The Avenue
275 West Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

GRAEF

collaborate / formulate / innovate

July 13, 2022

DPW Facility Relocation

The existing Public Works Campus is located at the southwest corner of Fond Du Lac Avenue and Division Road. The campus generally consists of a masonry administration building with four metal storage buildings. In addition, located directly across Division Road at the northwest corner of the intersection, is the Village's salt shed, a storage building and on-site storage.

EXISTING LOCATION

The Public Works Campus accommodates these various major departments; Streets, Water, Wastewater Utility and Vehicle Maintenance. Located at a different location, is the Village's Recycling Center. The existing structures are not large enough to accommodate the minimal needs of all the departments. In addition, the multiple buildings do not provide the continuity needed to provide the efficient use of the floor area provided. After the preliminary design, the existing buildings based only on square footage, only provide a third of the floor area needed for the DPW to be effectively functional. The entire site's structures would need to be razed to clear the site. Even with that being accomplished, the existing site would be insufficient for the proposed DPW. Another site was needed and selected.

NEW LOCATION

The new site acquired is located at the southwest corner of Donges Bay Road and Wasaukee Road. The proposed DPW facility is approximately 127,000 square feet. It will house all the departments from the existing location, along with a new salt shed, Recycling Center, fueling station, water filling station and on-site storage. Operations from at least three existing separate locations will now be accommodated at this new location.

EXTERIOR CONSTRUCTION

The proposed DPW will be constructed of insulated precast concrete wall panels. The roof structure will be long span steel bar joists/metal deck with a single-ply TPO membrane, fully adhered on 4" of polyisocyanurate insulation. All exterior glazing within the thermally broken window systems and overhead doors will be insulated glass. The hollow metal service doors will be insulated with the frames foamed in place. The precast wall panels will be prefinished with accent areas painted. The service doors and entrance canopy will also be painted. All other materials will be prefinished.

INTERIOR CONSTRUCTION

The majority of the interior walls are masonry for durability. Masonry walls in the administration areas will be covered with gypsum board. Other masonry walls used for storage areas will be painted. Individual offices will be gypsum board partitions. All door frames will be painted hollow metal. Administration doors will be wood and other doors will be painted hollow metal. Finished administration areas will have a suspended

acoustical tile ceilings while all other areas will have an exposed painted structure. Administration areas with a suspended ceiling will also receive carpeting. Almost all other floor areas will be sealed concrete. The mezzanine floor areas will be precast concrete plank with a concrete topping. All interior walls and the roof structure will be painted. Everything else will also be painted unless prefinished. Only the concrete floor slab will be sealed, not painted.

BUILDING USE

The DPW is mostly a storage building. All the departments will house their vehicles, trucks, service equipment, trailers, and equipment for weather protection within this one facility. Two wash bays are provided for required equipment cleaning. Ten maintenance service bays are necessary with various lift capabilities for servicing all DPW vehicles, along with fire-department trucks. Storage and work rooms are provided for each department's general operation. These areas account for almost the entire use of the building. Only a small portion of the is used for administration purposes. Each department has its own director's office but shares the remainder of the administration areas with each other. Those include the conference room, locker rooms, copy/supply room and some miscellaneous storage. In general, the building is used to house all of the Streets, Water and Wastewater vehicles and equipment under roof. In addition, work and storage areas are provided for each department's requirements. The building has been designed to meet all current needs with additional parking stalls to accommodate acquisition of future equipment. The mechanics have service bays, work rooms and material storage areas to service all the DPW department's needs. Only a minimal area is necessary for administration operations and the general staff members.

