APPLICATION FOR
URBAN DESIGN COMMISSION
REVIEW AND APPROVAL

AGENDA ITEM # _____
Project # _____
Legistar # _____

DATE SUBMITTED: May 29, 2012

UDC MEETING DATE: June 6, 2012

Action Requested
___ Informational Presentation
_X_ Initial Approval and/or Recommendation
___ Final Approval and/or Recommendation

PLEASE PRINT!

PROJECT ADDRESS: 402 South Point Road

ALDERMANIC DISTRICT: 9

OWNER/DEVELOPER (Partners and/or Principals)
City of Madison Streets Div.-West Side Public Works
Contacts: Chris Kelley, James Whitney, Randy Wiesner

ARCHITECT/DESIGNER/OR AGENT:
Angus Young Associates - Jeffrey Hazekamp
555 S. River Street
Janesville, WI 53548

CONTACT PERSON: Brad Werginz - Angus Young Associates
Address: 555 S. River Street
Janesville, WI 53548
Phone: (608) 756-2326
Fax: (608) 756-0464
E-mail address: jeffh@angusyoung.com

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TYPE OF PROJECT:
(See Section A for:)
___ Planned Unit Development (PUD)
___ General Development Plan (GDP)
___ Specific Implementation Plan (SIP)
___ Planned Community Development (PCD)
___ General Development Plan (GDP)
___ Specific Implementation Plan (SIP)
___ Planned Residential Development (PRD)
___ New Construction or Exterior Remodeling in an Urban Design District * (A public hearing is required as well as a fee)
_X_ School, Public Building or Space (Fee may be required)
___ New Construction or Addition to or Remodeling of a Retail, Hotel or Motel Building Exceeding 40,000 Sq. Ft.
___ Planned Commercial Site

(See Section B for:)
___ New Construction or Exterior Remodeling in C4 District (Fee required)

(See Section C for:)
___ R.P.S.M. Parking Variance (Fee required)

(See Section D for:)
___ Comprehensive Design Review* (Fee required)
___ Street Graphics Variance* (Fee required)

___ Other _____

*Public Hearing Required (Submission Deadline 3 Weeks in Advance of Meeting Date)

Where fees are required (as noted above) they apply with the first submittal for either initial or final approval of a project.

INTRODUCTION

It is the intent of this report to explore and develop a stormwater management plan for the anticipated future development of the site at 402 South Point Road. A master plan which shows the anticipated future use of this site is attached.

PROJECT DESCRIPTION

The project site at 402 South Point Road is being developed in phases by the City of Madison. It is the intent of the City to develop the stormwater management practices for the site as a whole. This will mean that earlier phases of development will need to take into account the future needs of stormwater management for future development.

The site currently includes Madison's Fire Station #12 and an existing salt storage building with an existing access road of asphalt pavement. Currently design, but not yet built, is a warm storage building that will be developed immediately to the east of the existing salt storage building on the southwest side of the site. Future development for this site is not yet designed, but a master plan exists that anticipates the usage of this site as a facility maintenance building. It is anticipated that this future development will greatly increase the amount of impervious surface on the site and will be subject to stormwater management requirements of the WiDNR and City of Madison.

Due to clayey soils, the portion of this site south of the existing salt storage access road is anticipated to be unsuitable for infiltration and thus exempt from any infiltration requirements. More information can be found on the attached soil borings.

STORMWATER MANAGEMENT PLAN

This site is will adhere to the City of Madison Stormwater requirements per Chapter 37.09 'Stormwater Management Plan Requirements', and the Wisconsin DNR NR 151.121 'Post-construction Performance Standards.' The following elements are required for stormwater management:

- 80% Total Suspended Solids Reduction
- 90% Runoff Infiltration
- Peak Discharge: Maintain predevelopment runoff rates for the 2-year and 10-year 24-hour storm events, and safely pass the 100-year storm event.

The infiltration requirement is not applicable to a portion of the site due to the existing soil conditions, which would not allow rainfall to properly infiltrate the soil. See appropriate geotechnical reports for additional information.

The total suspended solids treatment will be performed through the various infiltration basins on the site and also by the various detention basins on site.

The TSS reduction and Infiltration rates were analyzed using WinSlamm v9.4.0, see the attached WinSlamm reports for model inputs and results. The detention ponds were sized using HydroCAD software, see attached HydroCAD reports for model inputs and results.

SITE COMPOSITION

Total Site Area	30.9	Acres

Existing Developed Area (Fire Station #12, Salt Shed)		
-Area	3.55	Acres
Existing Impervious	1.91	Acres
Remainder Greenspace	1.64	Acres

Proposed Developed Area (Warm Storage Building)		
-Area	2.47	Acres
-Existing Pavement	7,241	SF
-New Building Roof	21,245	SF
-New Pavement	35,877	SF
Total Impervious	1.48	Acres
Remainder Greenspace	0.99	Acres

Future Developed Area		
-Area	24.88	Acres
-Rooftop Area	2.28	Acres
-Parking Lot Area	6.62	Acres
-Driveway Area	3.16	Acres
-Landscaped Area	10.67	Acres
-SWM Area	2.15	Acres

-Area Exempt from Infiltration Reqs.	4.71	Acres

Future Developed Area subject to Infiltration Reqs.

-Area	20.17	Acres
-Rooftop Area	2.28	Acres
-Parking Lot Area	6.62	Acres
-Driveway Area	2.37	Acres
-Landscaped Area	7.28	Acres
-SWM Area	1.62	Acres

HYDROCAD POND SIZING

The future development of this area is anticipated to be subject to regulations regarding the peak storm runoff rates leaving the site. The peak runoff rates are anticipated to be reduced using wet detention ponds. A pond serving the northern portion of the site would most likely be located in the northwest corner of the site, and another pond serving the southern portion of the site would be located in the southeast corner of the site. Site delineations for subwatersheds can be seen in more detail on the attached maps.

These ponds were already designed and shown on the master plan. The pond serving the northern portion of the site (or subwatershed A), is anticipated to have a storage capacity of approximately 153,000 ft^3. This volume was calculated by the designer of the master plan. The storage at various elevations was approximated to decrease linearly with depth, and the depth was assumed to be 5 feet. Outlet controls for this pond were assumed to be a 4" pipe at the permanent water level of the pond and a 24" pipe located 2' above the bottom elevation of the pond.

The pond serving the southern portion of the site (or subwatershed B), is anticipated to have a storage capacity of approximately 140,000 ft^3. This volume was calculated by using the master plan's pond footprint and assuming 4:1 side slopes and a 5' pond depth. Outlet controls for this pond were assumed to be the same as the pond serving subwatershed A, i.e. a 4" pipe at the permanent water level of the pond and a 24" pipe located 2' above the bottom elevation of the pond. Special concerns for this pond include the placement of the pond in relation to a proposed road and existing grass swale to the south. The pond is located 80' from the proposed road, which should provide enough clearance for the existing grass swale.

Elevations for the ponds were not known as a grading plan has not been completed for this future development. An arbitrary datum was chosen, and elevations are based off it. Existing grades were examined to verify the potential for proper storm drainage leaving the detention pond and entering existing storm infrastructure. A summary of results are shown below and more detailed reports are attached.

FUTURE DEVELOPMENT OF 402 SOUTH POINT ROAD

Peak Discharge Rates

		2 - Year Runoff Rate		10-Year Runoff Rate		100-Year Runoff Rate	
Predevelopment		**5.81**	**cfs**	**16.05**	**cfs**	**33.62**	**cfs**
Future Development - Subwatershed A (North) without control		15.07	cfs	23.72	cfs	35.59	cfs
Future Development - Subwatershed B (South) without control		15.68	cfs	27.11	cfs	43.31	cfs
	Subtotal	**30.75**		**50.83**		**78.90**	**cfs**
Future Development - Subwatershed A (North) with wet detention pond		1.59	cfs	2.20	cfs	6.69	cfs
Future Development - Subwatershed B (South) with wet detention pond		0.76	cfs	4.34	cfs	12.65	cfs
	Subtotal	**2.35**	**cfs**	**6.54**	**cfs**	**19.34**	**cfs**

The following table shows the storm elevations and available storage for each subwatershed wet detention pond.

Wet Detention Pond (Subwatershed A)				
2-Year Storm Elevation:	1.23	Available Storage:	153,000	CF
10-Year Storm Elevation:	2.03			
100-Year Storm Elevation:	2.85			
Top of Pond Elevation:	5.00			
Wet Detention Pond (Subwatershed B)				
2-Year Storm Elevation:	2.16	Available Storage:	140,000	CF
10-Year Storm Elevation:	2.81			
100-Year Storm Elevation:	3.63			
Top of Pond Elevation:	5.00			

WINSLAMM INFILTRATION ANALYSIS

The future development of this area is anticipated to be subject to regulations regarding stormwater infiltration. This infiltration requirement is anticipated to be met using infiltration basins. For the infiltration requirement, the site is again assumed be broken

into 4 subwatershed areas, each being served by an infiltration basin. These infiltration basins are shown on the attached map.

INFILTRATION BASINS					
	TOP	INVERT	WATERSHED AREA (ACRES)	TSS REMOVAL	RUNOFF REDUCTION
IB1	1070	1065	10.63	92.36%	92.36%
IB2	1070	1065	1.25	89.98%	89.73%
IB3	1070	1065	1.9	91.94%	91.24%
IB4	1071	1066	1.27	99.75%	99.76%
INFILTRATION					
TOTAL PREDEVELOPED RUNOFF				344058	CUBIC FEET
TOTAL DEVELOPED RUNOFF				23191	CUBIC FEET
PRECENT REDUCTIONS				93.26%	

Both of these infiltration basins have a vertical standpipe outflow that is 12” above the bottom of the infiltration basin. The soil under the detention pond is assumed be 0.5”/hr, meaning that these basins will fully drain in 24 hours.

These calculations are only preliminary and should be considered again once development plans for this area are finalized.

SEDIMENT CONTROL

The infiltration basins will be removing much of the sediment that is required, but due to clayey soils, are not required to infiltrate runoff from the entire site. Sediment control, however, is required for the entire site. Sediment from the exempted infiltration area is approximately 4.71 acres including 0.79 acres of driveways and 3.92 acres of landscaped area. This area drains to grass swale that drains to an existing retention pond. The existing Prairie Pond retention pond will provide adequate sediment control for this area.

In addition, both detention ponds on this site will provide sediment control.

