

PUBLIC WORKS STUDY CITY OF RAMSEY, MN

Draft Report

November 12, 2015



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II. Facility Assessment

A. INTRODUCTION

The purpose of this section of the study is to assess the condition of the existing Ramsey Public Works facilities. This information provides the necessary data to assist the City Leadership to make informed decisions regarding how to best address the existing city infrastructures for long range planning. With this information the report identifies possible repairs, upgrades and/or replacement of these facilities based on conditions as well as operational requirements.

The process starts with the BKV Group team becoming familiar with previous data, studies, documents and drawings for the buildings to be studied. The next step is an on-site meeting and tour of each facility with BKV Group's team of architects and engineers to tour the buildings and site. Following these visits, BKV Group documents the conditions.

The Facility Assessments were conducted on July 30, 2015.

The individuals present for the tour were:

- Grant Riemer
Public Works Superintendent
- Bruce Schwartzman, AIA
Partner & Managing Architect with BKV Group
- Ron Hilton
Senior Vice President with Maintenance Facility Consultants, a division of Whitman, Requardt & Associates, LLP
- Craig Carter, AIA
Senior Project Architect with BKV Group

The assessments included on-site observations of the existing facilities and review with key staff regarding the functional operation of the buildings. This portion of the process identified assets and deficiencies. The physical conditions of the buildings were assessed, as well as the way in which the building's design affects staff operations. A physical condition review of the buildings is performed to determine maintenance issues, safety and code concerns, and review how conditions affect building system operations and energy costs.

The assessments are intended to provide an indication of capital maintenance requirements, potential code and regulatory required upgrades, and other building conditions which should be considered as part of the facility's general upkeep as well as part of any building project. The study does not address potential environmental issues such as asbestos or deconstructive testing for unseen conditions. The facility assessments are not intended to be exhaustive, but rather to assess and highlight the major building deficiencies in four major categories:

1. Functional accommodations
2. Safety / security of staff and visitors
3. Code related deficiencies
4. Capital maintenance / building envelope

II. Facility Assessment

B. FACILITY ASSESSMENT REPORT

A brief summary of the existing conditions and deficiencies identified within each facility follows.

- B.1. Utility and Sign Shop
- B.2. Vehicle Storage
- B.3. Fleet Maintenance and Shops
- B.4. Salt Storage Building
- B.5. Administration Trailer
- B.6. Site
- B.7. Fuel Island
- B.8. Police Impound



Existing Site Conditions

II. Facility Assessment

B.1. UTILITY AND SIGN SHOP

The utility and sign shop building was built in the early to mid 1970's and is approximately 5,000 sf. It consists of a pre-engineered metal building with metal wall panels and roof. The exterior wall has approximately a 8 ft high concrete masonry unit base course.

The following photographs and captions summarize our findings:



Figure B.1.2: No code-required exit door



Figure B.1.3: Overhead door opening infilled with metal panel and wood studs



Figure B.1.1: Overall view of Utility and Sign Shop Building



Figure B.1.4: Overhead door jamb damaged and rusting

II. Facility Assessment



Figure B.I.5: Damaged / torn insulation and vapor barrier



Figure B.I.8: Soil erosion at perimeter of building suggests evidence of gutters overflowing



Figure B.I.6: Damaged metal gutter at overhead door



Figure B.I.9: Hollow metal door and frame rusting and signs of moisture damage at masonry wall along grade



Figure B.I.7: Depressed asphalt at door threshold causing ponding and drainage issues



Figure B.I.10: Hollow metal door and frame rusting

II. Facility Assessment



Figure B.1.11: Storage shelving placed too close together for safe access



Figure B.1.14: Evidence of roof leaks in sign shop area



Figure B.1.12: Exit door has deadbolt with thumb-turn which is not allowed by code



Figure B.1.15: Restroom is not handicap accessible



Figure B.1.13: Sign shop is not handicap accessible



Figure B.1.16: Staff lockers are not handicap accessible

II. Facility Assessment

B.2 VEHICLE STORAGE

The Vehicle Storage building consists of a pre-engineered metal structure with insulated metal wall panels. The building is 13,228 sf and was built in the mid 1970's to early 1980's. An addition to the West end of the building was constructed similarly, the year of the addition is unknown.

The following photographs and captions summarize our findings:



Figure B.2.2: Hollow metal door and frame on South facade is rusting



Figure B.2.3: Northwest exit door is stuck in closed position, does not meet code



Figure B.2.1: Overall view of Cold Storage Building



Figure B.2.4: Building lacks floor drains in main storage area creating slip hazards from wet vehicles

II. Facility Assessment



Figure B.2.5: Condensate drain is located high on the wall causing rust stains on South facade



Figure B.2.8: Steel structure is showing evidence a failing finish and rusting



Figure B.2.6: Insulation and vapor barrier is damaged



Figure B.2.9: Settling of concrete apron at North overhead door has necessitated asphalt patching



Figure B.2.7: Exit door is locked with deadbolt, does not meet code



Figure B.2.10: Exterior metal panel cladding is damaged at North facade

II. Facility Assessment

B.3 FLEET MAINTENANCE AND SHOPS

The Fleet Storage and Maintenance Building is a concrete masonry block building with precast double T's for the roof structure. The building is 12,258 sf and was built in the mid 1970's to early 1980's.

The following photographs and captions summarize our findings:

- Existing restroom is not handicap accessible
- Exit doors are being locked using thumb-turn style deadbolt which does not meet code



Figure B.3.2: Exterior masonry jambs have been repaired at overhead door but lack proper sealing/finishing

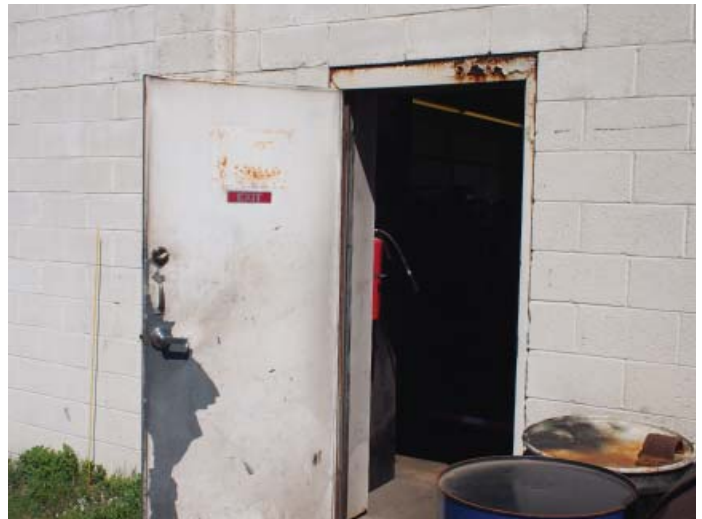


Figure B.3.3: Exterior hollow metal doors and frames are rusting



Figure B.3.1: Overall view of Fleet Storage Building



Figure B.3.4: Concrete apron at overhead doors is cracking and spalled

II. Facility Assessment



Figure B.3.5: Cracks are visible in exterior masonry walls on North and South facades



Figure B.3.8: Moisture damage is visible at base of masonry wall, exterior finish is failing and chipping off



Figure B.3.6: Vertical cracks are visible in masonry pilaster at West facade



Figure B.3.9: Evidence of thermal bridging throughout the building as dirt has accumulated at areas of condensation aligning with the studs



Figure B.3.7: Downspouts have eroded soil at base of wall/foundation causing potential drainage issues



Figure B.3.10: Staff lockers are not handicap accessible and are located in main storage area

II. Facility Assessment



Figure B.3.11: Concrete slab on grade is heavily worn, spalling and cracking

II. Facility Assessment

B.4 SALT STORAGE BUILDING

The salt storage building consists of a fabric roof structure supported by aluminum space frame set on round concrete foundation posts. The salt is kept from spilling out by precast concrete walls cantilevered up from the ground. The salt storage building covers 6,000 sf and was built in 2006. The building is in good shape and could be relocated if necessary.