Village of Germantown ...Willkommen

FEES MUST BE PAID AT TIME OF APPLICATION

$200 Plan Commission Consultation
$1,085 Rezoning
$1,240 PDD < 5 acres
$2,095 PDD 5-20 acre site
$3,460 PDD > 20 acre site

Date Paid: 7-19-22 Received by: _____

REZONING & PDD APPLICATION

Pursuant to Section 17.51 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1

APPLICANT OR AGENT

Village of Germantown
N112 W17001 Mequon Rd.
Germantown, WI 53022

Phone ( )

E-Mail

PROPERTY OWNER

Kathleen Krause
11864 Morrison St.
Morrisonville, WI 53571

Phone ( )

E-Mail

2

PROPERTY ADDRESS OR GENERAL LOCATION	TAX KEY NUMBER
N104 W12667 Donges Bay Rd.	361-991

3

REZONING REQUEST

FROM	TO
A-1	M-1

4

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY – REQUIRED

Attach pages as necessary

Village of Germantown ...Willkommen

FEES MUST BE PAID AT TIME OF APPLICATION

$200 Plan Commission Consultation
$1,085 Rezoning
$1,240 PDD < 5 acres
$2,095 PDD 5-20 acre site
$3,460 PDD > 20 acre site

Date Paid: 7-19-22 Received by: _____

REZONING & PDD APPLICATION

Pursuant to Section 17.51 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 **APPLICANT OR AGENT**

_____
_____
_____
_____
Phone ( ) _____
E-Mail _____

PROPERTY OWNER

Village of Germantown
N112 W17001 Mequon Rd.
Germantown, WI 53022

Phone ( ) _____
E-Mail _____

2 **PROPERTY ADDRESS OR GENERAL LOCATION** | **TAX KEY NUMBER**

N104 W12703 Donges Bay Rd. | 361-992

3 **REZONING REQUEST**

FROM	TO
A-1	I

4 **METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY – REQUIRED**

Attach pages as necessary

5 PURPOSE OF REZONING REQUEST

Briefly describe why the applicant is rezoning the property. Include a description of the proposed use, including any new construction and number of employees, if applicable.

6 SUPPORTING DOCUMENTATION:

☐ Plat of Survey (1:100)

☐ Site Plan and elevations for new construction (can be conceptual)

7 READ AND INITIAL THE FOLLOWING:

__X__ I understand that the Village is under no obligation to rezone property and that density and lot coverages provided in the Zoning Code are maximums. Actual build out will depend on myriad factors including topography and other natural conditions, surrounding neighborhood context and the detailed design of a project.

__X__ I understand that Village Staff, Plan Commission and/or Village Board may request additional information to properly evaluate this request and failure to provide such information may in itself by sufficient cause to deny the petition.

__X__ I am aware that this rezoning shall go into effect immediately upon the final approval of the Village Board and its execution of the rezoning ordinance

__X__ I understand that Village Staff is required to post one or more signs along the street frontage of and/or on the property subject of this application that indicate to nearby property owners and the general public that a public hearing of my application will be held before the Village Plan Commission and/or Village Board prior to action taken on this application; I hereby grant Village Staff permission to enter onto the property for the expressed purpose of installing said sign(s) provided Village Staff is responsible for installing, maintaining and removing said signs in a reasonable manner and time frame.

8 SIGNATURES – ALL APPLICATIONS MUST BE SIGNED BY OWNER!

Applicant _____ Date _____

Owner _____ Date 9.5-2022

Village of Germantown ...Willkommen

Fee must accompany application

☐ $1460 Paid _____ Date 7-19-22

CONDITIONAL USE PERMIT APPLICATION

Pursuant to Section 17.42 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 **APPLICANT OR AGENT**

Village of Germantown
N112 W17001 Mequon Rd.
Germantown, WI 53022

Phone ( )

Fax ( )

E-Mail

PROPERTY OWNER

Phone ( )

2 **TO WHOM SHOULD THE PERMIT BE ISSUED?**

3 **PROPERTY ADDRESS** | **TAX KEY NUMBER**

N104 W12703 Donges Bay Rd. | 361-992

4 **DESCRIPTION OF EXISTING OPERATION**

Briefly describe the use as it exists today, including use, size, number of employees, hours of operation, etc. If this permit involves new construction, describe the current status of the property, e.g. "vacant." Use additional pages as necessary.

5 **DESCRIPTION OF PROPOSED OPERATION**

Write the name of the proposed conditional use exactly as it appears in the Municipal Code

Encroach into the 25' wetland setback area

Describe the proposed use, including size, number of employees, hours of operation and extent of any new construction/alterations.