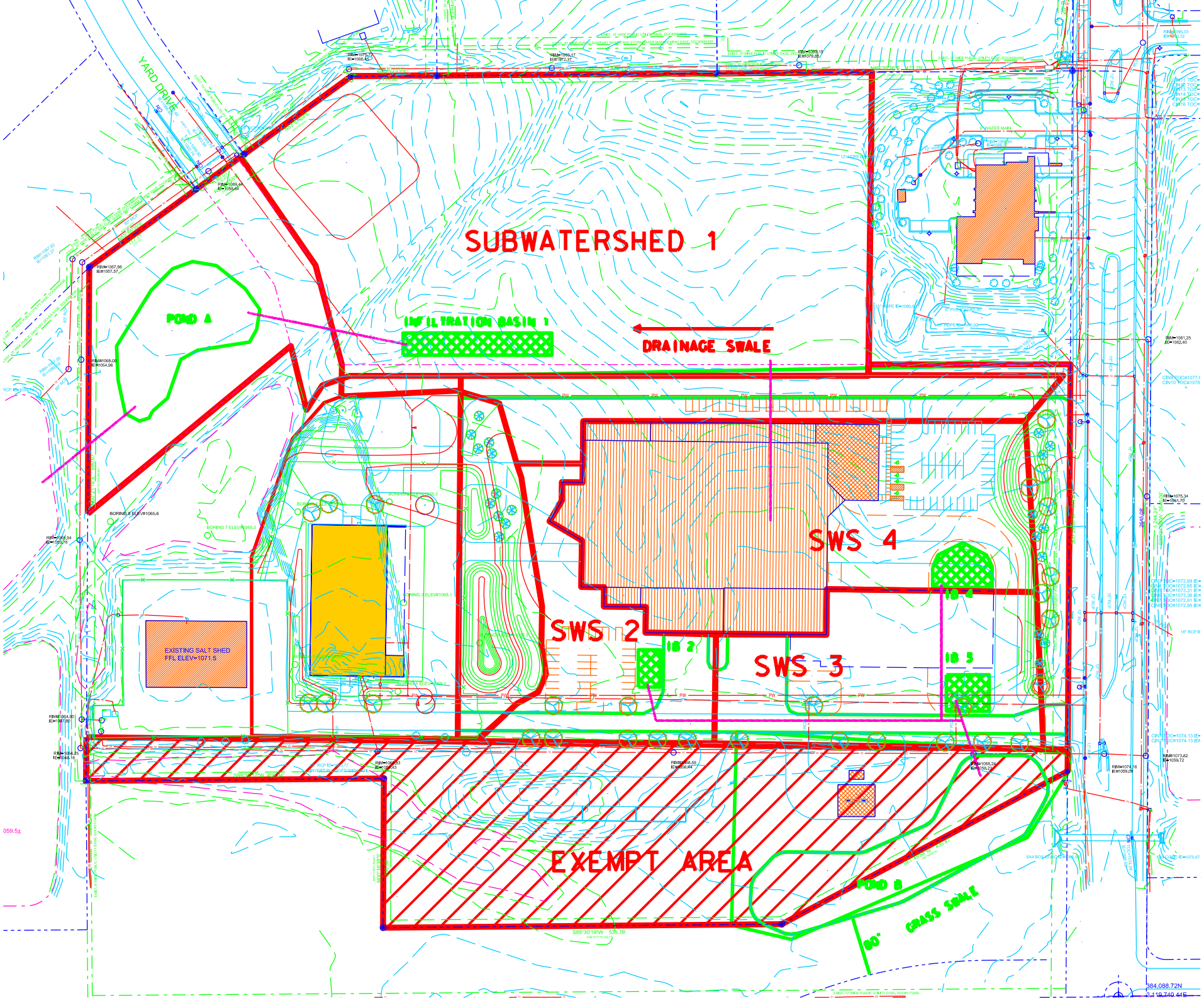
CONCLUSIONS

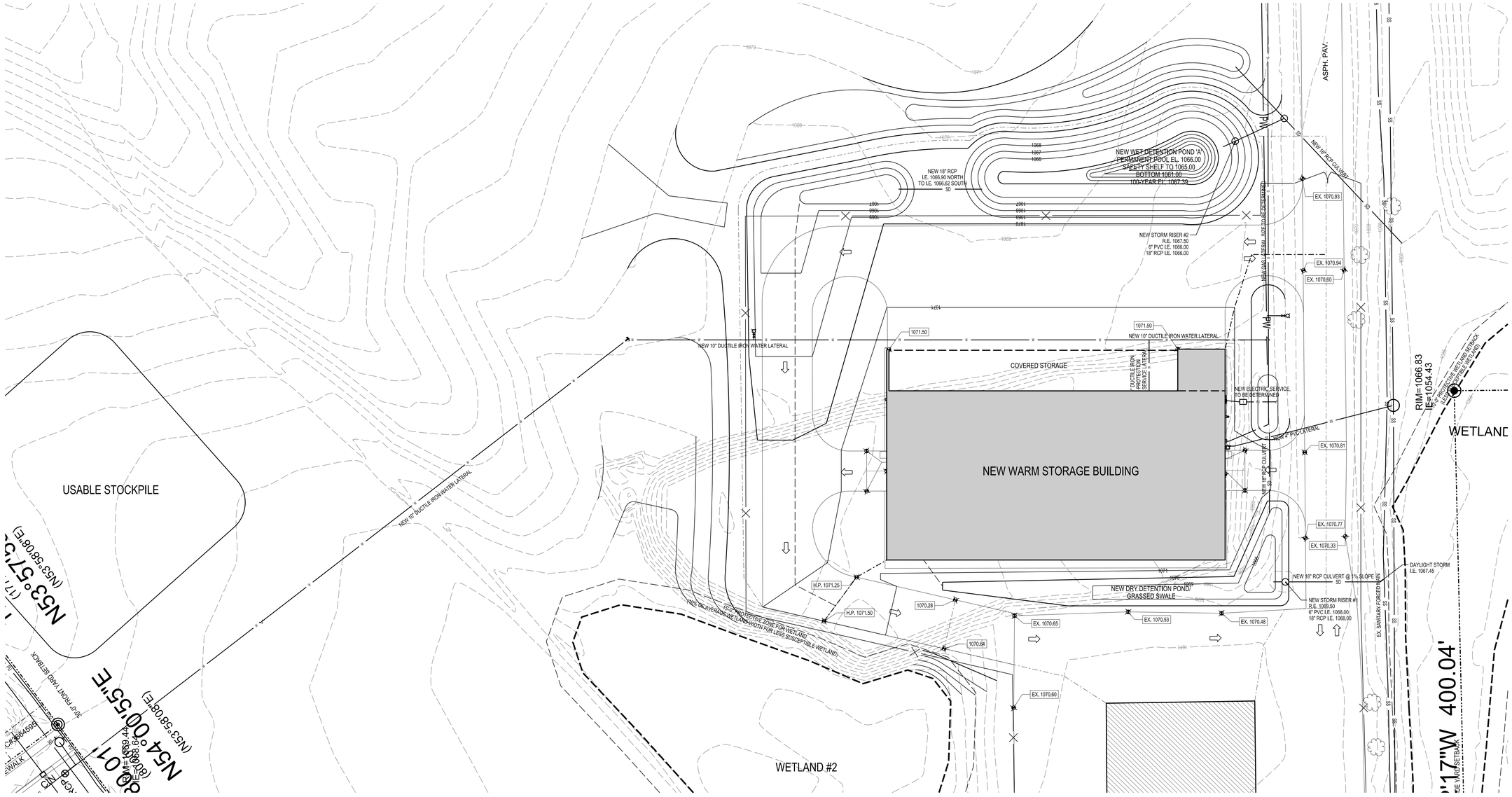
In conclusion, the soil borings available for this site show many clay deposits and clayey soils. Soil borings are not available for the proposed development in certain areas; these areas were assumed to be soils under the infiltration requirement. I would recommend additional soil borings.

Adequate area is available for the installation of detention ponds on site. Two detention ponds will be necessary to effectively collect water from this site based on existing topography. These ponds will provide additional sediment control as well as peak flow control.

Infiltration basins should be placed around the site as suggested and placed in areas with adequate infiltratable soils. This may require additional soil borings for this information.

The proposed master plan and proposed warm storage building as shown will provide enough area for the installation of the proposed infiltration and detention infrastructure.


SUBWATERSHED 1
POND A
INFILTRATION BASIN 1
DRAINAGE SWALE
SWS 4
SWS 2
SWS 3
IB 2
IB 3
EXISTING SALT SHED
FFL ELEV=1071.5
EXEMPT AREA
POND B
GRASS SWALE
YARD DRIVE
S89°30'19"W 535.78



GENERAL NOTES

1. ALL AREAS SHALL BE SEEDED LAWN UNLESS OTHERWISE NOTED.
2. ALL DECIDUOUS TREES SHALL RECEIVE 4'-0" DIAMETER SHREDDED BARK MULCH TREE RING (3" THICK) WITH SPADE-CUT EDGE.
3. ALL EVERGREEN TREES SHALL RECEIVE 6'-0" DIAMETER SHREDDED BARK MULCH TREE RING (3" THICK) WITH SPADE-CUT EDGE.
4. SEE DETAIL 13/C201 FOR TREE PLANTING DETAIL.
5. CONTRACTOR SHALL VERIFY ALL UTILITIES, ELEVATIONS AND DIMENSIONS.
6. GAS LATERAL SHALL CONNECT WITH SOUTH POINT MAIN (APPROXIMATELY 975 LINEAR FEET). CONTRACTOR SHALL COORDINATE WITH UTILITY.

PRELIMINARY - NOT FOR CONSTRUCTION

DIGGERS HOTLINE

CALL TOLL FREE 1-800-242-8511
MILWAUKEE AREA 414-259-1181
FAX A LOCATE 1-800-338-3860
TDD (HEARING IMPAIRED) 1-800-542-2289
ONLINE: www.DiggersHotline.com

WISCONSIN STATUE 182.0175 (1974) REQUIRES A MINIMUM OF THREE (3) WORKING DAYS NOTICE PRIOR TO EXCAVATION.

SCALE: 1"=30'-0"
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ORIGINAL SIZE = 24" x 36"
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ISSUANCES

REVISIONS

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STREETS DEPARTMENT
NEW WARM STORAGE BUILDING
CITY OF MADISON
MADISON, WISCONSIN

PROJECT NUMBER 48150
APPROVED BY
REVIEWED BY
DRAWN BY KAU
2/7/2012 1:27:20 PM

SITE GRADING PLAN

C202

LANDSCAPE PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	ROOT	MATURE SIZE	QTY
TREES:						
AF	*Acer x freemanii 'Sienna'*	Sienna Glen Freeman Maple	2" Cal.	B.B.	50' H x 35' W	14
GB	*Ginkgo biloba 'Princeton Sentry'*	Princeton Sentry Ginkgo	2" Cal.	B.B.	60' H x 25' W	4
GT	*Gleditsia triacanthos var. inermis 'Suncole'*	Sunburst Honeylocust	2" Cal.	B.B.	35' H x 30' W	7
PA	*Picea pungens*	Colorado Spruce	6' High	B.B.	40' H x 20' W	14
PC	*Pyrus calleryana 'Autumn Blaze'*	Autumn Blaze Callery Pear	2" Cal.	B.B.	40' H x 30' W	6
PG	*Picea glauca 'Densata'*	Black Hills Spruce	6' High	B.B.	35' H x 20' W	6

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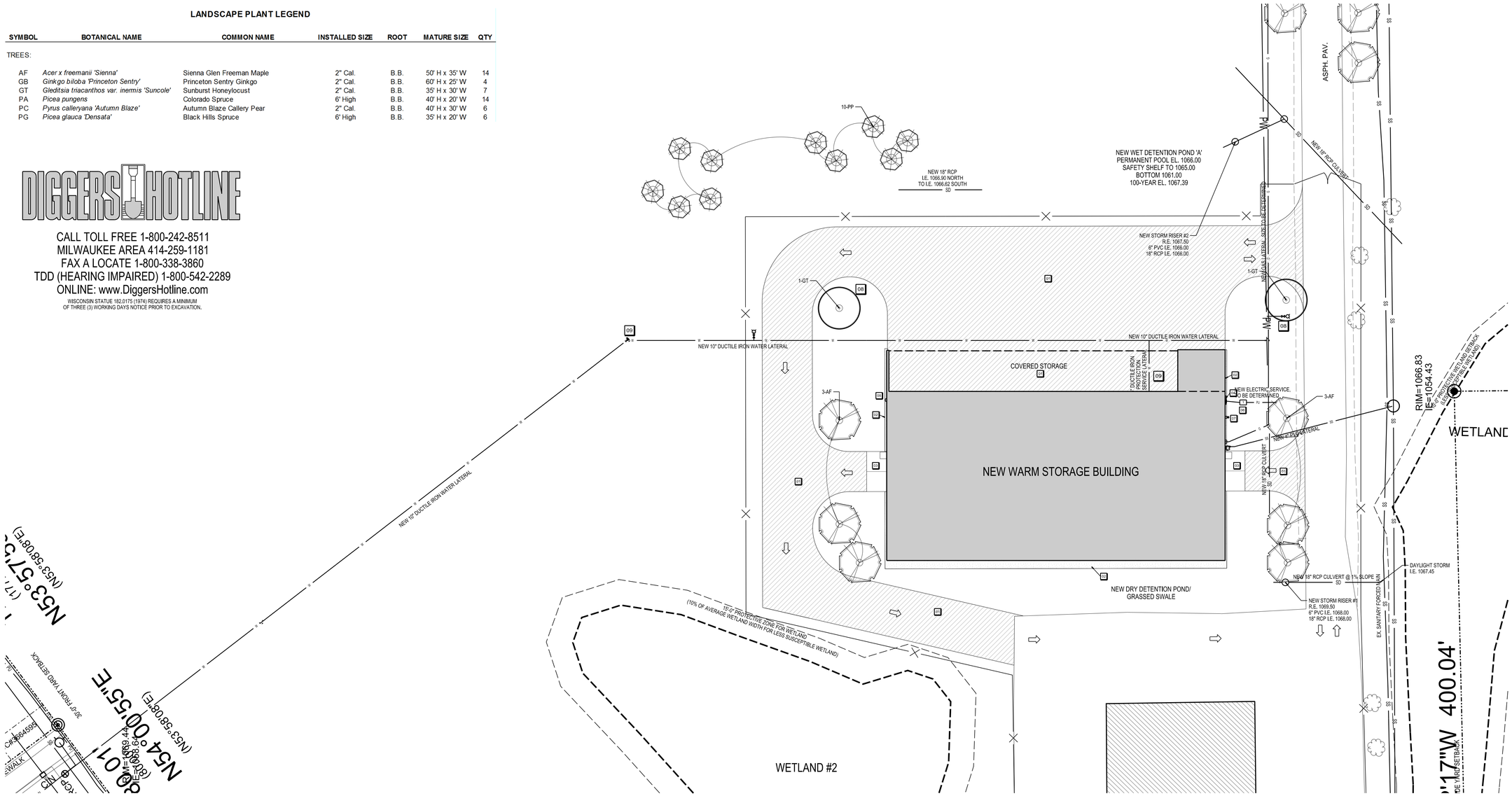

SITE LAYOUT, UTILITY AND LANDSCAPE PLAN

SCALE: 1"=30'-0"

KEYNOTES

01	NEW BITUMINOUS PAVEMENT
02	NEW 3' THICK WASHED STONE MULCH STRIP. 5'-0" WIDE ON WEST SIDE AND 12" WIDE ON NORTH AND SOUTH WALLS. PROVIDE WEED BARRIER FABRIC AND BLACK POLY EDGING.
03	NEW CONCRETE APRON
04	NEW ELECTRIC METER
05	NEW GAS METER
06	NEW TRANSFORMER
07	NEW FIRE DEPARTMENT CONNECTION WITH HORN AND STROBE
08	NEW FIRE HYDRANT
09	NEW THRUST BLOCKING, TYPICAL

GENERAL NOTES

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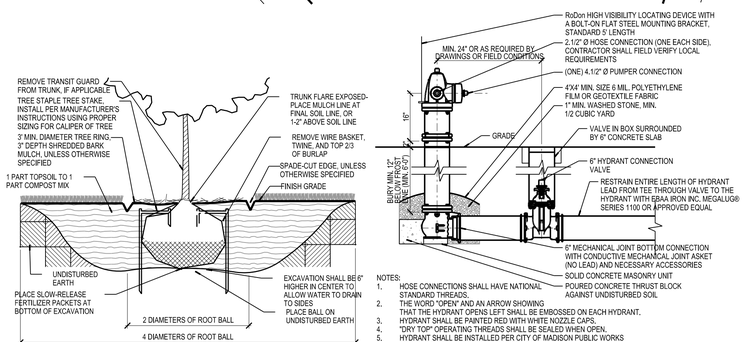
3. ALL EVERGREEN TREES SHALL RECEIVE 6'-0" DIAMETER SHREDDED BARK MULCH TREE RING (3" THICK) WITH SPADE-CUT EDGE.
4. SEE DETAIL 13/C201 FOR TREE PLANTING DETAIL.
5. CONTRACTOR SHALL VERIFY ALL UTILITIES, ELEVATIONS AND DIMENSIONS.
6. GAS LATERAL SHALL CONNECT WITH SOUTH POINT MAIN (APPROXIMATELY 975 LINEAR FEET). CONTRACTOR SHALL COORDINATE WITH UTILITY.



NOTES: 1. DETERMINE THE PROPER SIZE TREE STAPLE DEVISE BY MEASURING THE DEPTH OF THE ROOT BALL AND ADDING 12" TO 18". THIS SHOULD EQUAL THE LONG PRONG SIZE OF THE DEVISE. IF NECESSARY, ROUND UP TO THE NEXT SIZE.
2. IN EXTREME WIND AND/OR LOOSE SOIL CONDITIONS, USE THREE TREE STAPLE DEVICES PER TREE AND/OR ROUND UP TO THE NEXT SIZE.

13 / C201 — B.B. SHRUB AND TREE PLANTING DETAIL
SCALE: NONE

NOTES:
1. HOSE CONNECTIONS SHALL HAVE NATIONAL STANDARD THREADS.
2. THE WORD "OPEN" AND AN ARROW SHOWING THAT THE HYDRANT OPENS LEFT SHALL BE EMBOSSED ON EACH HYDRANT.
3. HYDRANT SHALL BE PAINTED RED WITH WHITE NOZZLE CAPS.
4. "DRY TOP" OPERATING THREADS SHALL BE SEALED WHEN OPEN.
5. HYDRANT SHALL BE INSTALLED PER CITY OF MADISON PUBLIC WORKS STANDARD SPECIFICATIONS AND NFPA 24.
6. BURY LINE ON HYDRANT SHALL BE AT FINISHED GRADE. DO NOT DISH OUT OR BUILD UP TO MEET REQUIREMENT.
7. RESTRAIN ENTIRE LENGTH OF HYDRANT LEAD FROM THE TEE THROUGH THE VALVE USING RESTAINED JOINT FLANGES PER CITY OF MADISON PUBLIC WORKS STANDARD SPECIFICATIONS 702.6.

