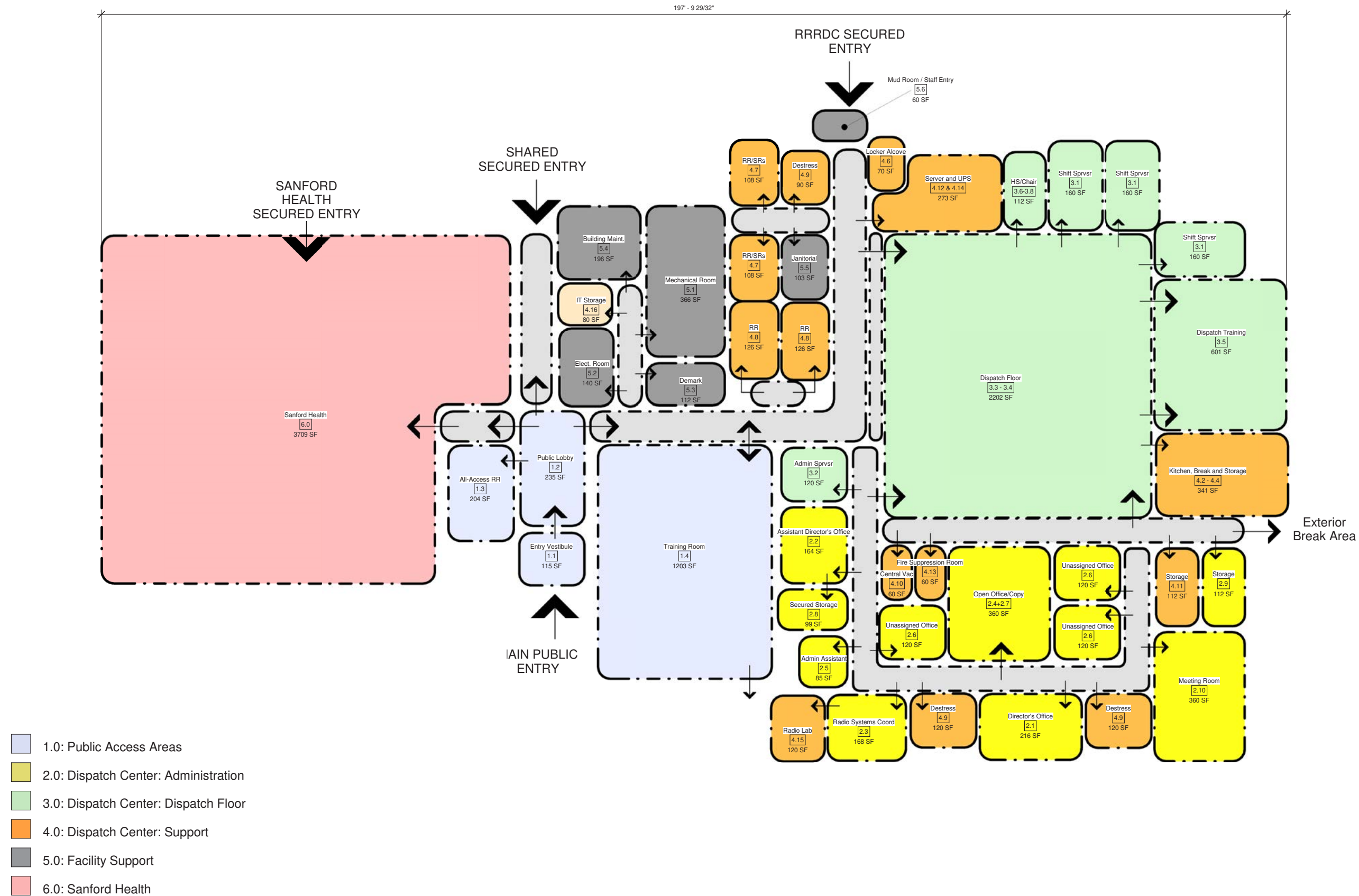
- 1.0: Public Access Areas
- 4.0: Dispatch Center: Support
- 2.0: Dispatch Center: Administration
- 5.0: Facility Support
- 3.0: Dispatch Center: Dispatch Floor
- 6.0: Sanford Health
- Secured entry