The following photographs and captions summarize our findings:



Figure B.4.2: Precast wall panels and concrete foundation piers along exterior wall are in good condition



Figure B.4.3: Aluminum space frame structure appears in good condition



Figure B.4.1: Overall view of Salt Storage Building



Figure B.4.4: Overall fabric roof structure is in good condition

II. Facility Assessment

B.5 ADMINISTRATION TRAILER

The Administration Trailer is a 10 year old double-wide temporary trailer of approximately 1,600 sf.

The following photographs and captions summarize our findings:



Figure B.5.2: Main entrance lacks signage directing to accessible entrance



Figure B.5.3: Ceiling is starting to sag and separate at seam of trailer



Figure B.5.1: Overall view of Administration Trailer



Figure B.5.4: Exterior cladding is showing age and needs to be painted

II. Facility Assessment



Figure B.5.5: Hole in floor is covered with sheet metal



Figure B.5.8: Office space is insufficient for staff needs



Figure B.5.6: Areas of missing VCT floor finish



Figure B.5.9: Staff lockers are not handicap accessible



Figure B.5.7: VCT floor finish shows extensive wear



Figure B.5.10: Supply and waste pipes at lavatory are not insulated

II. Facility Assessment



Figure B.5.11: Mechanical systems are in good condition



Figure B.5.12: Electrical systems are adequate and in good condition

II. Facility Assessment

B.6 SITE

The current site encompasses two parcels separated by 142nd Avenue Northwest. The Northern parcel is 2.07 acres and is used for granular material storage along with the Utility and Sign Shops building located at the far North end. The southern parcel is 3.17 acres and contains the Administration Trailer, Fleet Storage Buildings and Salt Storage.

The following photographs and captions summarize our findings:



Figure B.6.3: On-site pavement has multiple cracks and has less than 10 years of useful service life remaining



Figure B.6.1: Aerial view of Public Works site



Figure B.6.4: Unpaved areas of site are in good condition with no signs of deep rutting



Figure B.6.2: Major streets around the site are in good condition



Figure B.6.5: Granular storage areas do not meet current EPA standards for cover

II. Facility Assessment



Figure B.6.6: Granular material storage bins are in good condition



Figure B.6.7: Yard storage is located throughout the grounds

II. Facility Assessment

B.7 FUEL ISLAND

The fuel island consists of two above-ground storage tanks for on-road and off-road diesel fuel. The tanks appear to be in good condition but the metering technology is dated.

The following photographs and captions summarize our findings:



Figure B.7.1: Above ground fuel storage tank

B.8 POLICE IMPOUND LOT

The police impound lot adjacent to Fleet Storage had no security cameras and insufficiently tall fences to prevent people from breaking into the vehicles, thus it has been temporarily moved to another location.



Figure B.8.1: Police Impound Lot

END OF SECTION

III. Operational and Functional Observations

A. INTRODUCTION

The space needs analysis and the site walk through provided an opportunity for the study team to assess the functionality and operational efficiency of the complex. The following represent observations from the site visit and pursuant space needs evaluation. The following is divided by building/site area and includes observed positive features and operational/functional deficiencies.

B. OBSERVATIONS

I. Administration/Personnel Areas

The entirety of the administrative and personnel areas is located in a trailer near the entrance to the site. The building houses offices, break room and crew areas.

Positive Features

- None

Operational Deficiencies

- Space inadequate for functions required on site.
- Building does not house all personnel.

2. Fleet Maintenance and Shops Building

The Fleet Maintenance and Shops building houses the Streets, Parks and Fleet Maintenance operations. It is configured as a drive through building with a large overhead door on each end and a central circulation aisle. Shop spaces are located on both sides of the aisle with Streets and Park shops, materials storage and vehicle storage located at the entry end of the building and Fleet Maintenance located on one side of the aisle at the exit end of the building.

Positive Features

- None

Operational/Functional Deficiencies

- Shops and storage areas are poorly defined and are not segregated from areas that generate vehicle exhaust fumes.
- The Fleet Maintenance area is insufficient for the fleet size.
- The current wash location is behind the vehicle repair bays which causes the bays to be blocked and water to flow into the bays.
- There is no efficient drainage system in the building
- The building clear height is not sufficient for lifting large vehicles.
- There are no personnel support areas in the building.

3. Utilities Shops Building

The Utilities Operation and Sign Operation are located in a separate building located remotely on the site. The building houses the offices and personnel areas for the Utilities Crew, Utilities shops and storage, Utilities vehicle storage, Utilities material storage and the Sign Shop operation.

Positive Features

- None

Operational/Functional Deficiencies

- The remoteness of the building reduces the ability for good communication between Utilities staff and other Public Works groups.
- The work spaces are inadequate to support the department's needs. Currently, six staff are working out of an space designed for roughly two individuals.
- The Sign production area is located on the second floor of the space with limited access.
- Storage of vehicles in shops creates exhaust/ventilation issues.
- Limited room for efficient storage of vehicles and equipment; vehicles require stacking causing operational inefficiency. and building does not fit all required equipment.

4. Vehicle Storage Building

The Vehicle Storage building consists of a two bay structure with overhead doors on each end of two circulation aisles. The building is used for vehicle and material storage.

Positive Features

- The building has sufficient clear heights for most activities.
- The building includes substantial square footage that has capability for use as storage or possibly use for another function.
- The building is heated.

Operational/Functional Deficiencies

- The structural configuration of building does not lend itself to efficient use as vehicle storage.
- The space is lacks a drainage system for vehicle run-off.

III. Operational and Functional Observations

5. Salt Storage Building

The Salt Storage building is a fabric covered aluminum structure.

Positive Features

- The structure is sufficient for the amount of material stored.
- Circulation to and from the structure appears efficient, with ample maneuvering space for equipment.

Operational/Functional Deficiencies

- The structure is located adjacent to a wetlands area and runoff must be carefully controlled.

6. Exterior Material Storage

The site contains storage areas for a variety of materials and vehicles/equipment. These include stockpiles of granular materials, waste construction materials, construction materials, police impound and public works equipment and equipment implements.

Positive Features

- Sufficient space for storage of all assessed needs.

Operational/Functional Deficiencies

- Lack of site constraint results in materials stored in non-uniform manner and location.
- Lack of site constraint results in continued storage of items no longer required.

7. General Site Observations

The current site size and configuration limits the department's operational efficiency and opportunity for growth. The inefficient layout and shape of the site has facilitated the need to spread operational functions throughout the site creating increased site circulation and separation of functions. Site operational/functional deficiencies noted include the following.

- The road that bi-sects the site is virtually a public road with no separation from the Public Works yard and facility components.
- Site security is at a minimum/non-existent
- Employee and visitor parking is located in a manner forcing integration of private vehicle traffic with department vehicle traffic.
- Movement between buildings does not flow efficiently due to the location of the drive areas and entrances to the buildings.
- Building locations and elevations create inefficiencies in movement of materials and vehicles.
- There is no "front door" to the site.