09 / C201 — FIRE HYDRANT DETAIL
SCALE: 1/2"=1'-0"

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REVISIONS

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STREETS DEPARTMENT
NEW WARM STORAGE BUILDING
CITY OF MADISON
MADISON, WISCONSIN

PROJECT NUMBER 48150
APPROVED BY
REVIEWED BY
DRAWN BY KAU
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SITE LAYOUT, UTILITY AND LANDSCAPE PLAN

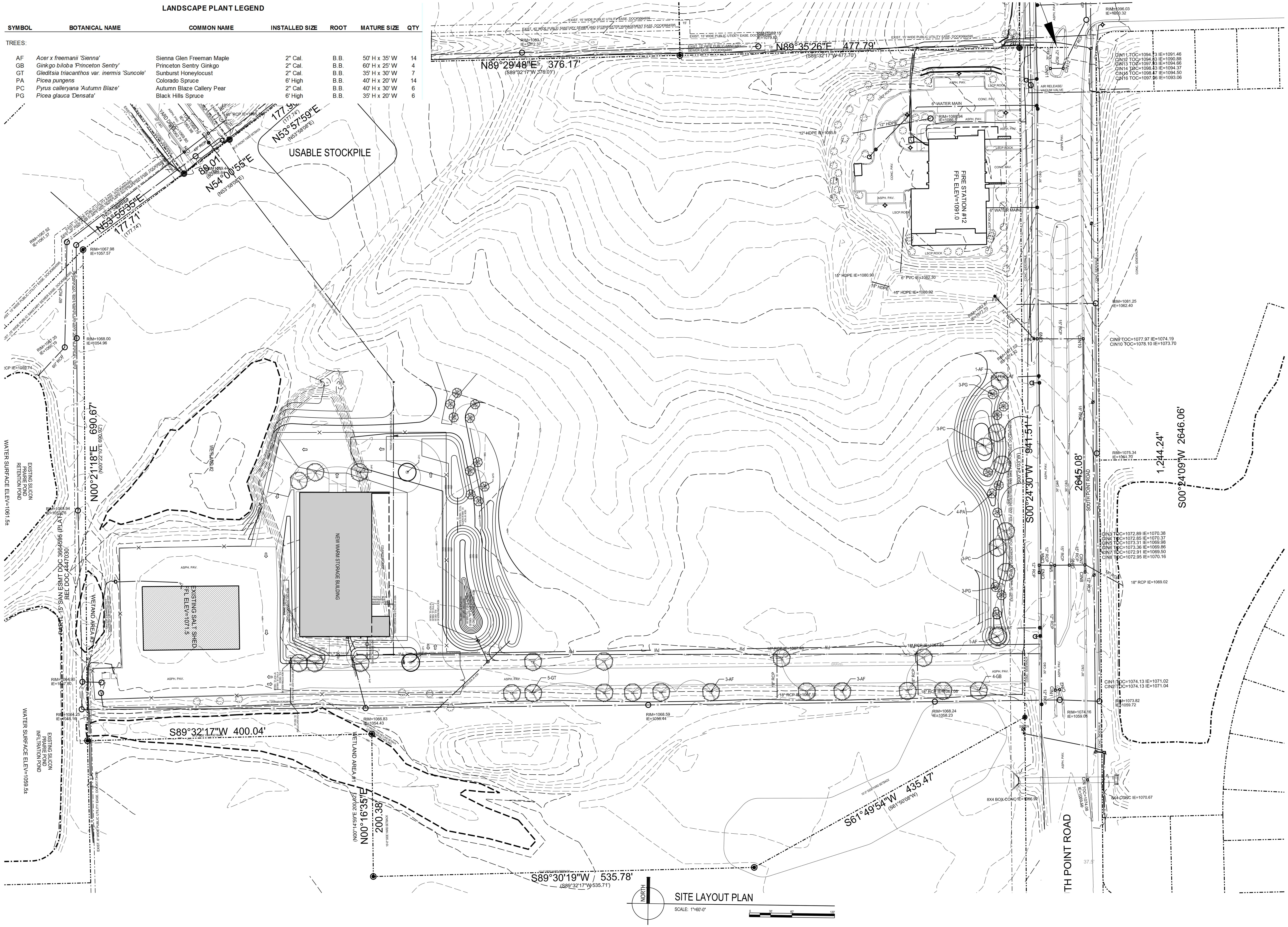
C201

SCALE: 1"=30'-0" PLOTTED BY: KaiHu

ORIGINAL SIZE = 24" x 36" X:\48150\cad\48150c2201.dgn

LANDSCAPE PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	ROOT	MATURE SIZE	QTY
TREES:						
AF	*Acer x freemanii 'Sienna'*	Sienna Glen Freeman Maple	2" Cal.	B.B.	50' H x 35' W	14
GB	*Ginkgo biloba 'Princeton Sentry'*	Princeton Sentry Ginkgo	2" Cal.	B.B.	60' H x 25' W	4
GT	*Gleditsia triacanthos var. inermis 'Suncole'*	Sunburst Honeylocust	2" Cal.	B.B.	35' H x 30' W	7
PA	*Picea pungens*	Colorado Spruce	6' High	B.B.	40' H x 20' W	14
PC	*Pyrus calleryana 'Autumn Blaze'*	Autumn Blaze Callery Pear	2" Cal.	B.B.	40' H x 30' W	6
PG	*Picea glauca 'Densata'*	Black Hills Spruce	6' High	B.B.	35' H x 20' W	6



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CITY OF MADISON
MADISON, WISCONSIN

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MASTER SITE PLAN

C101

SCALE: 1"=60'-0"
PLOTTED BY: KatieU

ORIGINAL SIZE = 24" x 36"
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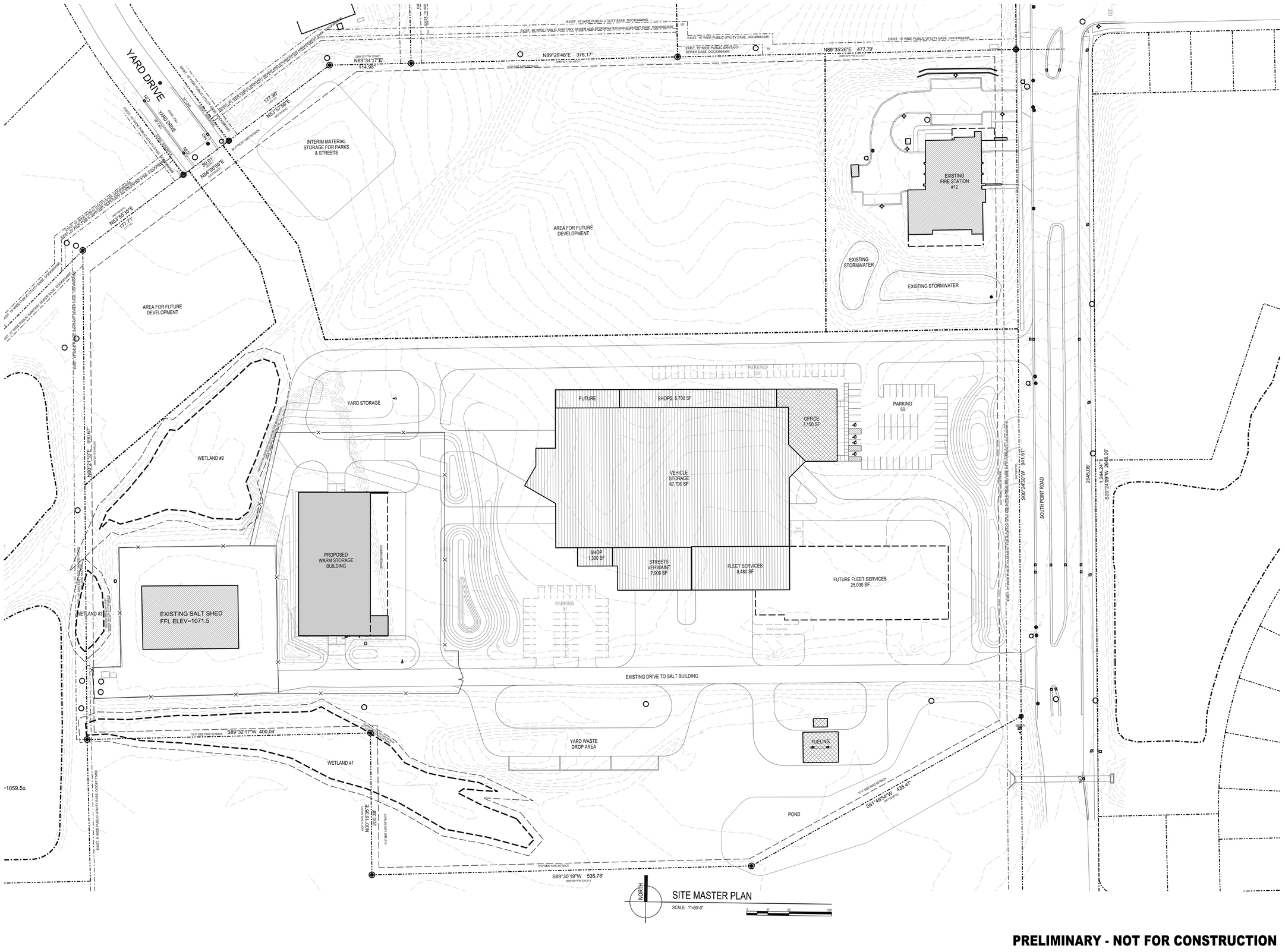

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CITY OF MADISON
MADISON, WISCONSIN

PROJECT NUMBER 49150

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REVIEWED BY

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MASTER SITE PLAN

C100

ORIGINAL SIZE = 24" x 36"
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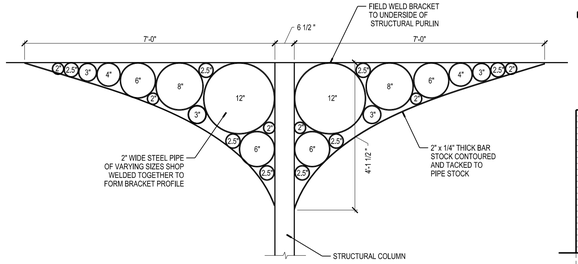
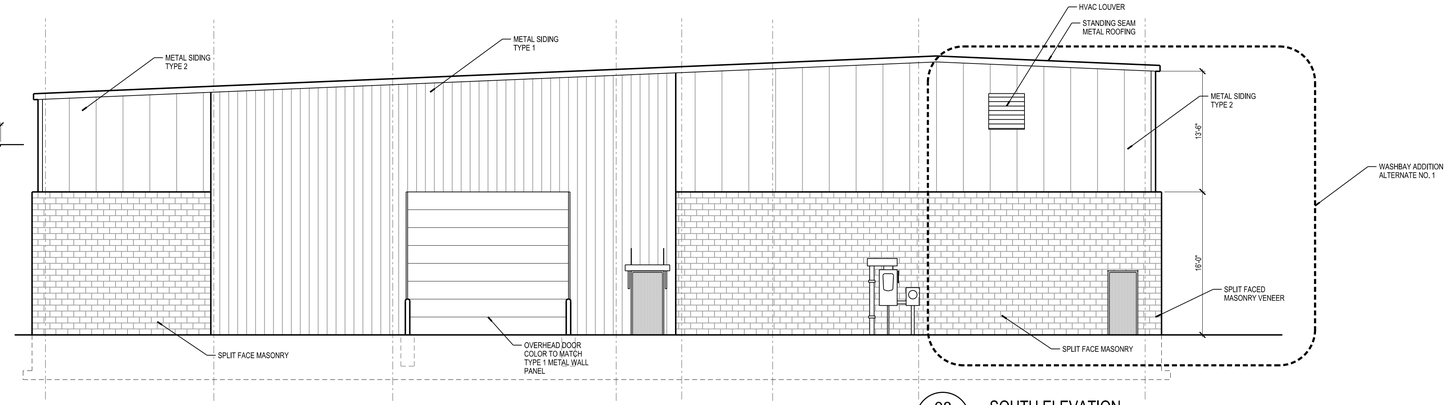
PLOTTED BY: KaleiJ



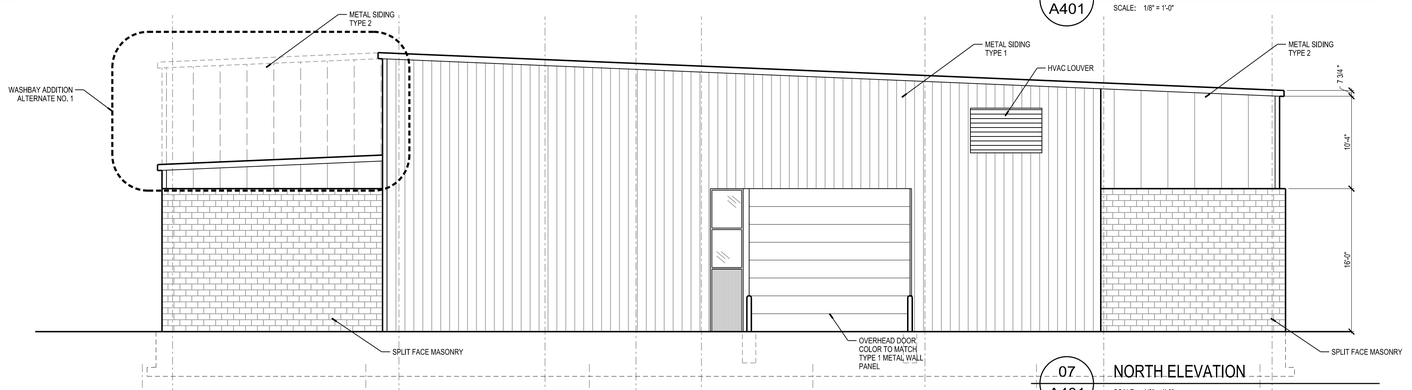
24 A401 DECORATIVE BRACKET DETAIL

SCALE: 1/2"=1'-0"



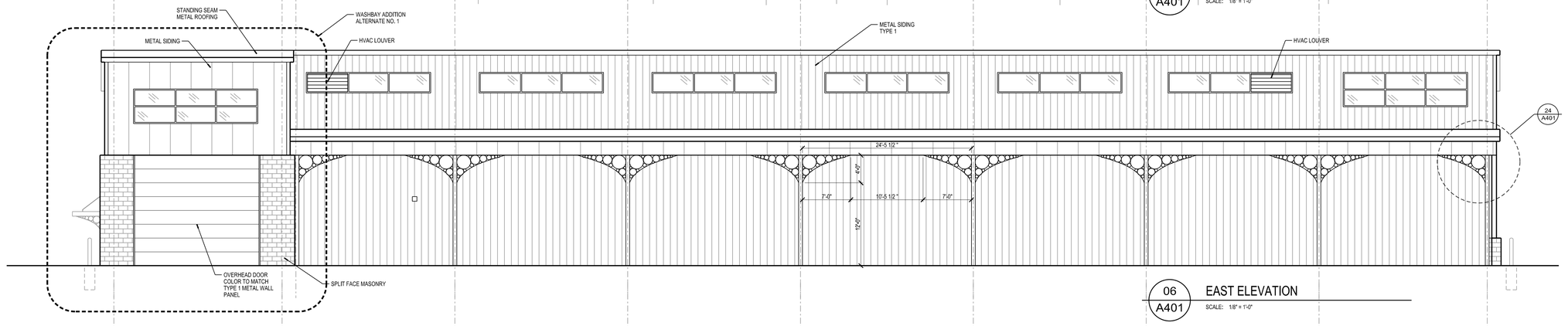
08 A401 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"