6 METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY – REQUIRED

Attach pages as necessary

7 SUPPORTING DOCUMENTATION:

- ☐ Site Plan and elevations for new construction (can be conceptual)
- ☐ Photos of existing use and/or proposed use operating elsewhere
- ☐ _____
- ☐ _____

8 READ AND INITIAL THE FOLLOWING:

_X_ I understand that the Village is under no obligation to issue a Conditional Use Permit and will do so only if the applicant successfully demonstrates that the proposed use is harmonious with the neighborhood and the long range goals of the Village.

_X_ I will notify the Village if <u>any</u> aspects of the conditional use changes. I understand that failure to do so may result in the revocation of the CUP.

_X_ I understand that a Conditional Use Permit is valid only if the conditions and restrictions of the permit are met. I understand that failure to comply with any aspect of the permit may result in revocation.

_X_ I understand that Village Staff is required to post one or more signs along the street frontage of and/or on the property subject of this application that indicate to nearby property owners and the general public that a public hearing of my application will be held before the Village Plan Commission and/or Village Board prior to action being taken on this application; I hereby grant Village Staff permission to enter onto the property for the expressed purpose of installing said sign(s) provided Village Staff is responsible for installing, maintaining and removing said signs in a reasonable manner and timeframe.

9 SIGNATURES – ALL APPLICATIONS MUST BE SIGNED BY OWNER!

_____ _____
Applicant Date

S A M 9-5-2012
Owner Date

Village of Germantown

Willkommen

Fee must accompany application

- ☐ $700 Minor Addition
- ☐ $1,240 Construction <10,000 SF
- ☐ $2,095 Construction 10,000 SF to 50,000
- ☐ $3,460 Industrial Construction >50,000 SF
- ☐ $3,460 Commercial Construction >50,000
- ☐ $200 Plan Commission Consultation
- ☐ $125 Fire Department Plan Review

~~PAID~~ _____ DATE 7-19-22

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 **APPLICANT OR AGENT**

_____

_____

_____

_____

_____

Phone ( ) _____

E-Mail _____

PROPERTY OWNER

Village of Germantown
N112 W17001 Mequon Rd.
Germantown, WI 53022

_____

_____

Phone ( ) _____

E-Mail _____

2 **PROPERTY ADDRESS**

W130 N10200 Omega Hills Parkway

3 **NEIGHBORING USES** – Specify name and type of use, e.g. Enviro Tech – Industrial, Smith – Residential, etc.

North	South	East	West

4 **READ AND INITIAL THE FOLLOWING:**

K I am aware of the Village of Germantown ordinance requiring fire sprinklers in most new construction.

K I understand that all new development is subject to Impact and/or Connection Fees that must be paid before building permits will be issued.

K I understand that an incomplete application will be withdrawn from the Plan Commission agenda and that all resubmissions to the Plan Commission are subject to a new application fee.

5 **SIGNATURES** – ALL APPLICATION MUST BE SIGNED BY OWNER!

_____

Applicant Date

Stan Theb 9.5.2022

Owner Date

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
N7725 Hwy 28
Horicon, WI 53032

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

March 15, 2022

EXE-SE-2022-67-00776

Steve Kreklow
N112 W17001 Mequon Road
Germantown, WI 53022

RE: Artificial Wetland Exemption Determination areas described as Wetlands W-1, W-2, W-3, W-4, W-5, W-7, W-8, W-9, W-10, W-11, and W-12, located in the Village of Germantown, Washington County

Dear Mr. or Ms. Kreklow:

This letter is in response to your request for an artificial wetland exemption determination for the above mentioned wetlands.

According to 281.36 (4n), State Statutes, a landscape feature where hydrophytic vegetation may be present as a result of human modification to the landscape or hydrology and for which no definitive evidence exists showing a prior wetland or stream history before August 1, 1991, may be exempt from state wetland regulations. The following types of artificial wetlands cannot be exempted from state wetland regulation:

1) a wetland that serves as a fish spawning area or that is passage to a fish spawning area and

2) a wetland created as a result of a wetland mitigation requirement.