- Public related activities (recycling, water sales) are located in areas of the site that force public vehicles deep into Public Works activities.
- Site size limits the ability to store large equipment. Equipment is typically stored off-site because of site constraints affecting operational efficiency.

END OF SECTION

IV. Space Programming

A. INTRODUCTION

The Space Program documentation is presented in two forms; Space Program Spreadsheets and Space Standards. The spreadsheets are summaries which identify personnel by position as well as support spaces necessary to accommodate **efficient operations of the department. The Space Standards are diagrammatic drawings of each space which include the equipment that can be accommodated within the space to meet function, building code and accessibility guidelines. The Space Standards are included in the appendix at the end of this report. Both parts together form “The Program”, a term used within the architectural industry to describe the inventory of all spaces to be accommodated in the future planning, budget definition and physical building design.**

Assumptions made in developing the program:

The development of the program is based on planning for a 15-20 year projected need. The projection of the program for a 15-20 year time-frame is within a reasonable range to accurately project future needs. It is important to note, however, that as time passes, particularly if funding for a project is not immediately available or a capital campaign will be in process over the next few years, the original program should be reviewed, refined and re-assessed to keep up with changing growth patterns and refined time frame. These considerations will affect the size and costs of future facility projects.

How to read the Program Summaries:

Each space required for the department is listed along with the area required for those spaces. The usable Square footage of a facility includes all areas that are within the interior walls of each individual function. If a facility was planned according to only the net number, the building would be too small to accommodate all functions listed. The reason for this is that space is consumed by components of the building including columns, structure, thickness of walls, plumbing and mechanical shafts, efficiency of the circulation or corridor system and other areas that cannot be easily projected at this phase of the project. To accommodate space for those functions, we have provided a CIRCULATION FACTOR of an additional 20 to 35% of the Net area to be dedicated toward these uses. Generally speaking, buildings that require greater circulation, wide public waiting areas, or large public interface functions require larger efficiency factors. A factor of 35% is reasonable for this project type but could be considered conservative, depending upon the amount of open circulation space desired. The final row, TOTAL PROPOSED / USABLE SF

is the number that should be used in the planning and space allocation for each department.

Summary of the Program Requirements:

Each summary spread sheet gives a snapshot of each of the current areas, the space they currently reside within and the projected space needed for future operations. The PERCENTAGE OF CHANGE columns calculate the amount of growth necessary to meet the future needs of the department, in comparison to the current space allocation, at each point in time. The calculation clearly indicates that the lack of required public works space.

Summary of Existing Space Deficiency

Department	2015 Current Space	2030 Projected Need	Space Deficiency	% of Change
Public Works	32,000 sf	66,205 sf	34,205 sf	106.9%

Analysis / Summary of Findings:

Public Works Findings:

The existing Public Works facility is currently located just east of the Municipal Complex on the south edge of the City limits.

- Current operational offices are in a temporary trailer that lacks required operational areas
- Lack of adequate storage area
- Lack of fleet space (equipment stored outside)
- Lack of adequate and appropriate fleet maintenance area
- Lacks meeting and break areas
- No staff locker area
- Lacking required office areas
- Lacks Maintenance bay areas
- Operational/functional relationships of areas is disjointed

*** See Appendix A for Space Standards ***

END OF SECTION

City of Ramsey Department of Public Works

Program of Space Needs

Space Description	Area	Dimension	Qty	Area	Remarks	Building Type		
						enclosed	covered	exterior
ADMINISTRATION/PERSONNEL AREAS								
Reception/Waiting	100		1	100		100	-	-
Public Works Superintendent	225		1	225		225	-	-
Parks and Asst PW Superintendent	168		1	168		168	-	-
Utilities Department Supervisor	168		1	168	includes SCADA workstation	168	-	-
Parks Lead Person	120		1	144		144	-	-
Streets Lead Person	120		1	144		144	-	-
Spare Office	120		1	144		144	-	-
Copy/Work Room	100		1	100		100	-	-
Streets Assembly Room	198		1	198	includes lockers	198	-	-
Parks Assembly Room	254		1	254	includes lockers	254	-	-
Utilities Assembly Room	152		1	152	includes lockers	152	-	-
Break Room/Training	525		1	525	includes kitchenette	525	-	-
Male Restroom/Shower	300		1	300		300	-	-
Female Restroom/Shower	120		1	120		120	-	-
Mud Room/Alcove	80		1	80	at employee entry	80	-	-
Mechanical Rooms	400		1	400		400	-	-
Electrical Rooms	350		1	350		350	-	-
LAN/IT Room	100		1	100		100	-	-
Fitness / Storage Room	750		1	750	current size of fire station	750	-	-
<i>Administration/Personnel Areas subtotal</i>						4,422	-	-
<i>circulation</i>						1,548	-	-
ADMINISTRATION/PERSONNEL AREAS TOTAL						5,970	-	-

City of Ramsey Department of Public Works
Program of Space Needs

Space Description	Area	Dimension	Qty	Area	Remarks	Building Type		
						enclosed	covered	exterior
VEHICLE MAINTENANCE FACILITY								
<i>Administration/Personnel</i>								
Mechanic Office/Library	120		1	120		120	-	-
Male Restroom	80		1	80		80	-	-
Female Restroom	80		1	80		80	-	-
<i>Administration/Personnel Areas subtotal</i>				280		280	-	-
<i>circulation</i>	35%			98		98	-	-
Administration/Personnel Total				378		378	-	-
<i>Repair Bays</i>								
Truck Repair Bay		20 x 55	2	2,200		2,200	-	-
Auto Repair Bay		16 x 35	2	1,120		1,120	-	-
<i>Repair Bays subtotal</i>				3,320		3,320	-	-
<i>circulation</i>	20%			664		664	-	-
Repair Bays Total				3,984		3,984	-	-
<i>Shops/Support/Parts</i>								
Common Work Area	300		1	300	includes tire equip.	300	-	-
Lube/Compressor Room	500		1	500		500	-	-
Equipment Storage	300		1	300		300	-	-
Tool Crib	100		1	100		100	-	-
Tire Storage	300		1	300		300	-	-
Parts Storeroom	464		1	464		464	-	-
<i>Shops/Support/Parts subtotal</i>				1,964		1,964	-	-
<i>circulation</i>	20%			393		393	-	-
Shops/Support/Parts Total				2,357		2,357	-	-
VEHICLE MAINTENANCE FACILITY TOTAL						6,719	-	-

City of Ramsey Department of Public Works

Program of Space Needs

Space Description	Area	Dimension	Qty	Area	Remarks	Building Type		
						enclosed	covered	exterior
PARKS SHOPS/STORAGE								
General Shop	1,000		1	1,000		1,000	-	-
Tool Storage	200		1	200		200	-	-
Small Equipment Storage	200		1	200		200	-	-
Consumables Storage	200		1	200		200	-	-
Material Storage	-		1	-	See Cold Storage	-	-	-
<i>Parks Shops/Storage subtotal</i>				1,000		1,000	-	-
<i>circulation</i>	20%			200		200	-	-
PARKS SHOPS/STORAGE TOTAL				1,200		1,200	-	-
STREETS SHOPS/STORAGE								
Sign Design	400		1	400	conditioned	400	-	-
Sign Fabrication	500		1	500		500	-	-
Sign Storage	500		1	500		500	-	-
Carpentry Shop	1,000		1	1,000		1,000	-	-
Welding Shop		30 x 50	1	1,500	could be in VMF	1,500	-	-
General Shop	1,000		1	1,000		1,000	-	-
Tool Storage	200		1	200		200	-	-
Consumables Storage	200		1	200		200	-	-
Material Storage	-		1	-	see cold storage	-	-	-
<i>Streets Shops/Storage subtotal</i>				5,300		5,300	-	-
<i>circulation</i>	35%			1,855		1,855	-	-
STREETS SHOPS/STORAGE TOTAL				7,155		7,155	-	-
UTILITIES SHOPS/STORAGE								
General Shop	1,000		1	1,000		1,000	-	-
Parts Storage	300		1	300		300	-	-
Tool/Equipment Storage	200		1	200		200	-	-
Material Storage	-		1	-	See Cold Storage	-	-	-
<i>Utilities Shops/Storage subtotal</i>				1,500		1,500	-	-
<i>circulation</i>	35%			525		525	-	-
UTILITIES SHOPS/STORAGE TOTAL				2,025		2,025	-	-