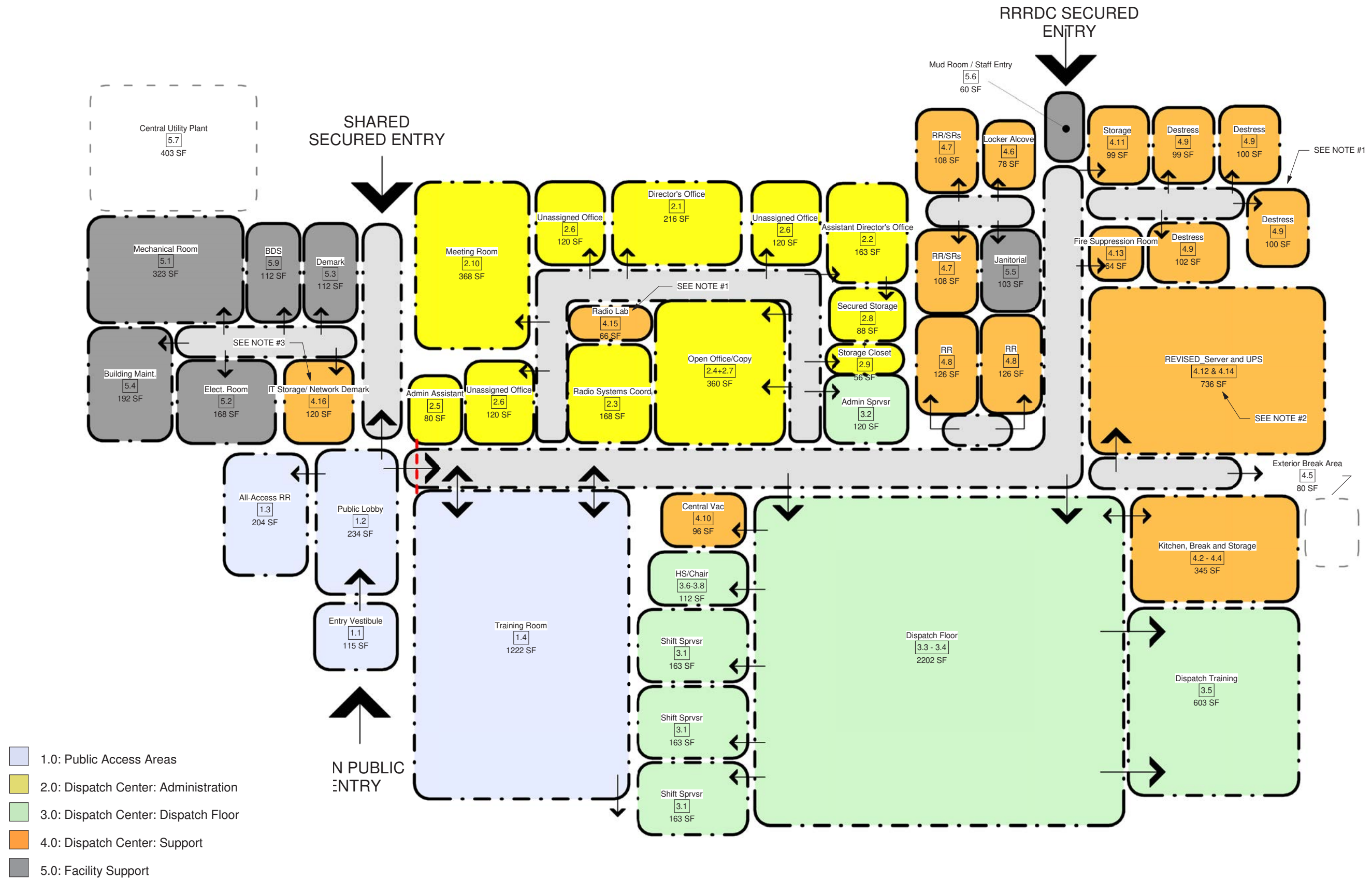
**NOTE:**

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- 1.0: Public Access Areas
- 2.0: Dispatch Center: Administration
- 3.0: Dispatch Center: Dispatch Floor
- 4.0: Dispatch Center: Support
- 5.0: Facility Support
- 6.0: Sanford Health











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