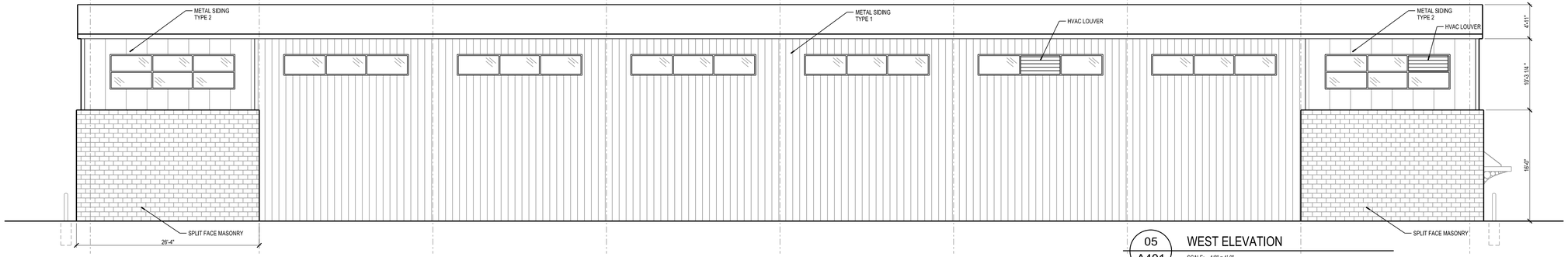
07 A401 NORTH ELEVATION

SCALE: 1/8" = 1'-0"



06 A401 EAST ELEVATION

SCALE: 1/8" = 1'-0"



05 A401 WEST ELEVATION

SCALE: 1/8" = 1'-0"

PRELIMINARY - NOT FOR CONSTRUCTION

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STREETS DEPARTMENT
NEW WARM STORAGE BUILDING
CITY OF MADISON
MADISON, WISCONSIN

PROJECT NUMBER 48150
APPROVED BY
REVIEWED BY
DRAWN BY JLH
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WARM STORAGE
EXTERIOR ELEVATIONS
ALTERNATE #1
W/ WASH BAY

A401

South Point Public Works Facility – Warm Storage Building

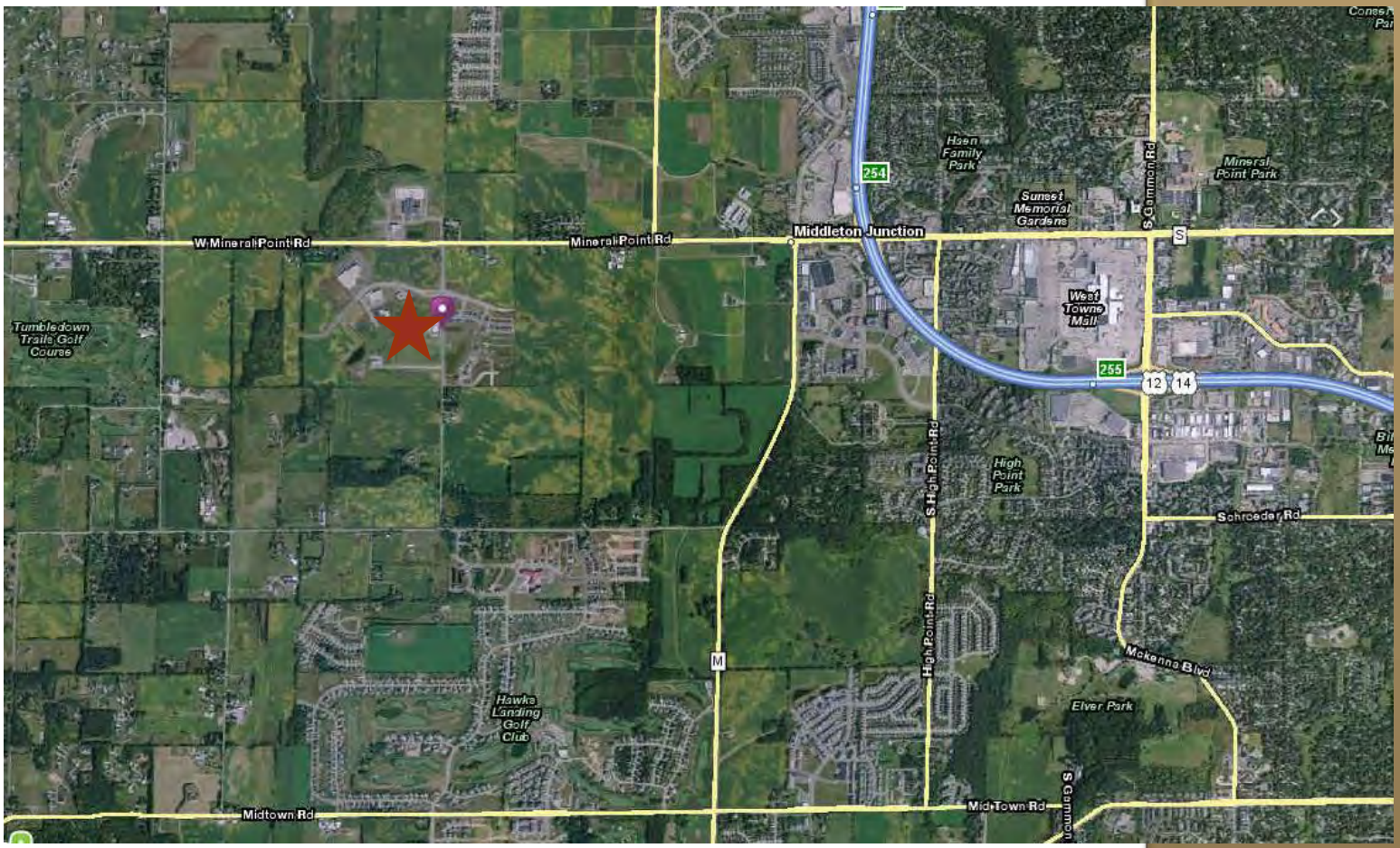
Urban Design Commission Submittal
–Initial Approval Presentation
June 6, 2012

Jeff Hazekamp, Angus Young Associates
jeffh@angusyoung.com (608) 756-2326

Project Description

- New 21,280 sf Warm Storage Building for Streets Department on existing South Point Public Works Facility site at 402 South Point Road

Location Map



Neighborhood Site Analysis

- Zoned SM – Specific Manufacturing
- Aldermanic District 9

Existing Salt Storage Building and Driveway

Neighborhood Images

Neighborhood Images

Neighborhood Images

Neighborhood Images

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Neighborhood Images

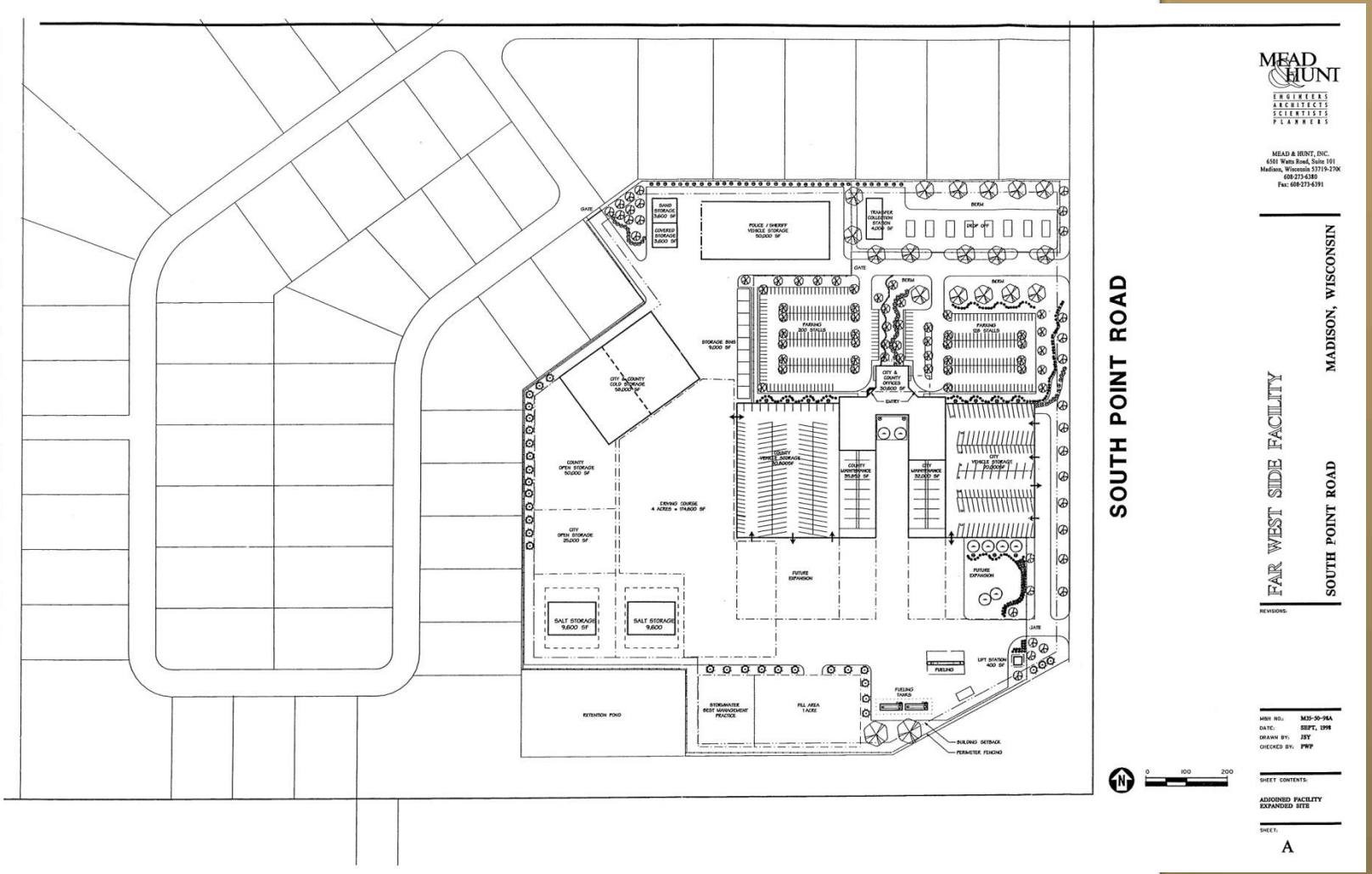
Site Analysis

- Endangered Resources Review did not determine any follow-up actions on the site
- Geotech report determined generally:
  - 5-30" topsoil over
  - 1-3' stiff/hard lean clay over
  - 7-13.5' medium stiff/lean clay and/or very loose to medium dense sand with some silt over
  - Sand w/various amts. of silt and gravel

Anticipated Wetlands (awaiting Wetland Delineation Report)

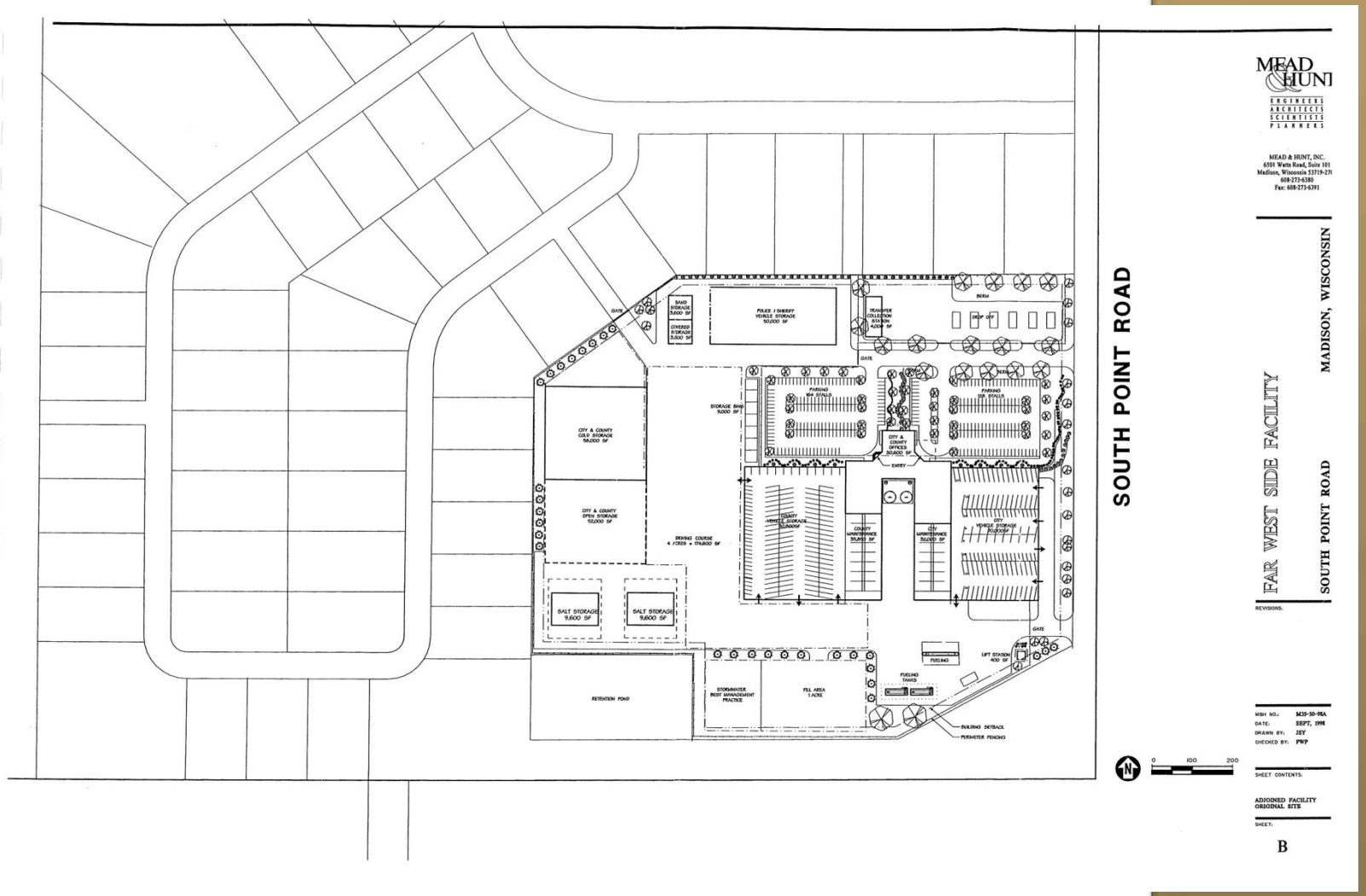
Previous Master Plan

- September 1998
- Adjoined City of Madison/Dane County Facilities on Expanded Site