City of Ramsey Department of Public Works

Program of Space Needs

Space Description	Area	Dimension	Qty	Area	Remarks	Building Type		
						enclosed	covered	exterior
COLD STORAGE								
Streets Materials	1,000		1	1,000		1,000	-	-
Utilities Materials	1,000		1	1,000		1,000	-	-
Parks Materials	1,000		1	1,000		1,000	-	-
Implements/Blades/etc	2,500		1	2,500	includes circulation	2,500	-	-
Shared Materials	2,000		1	2,000	barricades/cones/etc	2,000	-	-
Lumber Storage	400		1	400		400	-	-
Paving Materials - palletized	400		1	400		400	-	-
<i>Cold Storage subtotal</i>				8,300		8,300	-	-
<i>circulation</i>	20%			1,660		1,660	-	-
COLD STORAGE TOTAL				9,960		9,960	-	-
YARD STORAGE								
Truck Wash		20 x 50	2	2,000		2,000	-	-
Mower Blow Down		10 x 20	1	200		-	-	200
Antenna	40		1	40		-	-	40
Scrap Bins	200		4	800		-	-	800
Used Tire Storage	100		1	100		-	100	-
Salt Storage		70 x 100	1	7,000		-	7,000	-
Granular Material Storage		15 x 20	6	1,800		-	1,800	-
Granular Material Stockpiles		100 x 100	3	30,000		-	-	30,000
Material Storage	800		1	800	pipe, structures, etc	-	-	800
Generator		10 x 15	1	150		-	-	150
Fuel Island		14 x 30	2	840		-	840	-
Above Ground Fuel Storage	400		1	400		-	-	400
Recycling Center	43,560		1	43,560	containers near site entrance	-	-	43,560
Recycling Center Office/RR	140		1	140		140	-	-
Drying Bed		20 x 50	1	1,000		-	1,000	-
Impound Lot		10 x 20	20	4,000		-	4,000	-
<i>Yard Storage subtotal</i>				92,830		2,140	14,740	75,950
<i>circulation</i>	100%			92,830		2,140	14,740	75,950
YARD STORAGE TOTAL				185,660		4,280	29,480	151,900

City of Ramsey Department of Public Works

Program of Space Needs

Space Description	Area	Dimension	Qty	Area	Remarks	Building Type		
						enclosed	covered	exterior
PARKING								
Employee		10 x 20	50	10,000		-	-	10,000
Visitor		10 x 20	2	400		-	-	400
Accessible		15 x 20	2	600		-	-	600
Agency Vehicles								
Interior Conditioned								
X-Small Equipment		8 x 8	18	1,152		1,152	-	-
Small Equipment		10 x 20	33	6,600		6,600	-	-
Medium Equipment		12 x 30	15	5,400		5,400	-	-
Large Equipment		15 x 40	7	4,200		4,200	-	-
Covered								
X-Small Equipment		8 x 8	0	-		-	-	-
Small Equipment		10 x 20	0	-		-	-	-
Medium Equipment		12 x 30	0	-		-	-	-
Large Equipment		12 x 40	0	-		-	-	-
Exterior								
X-Small Equipment		8 x 8	0	-		-	-	-
Small Equipment		10 x 20	3	600		-	-	600
Medium Equipment		12 x 30	5	1,800		-	-	1,800
Large Equipment		12 x 40	0	-		-	-	-
Down/Ready Line								
Auto/Light Truck		10 x 20	4	800		-	-	800
Truck		12 x 40	1	480		-	-	480
		<i>Parking subtotal</i>		32,032		17,352	-	14,680
		<i>circulation - interior/heated storage</i>	75%	13,014		13,014	-	-
		<i>circulation - exterior storage</i>	100%	1,280		-	-	1,280
		PARKING TOTAL		46,326		30,366	-	15,960
Site Subtotal				265,015		67,675	29,480	167,860
Site Circulation, Setbacks				198,761				
Stormwater Management				43,560				
SITE TOTAL				507,336				
				11.65 acres				

Department	Job Title	Duties	No.	
			Full Time	Seasonal
Administration				
PW/Streets	PW Superintendent	Department Head	1	
Parks	Parks and Asst PW Superintendent	Park Dept Supervisor/Asst. PW Superintendent	1	
Parks				
Parks	Parks Lead Person	Parks Maintenance/Manage seasonal staff	1	
Parks	Parks Maintenance Worker	Park Maintenance	1	
Parks	Parks Maintenance Worker	Park Maintenance	1	
Parks	Parks Maintenance Worker	Park Maintenance	1	
Parks	Parks Maintenance Worker	Park Maintenance/Irrigation Maintenance	1	
Parks	Future		2	
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Seasonal Staff	Park Maintenance		1
Parks	Intern	Park Administration/Event Coordination	1	
Streets				
Streets	Streets Lead Person	Supervise streets projects/staff	1	
Streets	PW Maintenance Worker	Street Maintenance/Traffic Signs	1	
Streets	PW Maintenance Worker	Street Maintenance	1	
Streets	PW Maintenance Worker	Street Maintenance/Fleet Maintenance	1	
Streets	PW Mechanic	Fleet Maintenance	1	
Streets	PW Maintenance Worker	Street Maintenance	1	
Streets	PW Maintenance Worker	Street Maintenance	1	
Streets	Future		2	
Streets	Seasonal Staff	Street Maintenance		1
Streets	Seasonal Staff	Street Maintenance		1
Streets	Seasonal Staff	Street Maintenance		1
Snow/Ice	Seasonal Staff	Snow Removal		1
Snow/Ice	Seasonal Staff	Snow Removal		1
Snow/Ice	Seasonal Staff	Snow Removal		1
Snow/Ice	Seasonal Staff	Snow Removal		1
Utilities				
Utilities	Utilities Supervisor	Utilities Dept Supervisor	1	
Utilities	Utilities Maintenance Worker	Utility Maintenance	1	
Utilities	Utilities Maintenance Worker	Utility Maintenance	1	
Utilities	Utilities Maintenance Worker	Utility Maintenance	1	
Utilities	Future		2	
Utilities	Seasonal Staff	Utility Maintenance		1
Utilities	Seasonal Staff	Utility Maintenance		1
Totals			25	19

V. Facility Comparisons

A. INTRODUCTION

This section of the report provides a comparative analysis between the characteristics of the Ramsey Public Works facilities and the characteristics of the same departments in other comparable Minnesota municipalities. A comparative analysis of other municipalities, if used as a checks-and-balances comparison to the developed space program, can provide a quick snap-shot of the overall range of facilities that meet relatively similar requirements. The selection of comparable cities is primarily established based on population. Therefore it should be noted that variables in staffing, area of the city and age of existing facilities can create a range in the facilities. We do not utilize a facility comparison as the only means of projected space needs and a direct comparison is never truly possible, as no two cities are identical, the process can identify irregularities and areas to consider or reconsider or can confirm the projected program numbers, providing validity to the developed program.

One item to be particularly aware of when comparing similar city's facilities is to recognize that these figures may not represent current planning that is underway to expand those facilities. The asterisks and key notes, noted at the bottom of each analysis, provide further information to qualify the information provided in the spreadsheet. Projected or in-process expansion is an indicator of current space deficiencies, particularly important in weighing the relevance of their current facilities sizes to those projected for the City of Ramsey. The total of the comparative studies are averaged for ease of quick review, however each municipality's characteristics should be reviewed individually to best understand how their facility size (with projected expansion, if indicated) supports the population, and then compared with the projected numbers for the Ramsey's facilities.

B. COMPARATIVE ANALYSIS METHODOLOGY

The methodology for identifying the municipalities to be considered for the analysis consists of collecting a variety of information. BKV Group researched and identified a few municipalities, or "sister-cities", that seem to be similar in nature, size or community demographics from which to base the comparisons. In our analysis, a range of near-metro and out-state municipalities was used to provide a broad cross-section of comparative information. Other criteria used to select comparison information included geographic location along a major highway system or major transportation corridor.

The cities in this comparison were identified and ranked by municipality with a population range of 16,000 to 40,000. The

population differentiation is an important designation, as it often correlates with the facility size, number of employees it is supporting, and square footage per capita of residents served. However, the size of a municipal public works facility can vary greatly from one to another depending on the types of services provided and the geographic size of the area serviced.

C. ANALYSIS / SUMMARY OF FINDINGS

Comparison of Existing Facility:

The comparative analysis for the public works facility indicates that the City of Ramsey's Public Work's facility is similar to the comparable municipalities' facilities. A major factor in considering the usefulness of a public works facility is the efficiency of the layout and movement of vehicles and materials. The layout of the existing facility creates inefficiency in operation flow, segregating personnel and provides marginal fleet maintenance and storage. Overall, the facility is greatly undersized when compared to similar municipalities.

Projections:

When comparing Ramsey's projections for the 2030 timeframe, the projected facility size is within the range of other municipalities in the area. The projected requirements for the Ramsey Public Works facility is primarily based on providing adequate vehicle storage, service bays and proper staff support space.

In the comparison below 15 Minnesota cities are listed ranging in population from 16,500 to 39,000. With public works facilities that range in size from 44,900 square feet to 111,679 square feet, with the average facility being more in the 66,000 square feet range. As a snap shot Ramsey's existing public works facilities totals at approximately 32,000 square feet which is well below the current public works standards. The programmed area based on the size and operations of the City of Ramsey is 66,205 square feet, which is in line with current area requirements for public works operations.

V. Facility Comparisons

Public Works - Space Comparison

Municipality	Population (2013)	Municipality Area (sq m.)	Site Size (acres)	Facility Size (gsf) ¹	Notes
Red Wing	16,513	41.19	8.03	57,310	
Willmar	19,680	15.95	16.96	68,600	
Northfield	20,581	8.61	10.82	52,400	
Golden Valley	20,845	10.55	1.68	54,400	
Farmington	22,167	14.94	6.76	44,970	
Crystal	22,588	5.88	5.30	63,000	Built in 2015, \$12.8M
Elk River	23,447	43.82	17.47	83,244	Fleet 44,144 sf, Mechanics 13,300 sf, Shops 18,400 sf, Office 7,400 sf
Prior Lake	24,408	18.33	11.40	48,453	
Chanhassen	24,432	22.88	7.52	85,250	
White Bear Lake	24,555	8.66	4.23	55,259	
Austin	24,763	10.84	14.04	68,960	
Savage	28,639	16.45	14.51	66,600	29,000 sf addition in 2012
Andover	31,709	34.83	14.99	111,679	Size reflects 2015 needs assessment, current size is 68,680 sf
Cottage Grove	35,339	37.48	11.27	63,922	
Shakopee	39,167	29.32	12.52	69,000	
Average	25,256	21.32	10.50	66,203	

Ramsey (Existing)	24,935	29.79	7.74	32,000	
(Proposed GSF)			11.59	66,205	

General Notes:

1. Facility size does not include area for granular storage buildings.

END OF SECTION

VI. Master Planning Concept Options

A. INTRODUCTION

This portion of the study is the next step after the completion of the assessment of the existing facilities, operational analysis and space programming. This process involves the planning team and the City discussing all possible options to address operational space, as detailed in the program analysis, that will address the long term requirements of the City's Public Works department. Site options consider a variety of selection criteria such as: existing infrastructure locations, expansion capabilities, staff access, parking, zoning, easements, public access to a recycling center, existing and anticipated roadway improvements, etc. And while not a driver for study, the team did assess each plan and pros and cons associated with possible overall area development. The potential options were reviewed with the City planning team to assure that all viable options are being considered.

Concept Plan Development

The concept plans and the site master plan options were developed based upon achieving the identified priorities, goals and common vision of the city and public works department. The four concept planning options identified some core planning principals:

1. Provide adequate and appropriate building / operational area required for the Public Works Department
2. Provide adequate and appropriate site area and circulation needed for public works equipment & operations
3. Allow for future expansion
4. Create site layouts that promote operational efficiency
5. Separate public and public works traffic flow and access

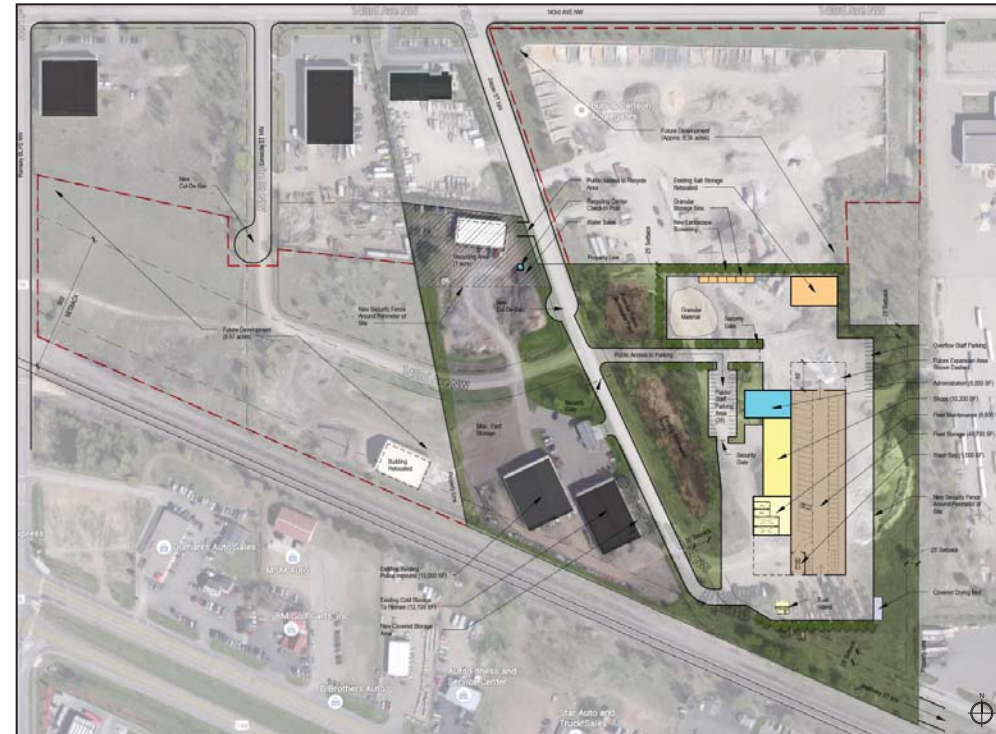
The following is a summary of the four options developed:

- **Option A** – construct a new public works operations east of Jasper and utilize some existing structures for storage.
- **Option B** - construct an entirely new public works facility east of Jasper.
- **Option C** – construct a new public works operations east of Jasper and utilize some existing structures for storage.
- **Option D** - construct a new public works operations on the west side of Jasper and utilize some existing structures for storage.