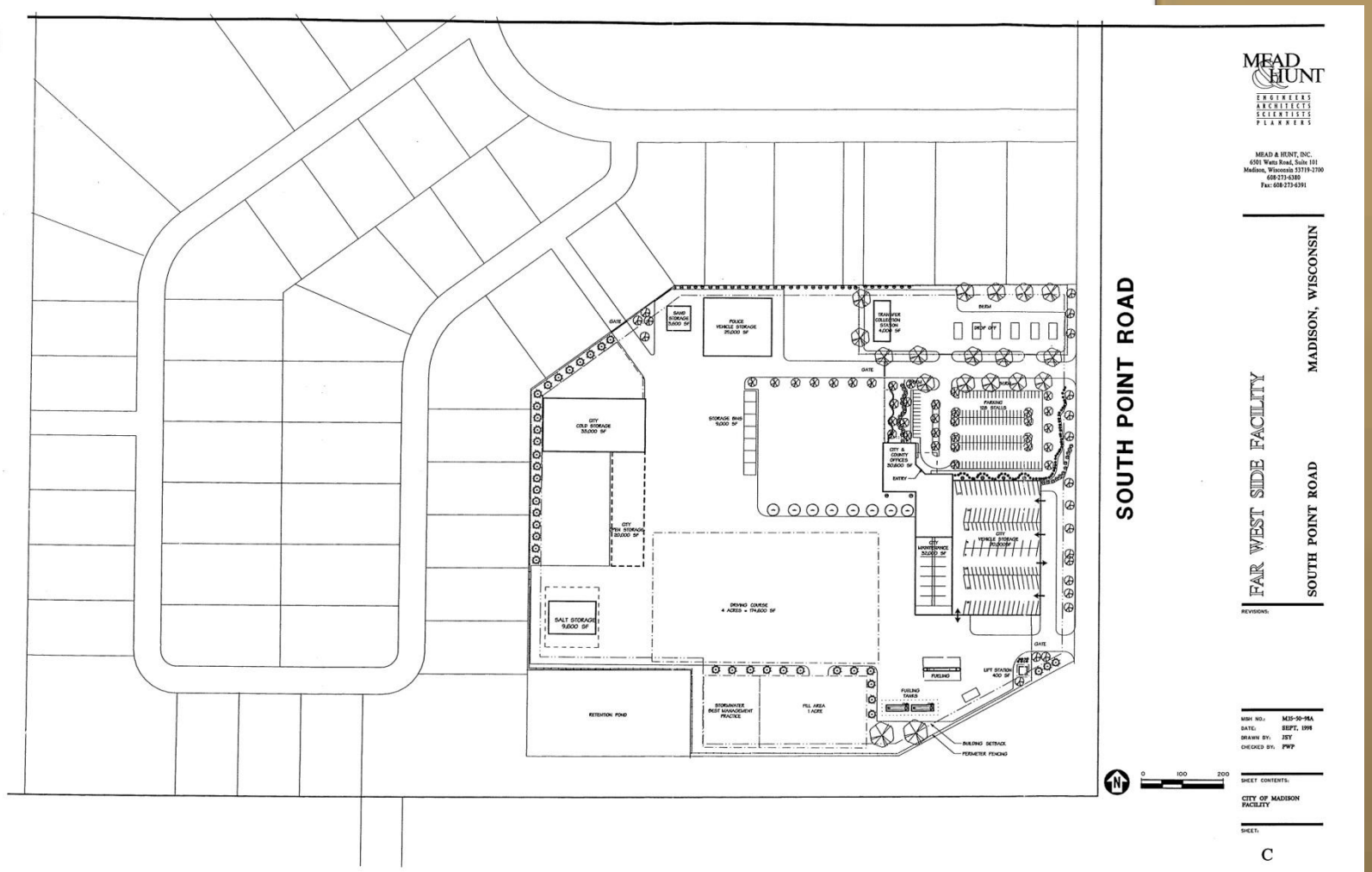
Previous Master Plan

- September 1998
- Adjoined City of Madison/Dane County Facilities on Original Site



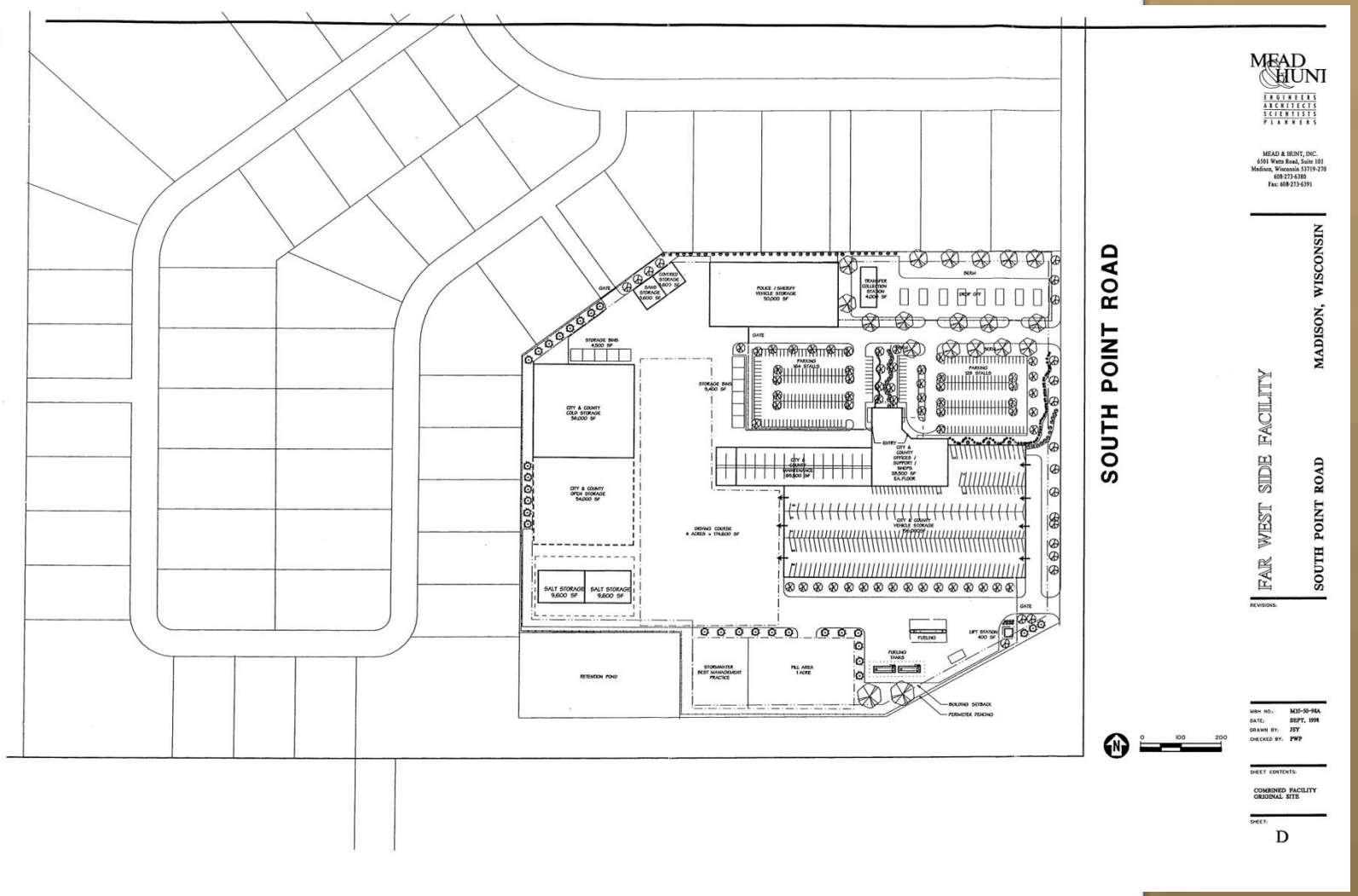
Previous Master Plan

- September 1998
- City of Madison Facility on Original Site



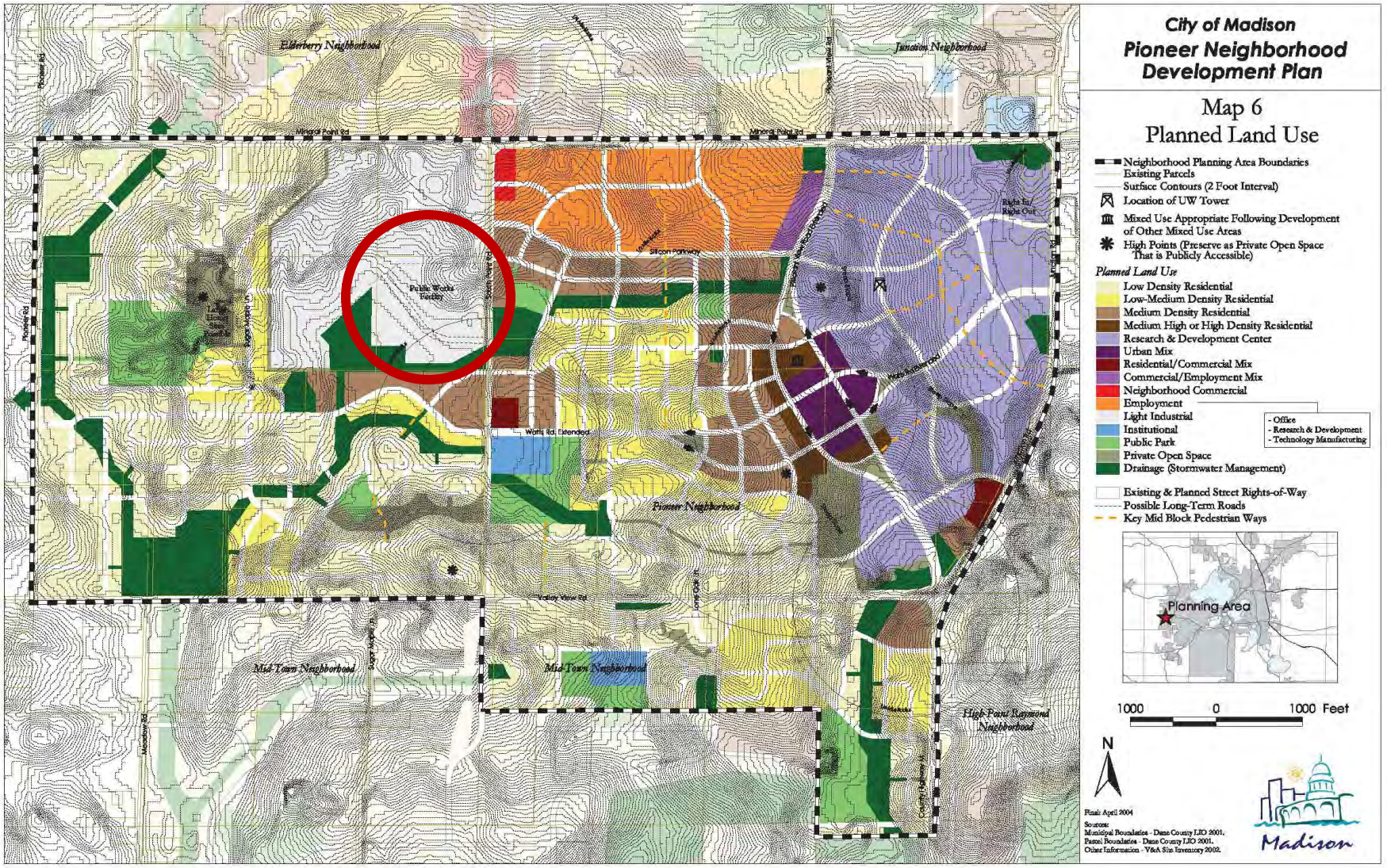
- September 1998
- Combined Facility on Original Site

Previous Master Plan



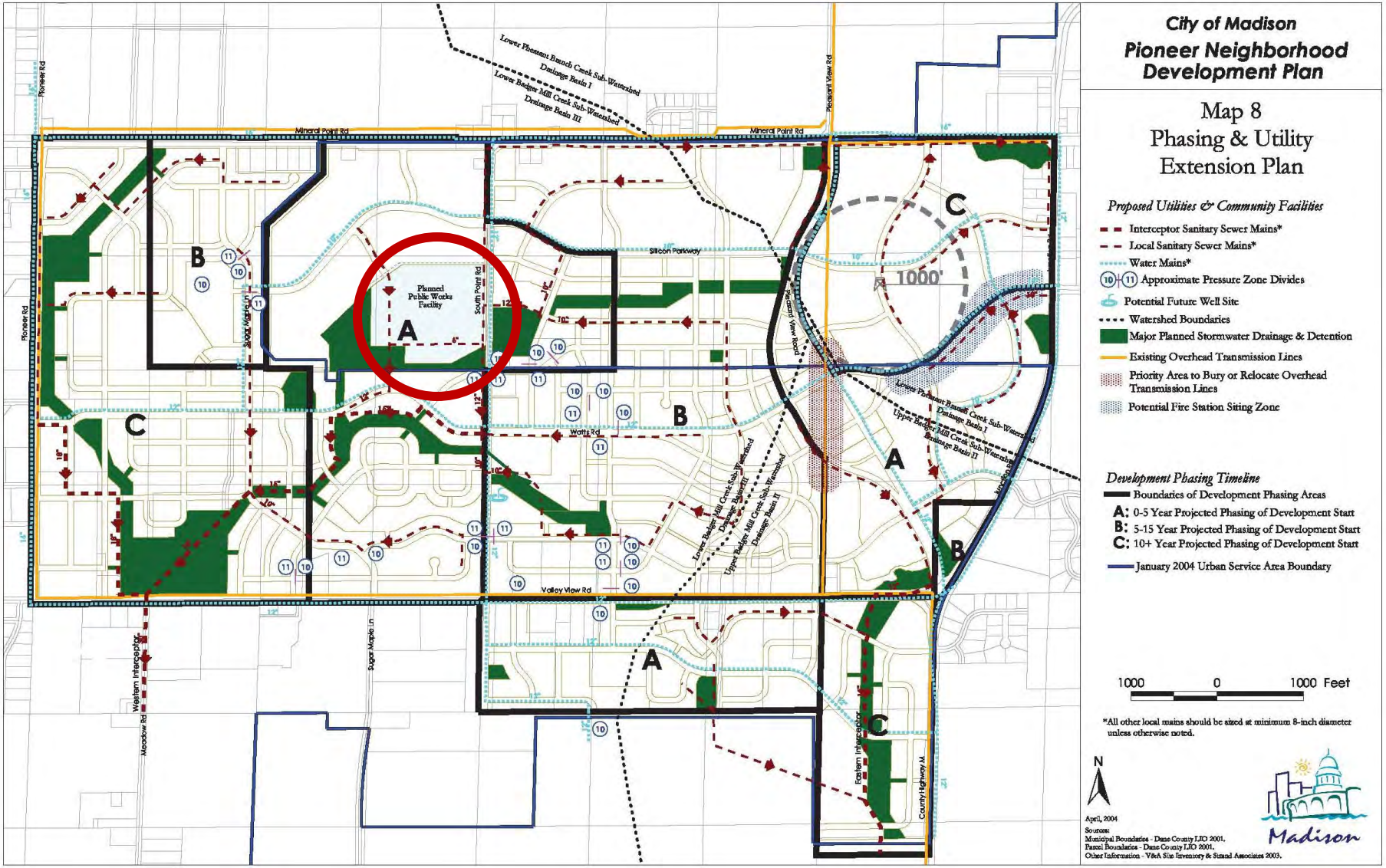
Pioneer Neighborhood Development Plan

- April 2004



Pioneer Neighborhood Development Plan

- April 2004



South Point Public Works Facility - Master Plan

Urban Design Commission Presentation: June 6, 2012

Angus-Young Associates
555 South River Street
Janesville, WI 53548-4783

Master Plan

Potential Future Developments:

- Low Speed Driver Training Area for Large Vehicles, Including: Fire, Streets, Metro, Police & Others

- Biodigester

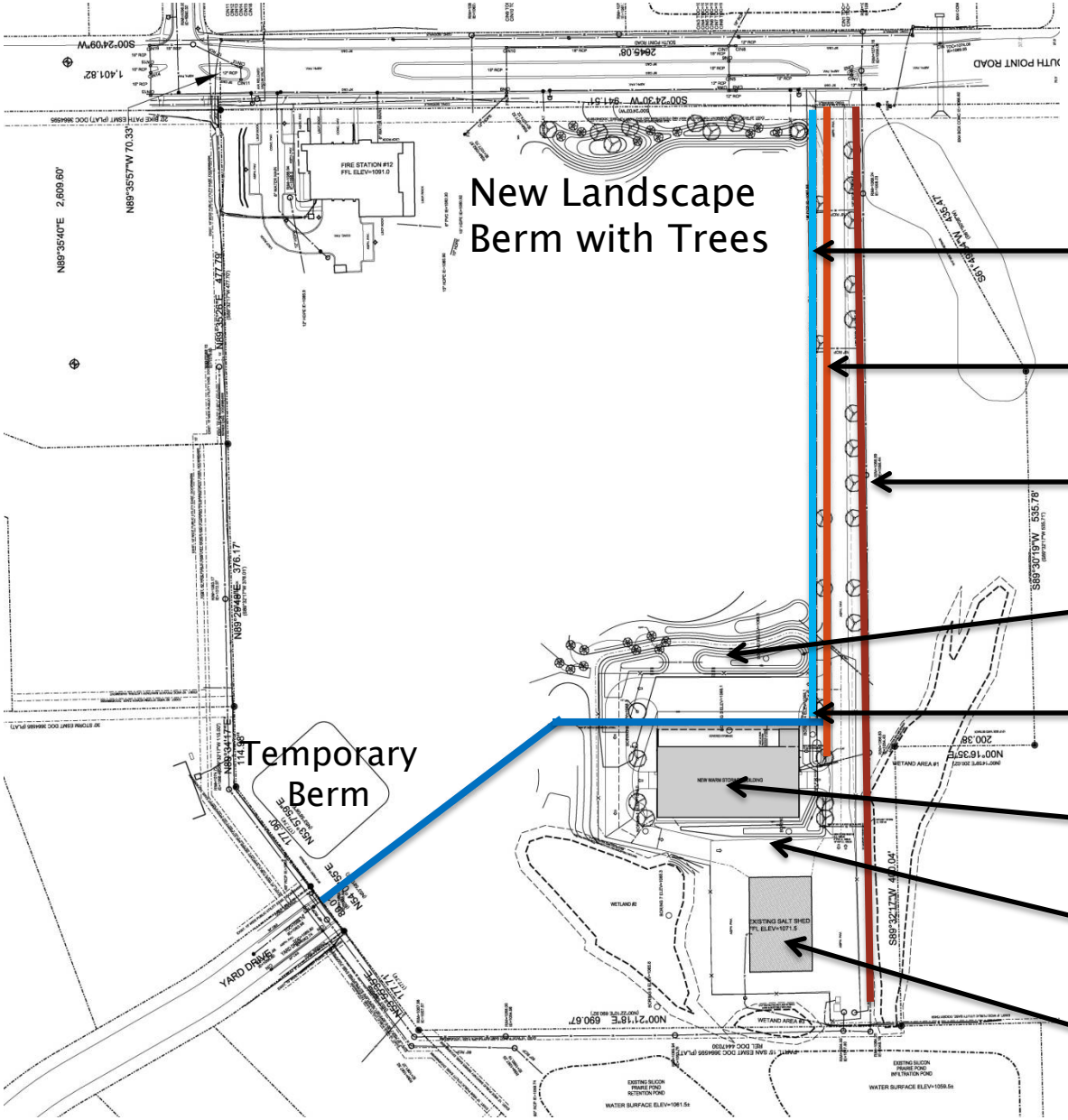
- Police Evidence Storage

- Fire Training

- Parks Maintenance Facility

• Development of Future Area will Require UDC Review & Approval

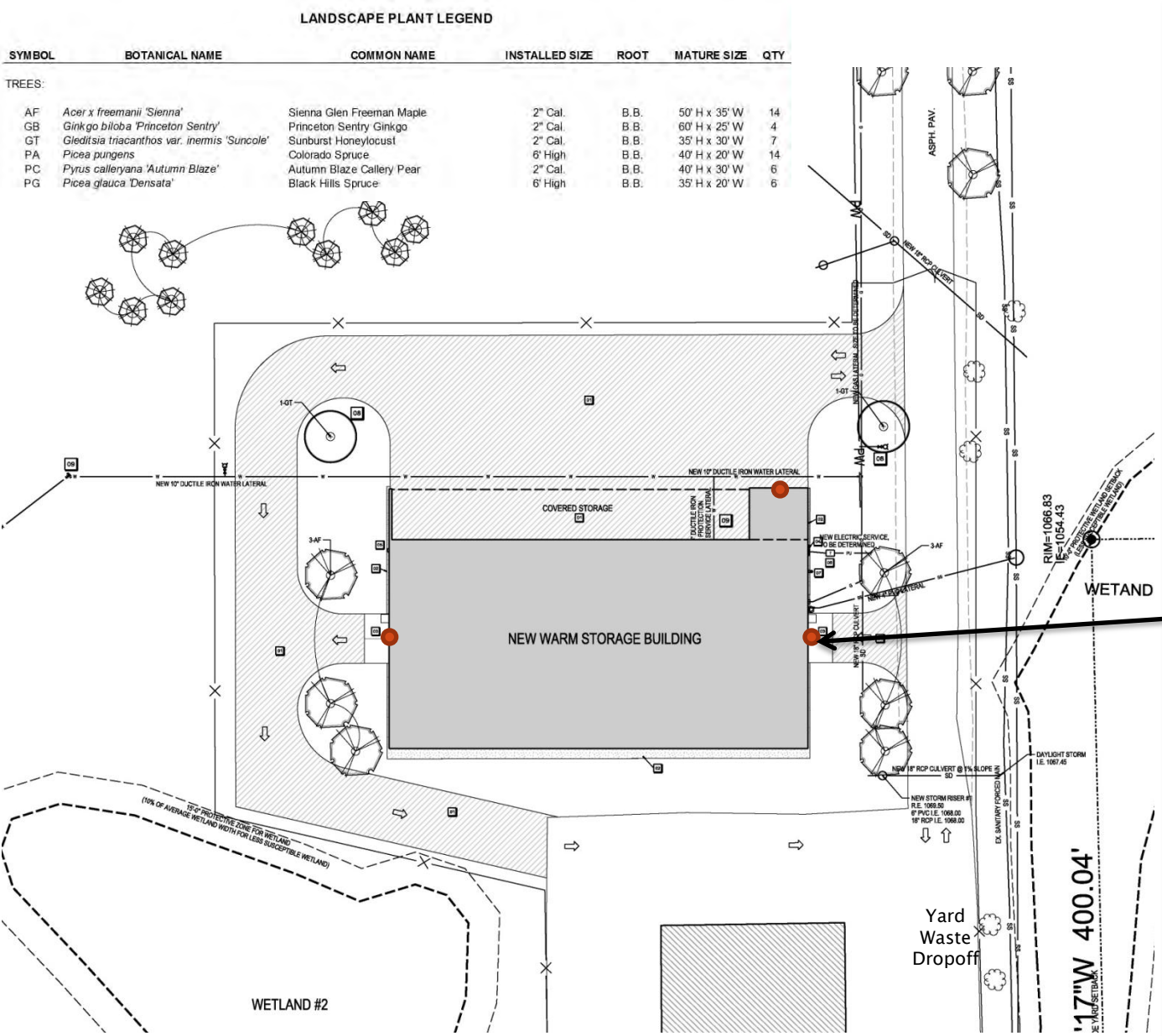
Overall Site Plan

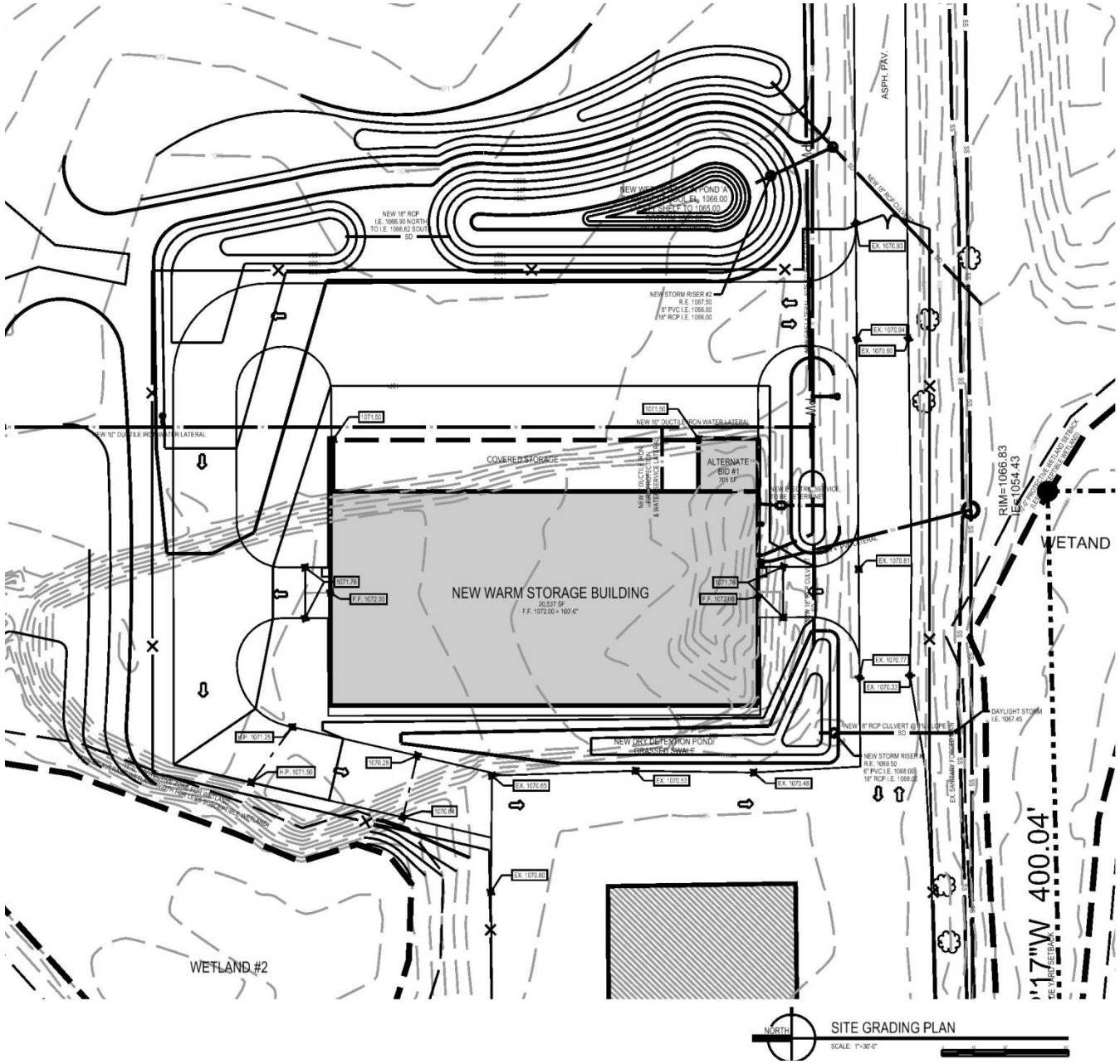


- Future Water lateral to provide loop service
- Gas Service from South Point
- Sanitary to connect to south
- Wet Detention Pond
- Proposed Water lateral with two fire hydrants
- Proposed New Building
- Grassed Swale & Dry Detention
- Existing Salt Storage

Proposed Site / Landscape Plan

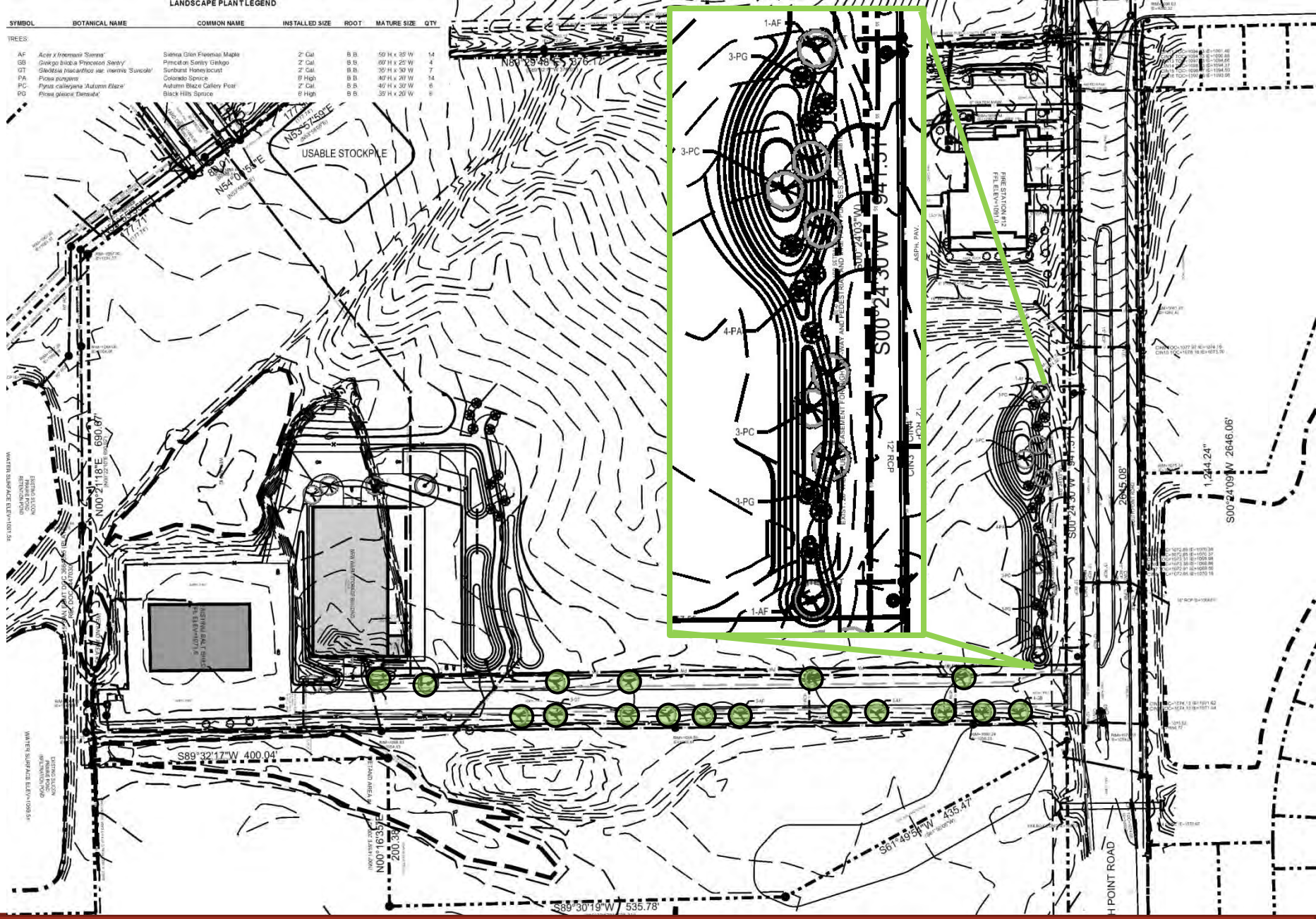
- Seeded utility lawn mix
- Covered Storage
- Wall-Pak Exterior Lighting
- Manual Swing Gate to be relocated