END OF SECTION

Option A

Preferred Options



Total Site Area: 15.50 acres
Total Developable Area: 18.03 acres

Option B



Total Site Area: 11.40 acres
Total Developable Area: 21.98 acres

Option C

Additional Options Studied



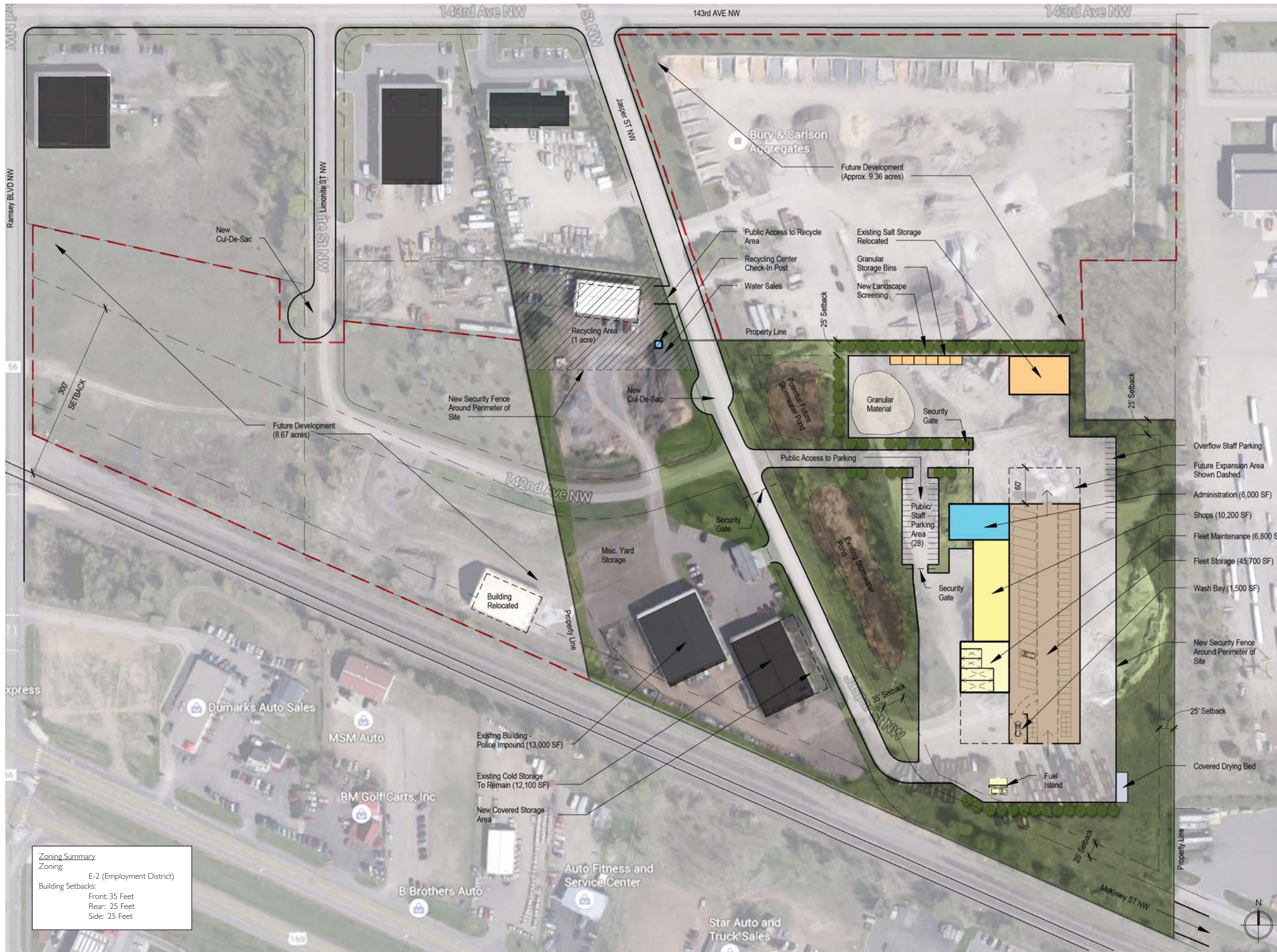
Total Site Area: 13.62 acres
Total Developable Area: 19.80 acres

Option D



Total Site Area: 9.68 acres
Total Developable Area: 23.91 acres

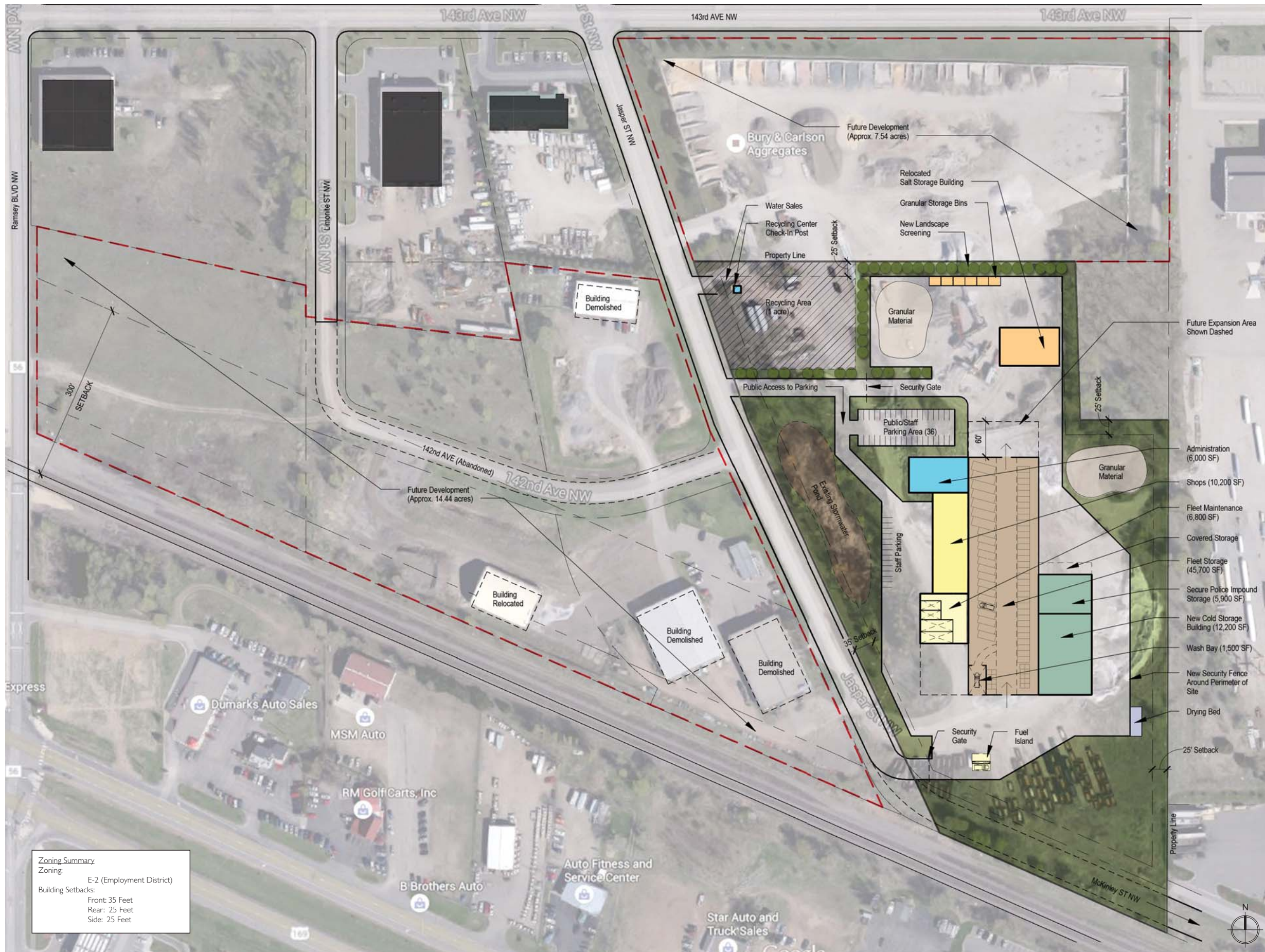
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- Pros:**
- Utilizes existing cold storage buildings
 - Efficient centralized operation / circulation
 - Room for future growth / expansion
 - Existing stormwater pond can remain in-place
- Cons:**
- Salt storage building needs to be relocated

Option A
15.50 acres

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Pros:

- Operations are centralized with efficient circulation
- Room for future expansion
- Existing stormwater pond can remain in-place

Cons:

- New cold storage/police impound building required
- Salt storage building needs to be relocated

Option B
11.40 acres

DRAFT

VII. Project Cost Estimates

A. INTRODUCTION

This section of the report looks at the cost associated with each of the master plan options. These estimates are general in nature at this early stage of planning. However the estimated cost are based on historic cost for public works construction in our region.

There are a number of possible project aspects that can affect the cost of a project, such as:

- Poor soil conditions
- Contaminated soil conditions from previous uses
- Level of ground water is high
- Restrictive development standards
- Higher requirement for sustainability such as LEED

In general the square foot cost shown in the following estimates represent the mean range that we would anticipate for construction to occur in 2016. The construction industry is currently indicating anticipated inflation higher than what has occurred over the past 5 years. While there are many factors that can effect bidding climates , it is anticipated that yearly escalation cost will be in the 4% to 6% range. In the last year we have seen a dramatic spike in construction cost as we came out of the recession. For this reason we would suggest that the City move ahead with project planning this upcoming year with the goal to start construction in spring of 2017.

The estimated cost for each of the 4 options with inflation added are as follows:

Option A

- Construction \$12,467,621
- Soft Cost Estimate \$1,500,000
- **Estimated 2017 Total Project Cost \$13,967,621**

Option B

- Construction \$13,278,825
- Soft Cost Estimate = \$1,500,000
- **Estimated 2017 Total Project Cost \$14,778,825**

Option C

- Construction \$12,412,496
- Soft Cost Estimate = \$1,500,000
- **Estimated 2017 Total Project Cost \$13,912,496**

Option D

- Construction \$12,247,121
- Soft Cost Estimate = \$1,500,000
- **Estimated 2017 Total Project Cost \$13,747,121**

The difference between the high and low estimated is \$1,031,704. Since all concept plans are based on providing the same amount of building area the primary differences in the cost are based on:

1. Reuse or new of existing cold storage buildings
2. Relocation of the existing salt storage shed
3. Amount of site development required

VII. Project Cost Estimates

Site Option A:

A. Construction Estimate:

- 1. 6,000 SF Office Building at \$250 / SF = \$1,500,000
- 2. 10,200 SF Shop Space at \$180 / SF = \$1,836,000
- 3. 6,800 SF Fleet Maintenance at \$200 / SF = \$1,360,000
- 4. 45,700 SF Fleet Storage at \$125 / SF = \$5,712,500
- 5. Remodel Cold Storage Buildings = \$250,000
- 6. New Fueling Island with above ground tanks = \$200,000
- 7. Move Salt Storage = \$50,000
- 8. Demolition, Fence and Site Development = \$400,000
- 9. Design & Construction contingency at 5% = \$565,425

Construction Estimate = \$11,873,925

B. Soft Cost Estimate (Typically Include):

- 1. A/E Fees
- 2. Legal Counsel Review
- 3. Reimbursable Expenses
- 4. Geotechnical Report
- 5. Data / Telecom Wiring
- 6. A/V Systems for Training Room
- 7. Survey
- 8. CM / Project Management Fees
- 9. FF&E (Furniture, Fixtures and equipment)
- 10. SAC (sewer connection fees through Met Council)
- 11. WAC (water connection fees)
- 12. Bond costs
- 13. Plan review fee
- 14. Bid Advertising
- 15. Special Testing (construction)
- 16. Bid document printing
- 17. Builders Risk Insurance
- 18. General Project Contingency

Soft Cost Estimate = \$1,400,000

Estimated Total Project Cost for 2016 = \$13,273,925

This estimate is based on 2016 construction values.

Based on construction occurring in 2017 cost should be adjusted by 5% to allow for anticipated inflation.

Inflated Construction Estimate for 2017 = \$11,873,925 x 5% = \$12,467,621
Soft Cost Estimate = \$1,500,000

Estimated 2017 Total Project Cost \$13,967,621

VII. Project Cost Estimates

Site Option B:

A. Construction Estimate:

- 1. 6,000 SF Office Building at \$250 / SF = \$1,500,000
- 2. 10,200 SF Shop Space at \$180 / SF = \$1,836,000
- 3. 6,800 SF Fleet Maintenance at \$200 / SF = \$1,360,000
- 4. 45,700 SF Fleet Storage at \$125 / SF = \$5,712,500
- 5. 18,100 SF Cold Storage Building at \$60 / SF = \$1,086,000
- 6. New Fueling Island with above ground tanks = \$200,000
- 7. Move Salt Storage = \$50,000
- 8. Demolition, Fence and Site Development = \$300,000
- 9. Design & Construction contingency at 5% = \$602,000

Construction Estimate = \$12,646,500

B. Soft Cost Estimate (Typically Include):

- 1. A/E Fees
- 2. Legal Counsel Review
- 3. Reimbursable Expenses
- 4. Geotechnical Report
- 5. Data / Telecom Wiring
- 6. A/V Systems for Training Room
- 7. Survey
- 8. CM / Project Management Fees
- 9. FF&E (Furniture, Fixtures and equipment)
- 10. SAC (sewer connection fees through Met Council)
- 11. WAC (water connection fees)
- 12. Bond costs
- 13. Plan review fee
- 14. Bid Advertising
- 15. Special Testing (construction)
- 16. Bid document printing
- 17. Builders Risk Insurance
- 18. General Project Contingency

Soft Cost Estimate = \$1,400,000

Estimated Total Project Cost for 2016 = \$14,046,500

This estimate is based on 2016 construction values.

Based on construction occurring in 2017 cost should be adjusted by 5% to allow for anticipated inflation.