Proposed Stormwater

- New Wet Detention Pond on east handles majority of pavement runoff
- New grassed swale and dry detention on west handles roof runoff and some pavement
- Both stormwater features discharge to south under driveway
- Accommodate future driveway
- Divert existing runoff to the existing wetland #2 and to the east of stormwater features for Warm Storage Building


LANDSCAPE PLANT LEGEND
SYMBOL
BOTANICAL NAME
COMMON NAME
INSTALLED SIZE
ROOT
MATURE SIZE
QTY
TREES:
AF Acer x freemanii 'Sienna' Sienna Glen Freeman Maple 2" Cal. B.B. 50' H x 35' W 14
GB Ginkgo biloba 'Princeton Sentry' Princeton Sentry Ginkgo 2" Cal. B.B. 60' H x 25' W 4
GT Gleditsia triacanthos var. inermis 'Suncole' Sunburst Honeylocust 2" Cal. B.B. 35' H x 30' W 7
PA Picea pungens Colorado Spruce 6' High B.B. 40' H x 20' W 14
PC Pyrus calleryana 'Autumn Blaze' Autumn Blaze Calery Pear 2" Cal. B.B. 40' H x 30' W 6
PG Picea glauca 'Densata' Black Hills Spruce 6' High B.B. 35' H x 20' W 9
USABLE STOCKPILE
1-AF
3-PG
3-PC
4-PA
3-PC
3-PG
1-AF
FIRE STATION #12
FFE ELEV=1091.0
S00°24'30"W 941.31'
S00°24'09"W 2646.06'
S89°32'17"W 400.04'
S89°30'19"W 535.78'
S61°49'54"W 435.47'
N00°16'35"E 200.39'
N00°21'18"E 690.07'
N89°29'48"E 376.12'
N53°57'59"E
N54°01'54"E
177.71'
EXISTING SALT SHED
FF ELEV=1071.6
EXISTING SILOON
PRIMARY POND
RETENTION POND
WATER SURFACE ELEV=1091.5±
WATER SURFACE ELEV=1095.5±
NEW WARM STORAGE BUILDING
EXISTING STORAGE BUILDING
EXISTING WETLAND AREA #1
EXISTING WETLAND AREA #2
ASPH. PAV.
POINT ROAD

Exterior Lighting

COOPER LIGHTING - LUMARK®

DESCRIPTION

The Lumark Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impenetrable to contaminants. IP65 Rated. Six available lamp sources including patent pending energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium. UL and cUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.

Catalog #		Type
Project		OA
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Housing
Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1598 wet location listed and IP65 ingress protection rated. Not recommended for car wash applications.

Electrical
Ballasts, LED driver and related electrical components are hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three ½" threaded conduit entry points allow for thru-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV surge test and is Class 2 rated for 120-277V with an operating temperature of -30° to 60°C. Wal-Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated (metal halide: 150, 175, 200, 250, 320, 350, 400W [-30°C / -20°F], (high pressure sodium: 50, 70, 100, 150, 250, 400W [-40°C / -40°F]. High efficiency HID ballasts are available in 120V, 208V, 240V, 277V, 347V and 480V. Compact fluorescent high power factor ballasts are Class P insulation rated for 120-277V and have a starting temperature of -18°C / 0°F.

Optical
Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass, Solite™ flat diamond patterned glass and full cutoff IESNA compliant configurations. Patent pending, solid state LED luminaires are thermally optimized with 2400 or 4000 lumen package modules. HID models are offered in horizontal medium or mogul-based metal halide (MH / MP) or high pressure sodium (HP) lamps. T6 ceramic metal halide (CM) and 4-pin compact fluorescent (CF) lamp models offer high efficiency energy saving illumination.

Door Assembly
Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

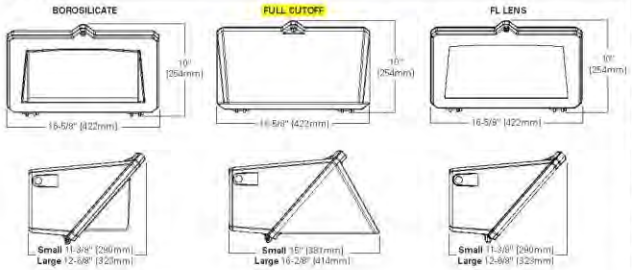
Finish
Housing and door are protected with 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC power coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional premium colors are available.

WP WAL-PAK
2400 - 4000 Lumen LED
39 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide
Ceramic Metal Halide
32 - 140W
Compact Fluorescent

WALL MOUNT LUMINAIRE

DARK SKY COMPLIANT FCO Full Cutoff

DIMENSIONS



TECHNICAL DATA
UL and cUL Wet Location Listed
IP65 Rated
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
EISA 6, ARRA, Title 20 Compliant
LM79 / LM80 Compliant

ENERGY DATA
Reactor Ballast Input Watts
50W HPS NPF (58 Watts)
70W HPS NPF (82 Watts)
100W HPS NPF (118 Watts)
150W HPS NPF (175 Watts)
High Reactance Ballast Input Watts
50W MP HPF (69 Watts)
70W MP HPF (94 Watts)
100W MP HPF (123 Watts)
150W MP HPF (185 Watts)
CWA Ballast Input Watts
200W HPS HPF (250 Watts)
200W MP HPF (227 Watts) ®
250W MP HPF (283 Watts) ®
320W MP HPF (385 Watts) ®
350W MP HPF (400 Watts) ®
400W HPS HPF (485 Watts)
400W MP HPF (452 Watts) ®

SHIPPING DATA
Approximate Net Weight:
32-42 lbs. (15-19 kgs.)

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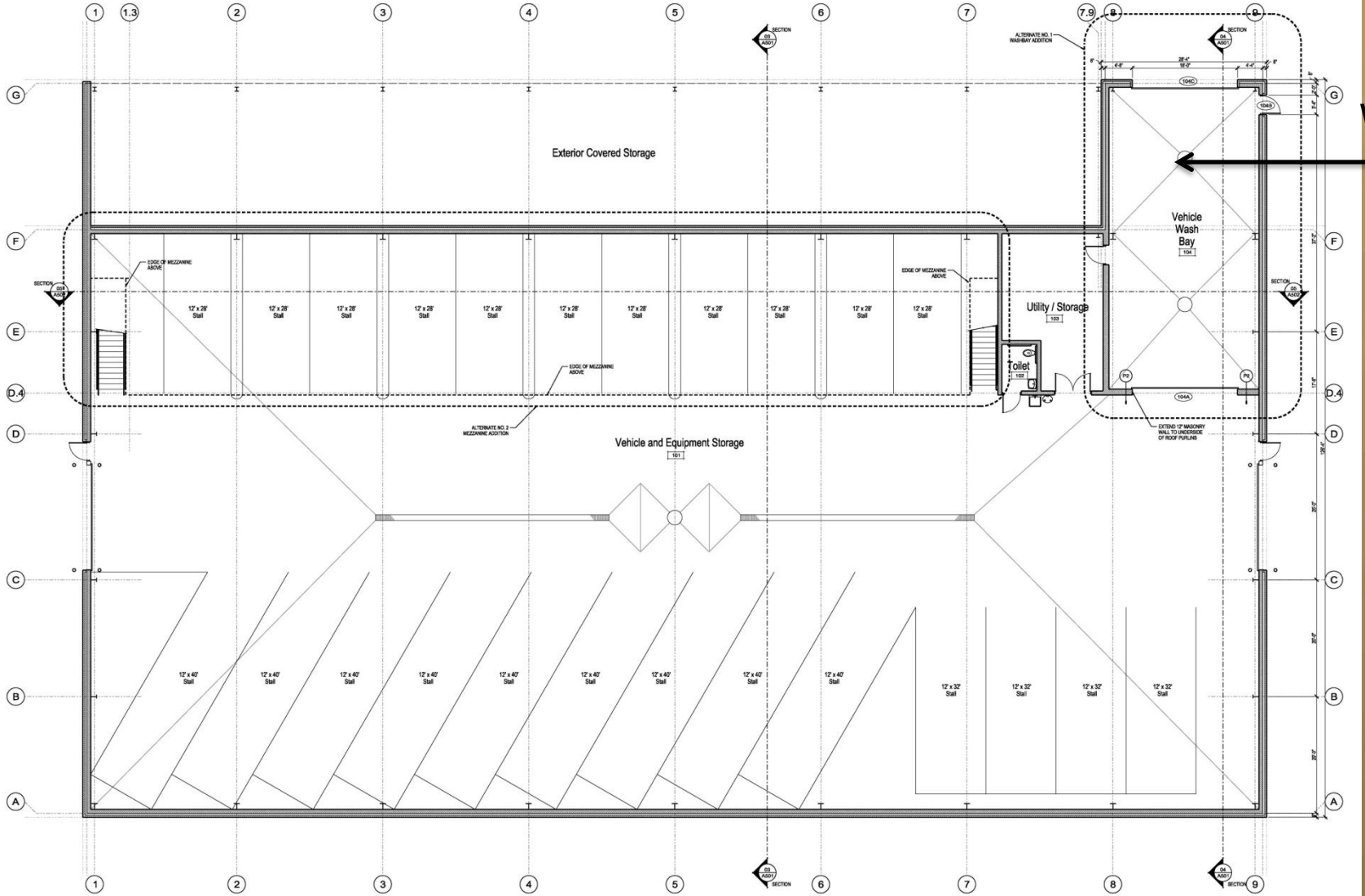
2010-11-03 17:10:12