Inflated Construction Estimate for 2017 = \$12,646,500 x 5% = \$13,278,825
Soft Cost Estimate = \$1,500,000

Estimated 2017 Total Project Cost \$14,778,825

VII. Project Cost Estimates

Site Option C:

A. Construction Estimate:

1. 6,000 SF Office Building at \$250 / SF = \$1,500,000
2. 10,200 SF Shop Space at \$180 / SF = \$1,836,000
3. 6,800 SF Fleet Maintenance at \$200 / SF = \$1,360,000
4. 45,700 SF Fleet Storage at \$125 / SF = \$5,712,500
5. Remodel Cold Storage Buildings = \$250,000
6. New Fueling Island with above ground tanks = \$200,000
7. Move Salt Storage = \$50,000
8. Demolition, Fence and Site Development = \$350,000
9. Design & Construction contingency at 5% = \$562,925

Construction Estimate = \$11,821,425

B. Soft Cost Estimate (Typically Include):

1. A/E Fees
2. Legal Counsel Review
3. Reimbursable Expenses
4. Geotechnical Report
5. Data / Telecom Wiring
6. A/V Systems for Training Room
7. Survey
8. CM / Project Management Fees
9. FF&E (Furniture, Fixtures and equipment)
10. SAC (sewer connection fees through Met Council)
11. WAC (water connection fees)
12. Bond costs
13. Plan review fee
14. Bid Advertising
15. Special Testing (construction)
16. Bid document printing
17. Builders Risk Insurance
18. General Project Contingency

Soft Cost Estimate = \$1,400,000

Estimated Total Project Cost for 2016 = \$13,221,425

This estimate is based on 2016 construction values.

Based on construction occurring in 2017 cost should be adjusted by 5% to allow for anticipated inflation.

Inflated Construction Estimate for 2017 = \$11,821,425 x 5% = \$12,412,496
Soft Cost Estimate = \$1,500,000

Estimated 2017 Total Project Cost \$13,912,496

VII. Project Cost Estimates

Site Option D:

A. Construction Estimate:

1. 6,000 SF Office Building at \$250 / SF = \$1,500,000
2. 10,200 SF Shop Space at \$180 / SF = \$1,836,000
3. 6,800 SF Fleet Maintenance at \$200 / SF = \$1,360,000
4. 45,700 SF Fleet Storage at \$125 / SF = \$5,712,500
5. Remodel Cold Storage Buildings = \$250,000
6. New Fueling Island with above ground tanks = \$200,000
7. Demolition, Fence and Site Development = \$250,000
8. Design & Construction contingency at 5% = \$555,425

Construction Estimate = \$11,663,925

B. Soft Cost Estimate (Typically Include):

1. A/E Fees
2. Legal Counsel Review
3. Reimbursable Expenses
4. Geotechnical Report
5. Data / Telecom Wiring
6. A/V Systems for Training Room
7. Survey
8. CM / Project Management Fees
9. FF&E (Furniture, Fixtures and equipment)
10. SAC (sewer connection fees through Met Council)
11. WAC (water connection fees)
12. Bond costs
13. Plan review fee
14. Bid Advertising
15. Special Testing (construction)
16. Bid document printing
17. Builders Risk Insurance
18. General Project Contingency

Soft Cost Estimate = \$1,400,000

Estimated Total Project Cost for 2016 = \$13,063,925

This estimate is based on 2016 construction values.

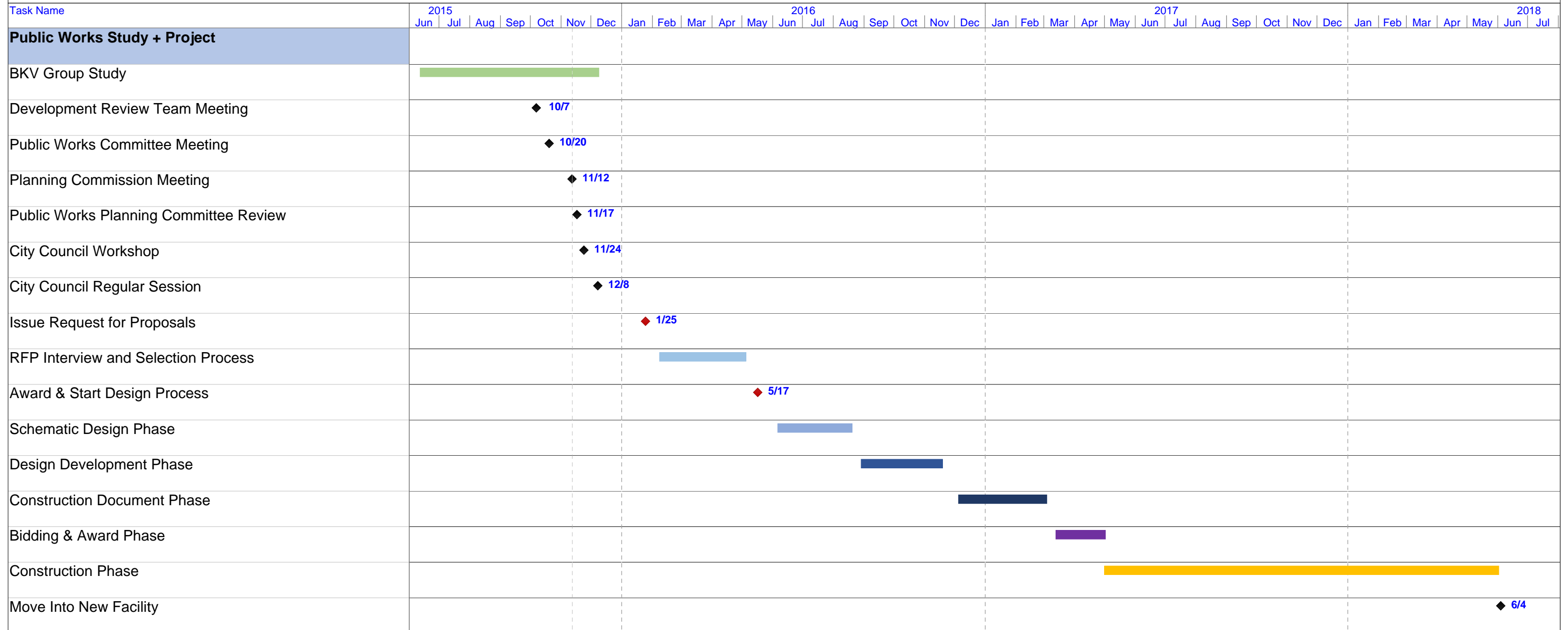
Based on construction occurring in 2017 cost should be adjusted by 5% to allow for anticipated inflation.

Inflated Construction Estimate for 2017 = \$11,663,925 x 5% = \$12,247,121
Soft Cost Estimate = \$1,500,000

Estimated 2017 Total Project Cost \$13,747,121

END OF SECTION

**City of Ramsey
Public Works Study
Proposed Project Implementation Schedule**
November 12, 2015



Task	[Solid Grey Bar]	Project Summary	[Dashed Grey Bar]	Inactive Summary	[Dotted Grey Bar]	Manual Summary	◆	External Milestone	[Teal Bar]
Split	[Dotted Blue Bar]	External Tasks	[Solid Grey Bar]	Manual Task	◇	Start-only	[Red Bar]	Progress	[Black Bar]
Milestone	◆	External Milestone	◆	Duration-only	[Dotted Teal Bar]	Finish-only	[Black Bar]	Deadline	↓
Summary	[Black Bar]	Inactive Milestone	[White Bar]	Manual Summary Rollup	◆	External Tasks	◇		