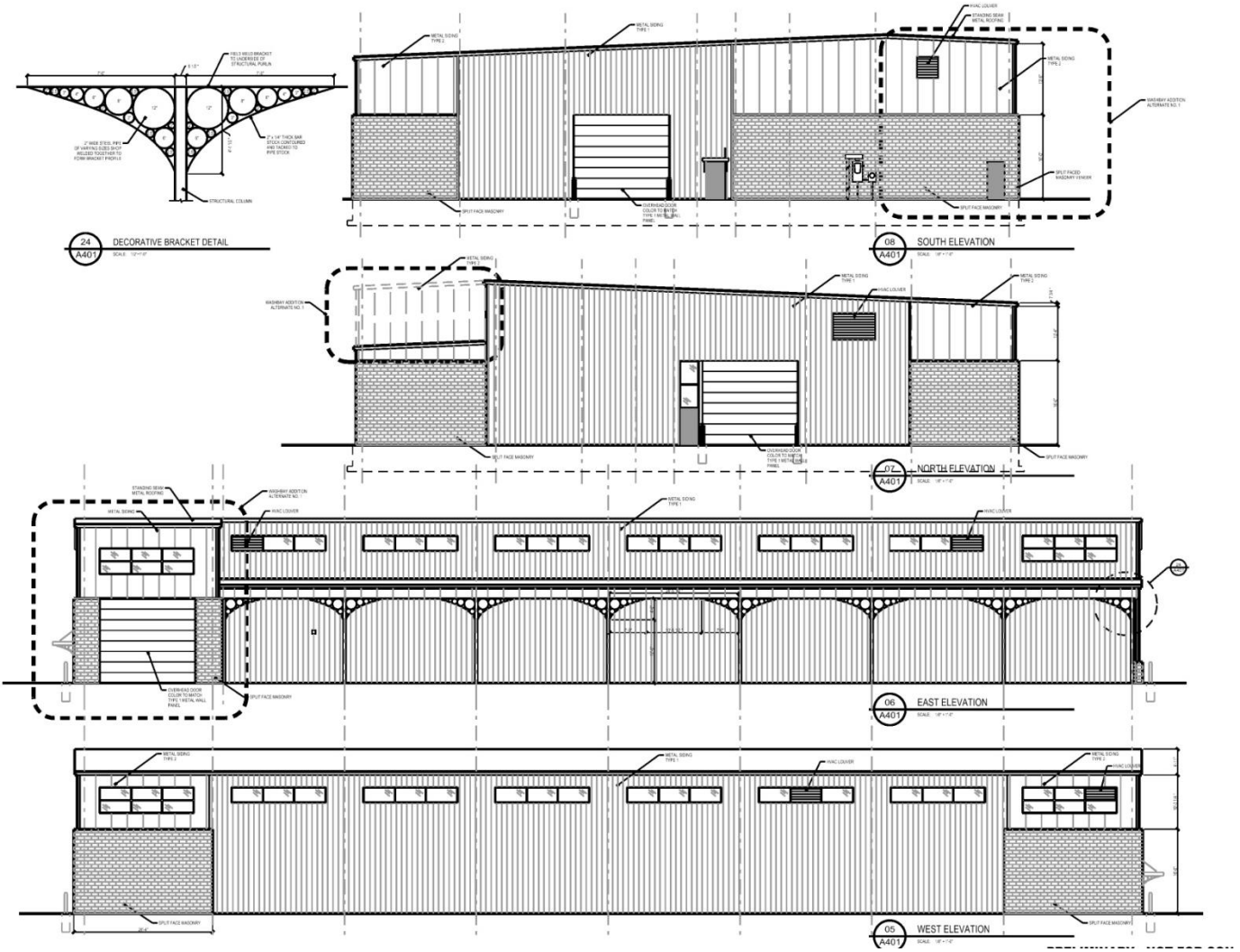
COOPER Lighting
www.cooperlighting.com

Proposed Building Plan

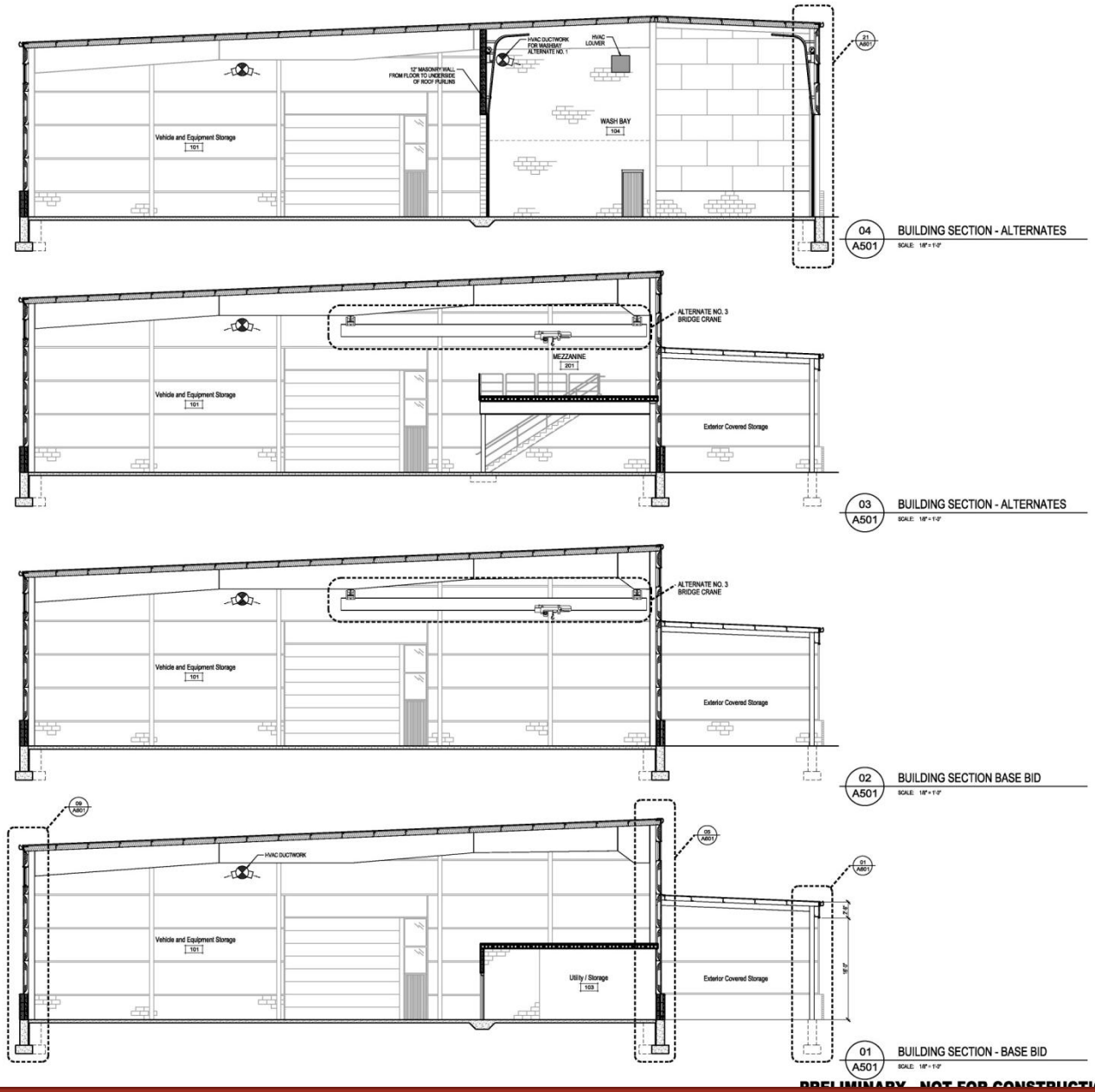


Wash Bay is an alternate

Proposed Building Elevations



Building Sections



Proposed Building Perspectives

Building Materials:

- Hunter Green Metal Panel
- Buff Split-Face Block
- Tan Doors & Frames & Fascia
- Snow White Standing Seam Roof

Thank you for your time.

Jeff Hazekamp, Angus Young Associates
jeffh@angusyoung.com (608) 756-2326

COOPER LIGHTING - LUMARK®

energy solutions

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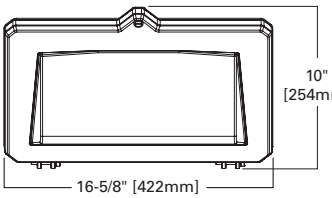
WP WAL-PAK

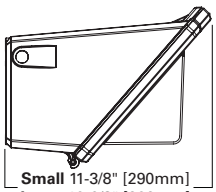
2400 - 4000 Lumen LED
39 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide
Ceramic Metal Halide
32 - 140W
Compact Fluorescent

WALL MOUNT LUMINAIRE

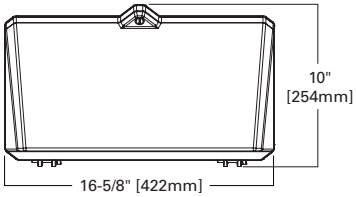
DIMENSIONS

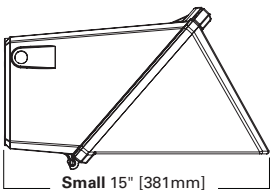
BOROSILICATE



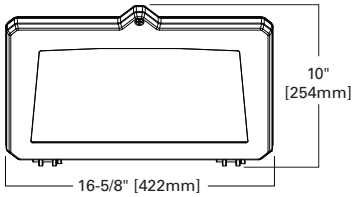


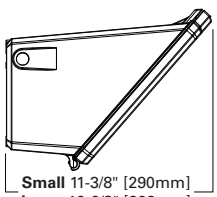
FULL CUTOFF





FL LENS





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150W MP HPF (185 Watts)
CWA Ballast Input Watts
200W HPS HPF (250 Watts)
200W MP HPF (227 Watts) Ⓔ
250W MP HPF (283 Watts) Ⓔ
320W MP HPF (365 Watts) Ⓔ
350W MP HPF (400 Watts) Ⓔ
400W HPS HPF (465 Watts)
400W MP HPF (452 Watts) Ⓔ

SHIPPING DATA

Approximate Net Weight:
32-42 lbs. (15-19 kgs.)

COOPER Lighting
www.cooperlighting.com

ORDERING INFORMATION

Sample Number: MPWP-GL-250-MT-2EM/SC/MR

Lamp Type
MP=Pulse Start Metal Halide
HP=High Pressure Sodium
LD=Solid State Light Emitting Diodes (LED)
CF=Compact Fluorescent [1]
CM=Ceramic Metal Halide [2]
MH=Metal Halide [3]

Series
WP=Wal-Pak

Door Type [4]
GL=Borosilicate Glass Door
FC=Full Cutoff Door
FL=Flat Solite Glass Door
PL=Polycarb Refractor Door

Lamp Wattage [5]
LED
2A=(2400 Initial Lumens)
4A=(4000 Initial Lumens)
MP
50=50W
70=70W
100=100W
150=150W
200=200W
250=250W
320=320W
350=350W
400=400W
MH
175=175W
250=250W
400=400W
HP
50=50W
70=70W
100=100W
150=150W
250=250W
400=400W
CM
39=39W
70=70W
100=100W
150=150W
CF
32=32W
42=42W
57=57W
70=70W
64=(2-32)
84=(2-42)
114=(2-57)
140=(2-70)

Voltage [6]
120V=120V
208V=208V
240V=240V
277V=277V
347V=347V [7]
480V=480V
DT=Dual-Tap
MT=Multi-Tap
TT=Tri-Tap
5T=5-Tap
E=Electronic Ballast [8]
ED=Electronic LED Driver

Options [9]
F1=Single fuse [10]
F2=Double fuse [10]
PE=Photocontrol button [10]
LL=Includes lamp [2]
BK=Black housing
WH=White housing
GM=Graphite Metallic housing
AP=Grey housing
DP=Dark Platinum housing
DIMA=CF Dimming Ballast [11]
DIMB=CF Dimming Ballast [11]
SGL=Solite Glass Lens [12]
Q=Quartz Restrike T4 Lamp [13]
EM=Emergency Quartz Restrike T4 Lamp with Time Delay Relay [13]
EM/SC=Emergency Separate Circuit T4 Lamp [13]
QMR=Emergency Back-Up 1-MR16 Lamp [14,15]
2QMR=Emergency Back-Up 2-MR16 Lamps [14,15]
2QMR/SC=Emergency Back-Up MR16 and EM separate circuit 2-MR16 Lamp [14,16]
EMMR=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay [14,15]
2EMMR=Emergency Back-Up 2-MR16 Lamps with Time Delay Relay [14,15]
2EMMR/SC=Emergency Back-Up 1-MR16 Lamp with Time Delay Relay and EM Separate Circuit [14, 15, 16]
EM/SC/MR=Emergency Back-Up Separate Circuit 1-MR16 Lamp [14, 15, 16]
2EM/SC/MR=Emergency Back-Up Separate Circuit 2-MR16 Lamps [14, 15, 16]
EM/SC/12V=Emergency Separate Circuit 12V 1-MR16 Lamp [14, 16, 17]
2EM/SC/12V=Emergency Separate Circuit 12V 2-MR16 Lamps [14, 16, 17]
EMI40=Emergency Cold Temperature UL 924 CF Power Pack 1 Lamp [18]
EMI40/2L=Emergency Cold Temperature UL 924 CF Power Pack 2 Lamp [18]
CF-EM=Emergency UL924 CF Power Pack 1 Lamp [19]
CF-EM/2L=Emergency UL924 CF Power Pack 2 Lamp [19]
EMLED-CD=LED Battery Back-Up Cold Temperature [20]

Accessories [21]
WG/WPGL=Wire Guard Borosilicate Glass Lens Door
WG/WPFC=Wire Guard Full Cutoff Door
WG/WPFL=Wire Guard FL Lens Door
TR/WP=Tamper Resistant Screw and Bit
VS/WPGL=Polycarbonate Vandal Shield for Borosilicate Glass Lens Door

STOCK SAMPLE NUMBER - LAMP INCLUDED

SAMPLE NUMBER: WPP40C

Series
WP=Wal-Pak

Lamp Type
L=LED
P=Pulse Start Metal Halide
S=High Pressure Sodium

Lamp Wattage
2A=28W
4A=40W
10=100W
15=150W
25=250W
32=320W
40=400W

Door/Glass Type
Blank=Standard
C=Full Cutoff Door

NOTES: Options not available with stock products. Refer to standard order information to add options. MT is standard. Lamp Type: MP not available in 100W. HPS not available in 320W. Borosilicate glass door is standard. 2A and 4A models available in LED only. LED models are 120-277V.

BUG RATING	B	U	G		B	U	G
Borosilicate Glass Door (GL)				Flat Lens Door (FL)			
LDWP-GL-2A-ED	0	3	2	LDWP-FL-2A-ED	0	2	1
LDWP-GL-4A-ED	1	3	2	LDWP-FL-4A-ED	0	3	1
Polycarbonate Lens (PL)				Full Cutoff Door (FC)			
LDWP-PL-2A-ED	0	3	2	LDWP-FC-2A-ED	0	1	1
LDWP-PL-4A-ED	1	3	2	LDWP-FC-4A-ED	0	1	1

For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

NOTES:
1 CF Single lamp offered in all door configurations. CF dual lamp models not offered with FL door type. 70W models not available with EMI40-2L, CF-EM, CF-EM-2L. CF not available in 347V.
2 All CM models offered with T6 envelope G12 lamp base. T6 Lamp included with CM models. Order LL with CM models. Ceramic Metal Halide (CM) is available with (MP) pulse start metal halide or E - Electronic Ballast. 400W MP must be ordered with LL option to be Title 20 Complaint.
3 MH products available for non-US markets only.
4 Small housing offered for 175W and below, CF and LD models. Large housing for 200W-400W. FL door not available with CF or 200-400W models. Polycarbonate lens available in models up to 175W max including LD. Polycarbonate lens not available with full cutoff door or FL models. Solite stipple glass is standard for FL lens. Clear glass is standard for full cutoff door types except for LD. LD full cutoff door is standard with solite glass.
5 LD nominal initial lumens prior to optical and configuration losses based on 67 CRI/5000K package at 25°C ambient. MH and MP 175W and below are medium base all others are mogul base. CF 64, 84, 114 and 140 models are offered in borosilicate glass and full cutoff doors only. In cold temperatures, compact fluorescent lamps produce lower illumination levels. CF 140 models and 400W HPS rated for 25°C.
6 See Voltage Chart for descriptions. 5T available in 400W MH models only. 90°C Rated wire required for thru-branch wiring for units 175W and lower. 105°C Rated wire required for thru-branch wiring for units 200W and higher. Thru-branch wiring is rated for 40°C for LD and 175W and below. Higher wattage thru-branch wiring is rated for use in 25°C ambient operating environments.
7 347V not available with thru-branch wiring. For 347 or 480V LD specify voltage. ED will be supplied with integral step down transformer. 347V not available with CF lamps.
8 Available with 70-150W MP or CM lamps. E is standard for all CF models. All electronic ballasts are universal 120-277V.
9 Not all options can be combined. Only one emergency or battery back-up option available within the fixture. CF Models utilize EMI40, EMI40/2L, CF/EM or CF-EM/2L option for emergency egress. LD Models utilize EM-LED or EMLED-CD options only for battery back-up.
10 Must specify voltage. F1=120, 277 or 347V. F2=208, 240 or 480V. PE=120, 208, 240 or 277V.
11 DIMA dimming ballast, specify number of lamps, available for 1 or 2-26W or 1-32W, 1-42W. DIMB available for 2-42W, 1-57W or 1-70W.
12 SGL optional on HID and CF models only. See note number 4.
13 Q or EM not available with LD or E electronic ballast. Q or EM Minimum HID wattage is 70 watts. EM/SC available in 120V only, EM/SC not available with LD. Maximum 100W 120V T4 DC Bayonet Quartz lamp. Lamp supplied by others.
14 QMR, 2QMR, EMMR, 2EMMR & 2EMMR/SC not available with LD or E electronic ballast. Minimum HID wattage is 70 watts.
15 1 or 2 GU10 base 50W max - 120V Halogen. Lamps supplied by others. EM/SC/MR, 2EM/SC/MR, EM/SC/12V, 2EM/SC/12V not available with LD.
16 Emergency lamp leads out of the back of the unit to auxillary power. Lamps independently wired to separate circuits.
17 Low Voltage 1 or 2 GU5.3 MR16 base, 12V DC, 35W max. Lamps supplied by others.
18 For use in 25°C ambient operating temperature environments. EMI40, EMI40/2L used for CF lamps. Specify 120 or 277V. EMI40 supports 1-70W CF max, EMI40/2L supports 2-32W CF max. Minimum -18°C/-4°F.
19 For use in 25°C ambient operating temperature environments. Specify 120 or 277V, CF-EM supports up to 1-57W CF. CF-EM/2L supports 2-18W CF, 18W lamps supplied by others. Minimum temperature is 0°F/32°C.
20 EMLED-CD available with 4A models only. For use in 25°C ambient operating temperature environments. Specify 120 or 277V. EMLED-CD minimum -20°C/-4°F. Battery pack is a UL recognized component.
21 Order separately.

VOLTAGE CHART	
DT=Dual-Tap	120/277 (wired 277V)
MT=Multi-Tap	120/208/240/277 (wired 277V)
TT=Tri-Tap	120/277/347 (wired 347V)
5T=5 Tap	120/208/240/277/480 (wired 480V)
E=Electronic Ballast	120-277V (Universal) (50/60 HZ)
ED=Electronic LED Driver	120-277V (Universal) (50/60 HZ)

LAMP TYPE	WATTAGE
Pulse Start Metal Halide	50, 70, 100, 150, 200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
T6 Ceramic Metal Halide	39, 70, 100, 150W
Compact Fluorescent	(1) 32, (1) 42, (1) 57, (1) 70, (2) 32, (2) 42, (2) 57, (2) 70
LED	2A (2400 Initial Lumens), 4A (4000 Initial Lumens)