In addition, DNR must also consider whether the artificial wetland is providing significant flood protection to adjacent or downstream properties and infrastructure, and/or significant water quality functions to adjacent or downstream water bodies.

The Department reviewed the following materials to aid in our exemption determination:

- The request narrative
- Historic Maps, including the Original Land Survey Plat, Bordner Survey
- Aerial photographs, including the 1937 photograph, a pre-construction photograph, and a post-construction photograph.

Below is a summary of our findings:

Request Narrative

According to the request narrative, "Historical USGS 1958 topographical surveys and various aerial images were reviewed to further understand the past land use of the site. The historic use of the area was for agriculture with various farmed fields, agricultural buildings, and roads. Wetlands W-10, W-11, W-7, and W-5 near the southwest corner of the property is the prime proposed location of the new building and associated DPW construction. Based on historical images it is likely that this area was completely regraded to is current contours. The elevation changes are not natural or similar to the surrounding site. Its [sic] likely this grading was for stormwater management and industrial use. In 1950, 1970, 1980, and 1985 these wetlands are not visible. On the 1985 image there is also an impervious road cutting through the site likely causing the ponding and alterations to the landscape for wetland W-7. Wetlands W-1, W-2, W-3, W-4, W-8, W-9, and W-12 are all likely formed due to the agricultural practices on this land. W-1 and W-2 are not visible until 1970 and are likely from the structure and road visible on the historical images. W-8, W-9, and W-12 are all likely associated with the primary farm operation on this site. It is likely that W-12 formed because of compact soils and other impervious surfaces that were in that area historically."

Historic Map Review

- Original Land Survey Plat: The original land survey indicates a waterway running through the current location of Wetland W-6. No wetlands are mapped elsewhere.

- Bordner Survey: The Bordner survey indicates "grass marsh" and a stream flowing southwest where Wetland W-6. "Pasture" is mapped where Wetland W-12 is now found. Other wetlands are in locations that were mapped as "cleared crop land."

- USGS Topographic Quad map: The 1892 and 1907 USGS Quad maps indicate mapped wetlands with a mapped waterway within where Wetland W-6 is now found.

- Soil Maps: The soil maps indicate the wetlands to be found within the following soil types:

    - Wetland W-1 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows), Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows), and Ozaukee silt loam, high carbonate substratum, 6-12% slopes, eroded (this is a non-hydric soil type).

    - Wetland W-2 is found within Ozaukee silt loam, high carbonate substratum, 6-12% slopes, eroded (this is a non-hydric soil type).

    - Wetland W-3 is found within Dresden silt loam, 1-3% slopes (this is a non-hydric soil type).

    - Wetland W-4 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows) and Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

    - Wetland W-5 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows) and Ozaukee silt loam, high carbonate substratum, 6-12% slopes, eroded (this is a non-hydric soil type).

    - Wetland W-7 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

    - Wetland W-8 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

    - Wetland W-9 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

    - Wetland W-10 is found within Ozaukee silt loam, high carbonate substratum, 6-12% slopes, eroded (this is a non-hydric soil type).

    - Wetland W-11 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

    - Wetland W-12 is found within Ozaukee silt loam, high carbonate substratum, 2-6% slopes (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows)

and Ozaukee silt loam, high carbonate substratum, 2-6% slopes, eroded (this is a non-hydric soil type with minor hydric inclusions of drained Ashkum in ponded depressional sedge meadows).

Aerial Photograph Review

- 1937 aerial photograph. The 1937 aerial photograph shows the following:
  Wetland W-1 was an uncropped area with scattered trees, no wetness signatures. Wetland W-2 was a cropped farm field with wetness signatures present but no definitive wetlands seen. There is a drainage pattern and wetness signature but no definitive wetlands where Wetland W-3 is now found. Wetland W-4 was a cropped farm field with weak wetness signatures present but no definitive wetlands seen. Wetland W-5 was a cropped farm field with wetness signatures present in the northern half of the main body of the wetland but no definitive wetlands seen. There is a large drainage swale with strong wetness signatures where Wetland W-6 is now found. Wetland W-7 was a cropped farm field with wetness signatures present but no definitive wetlands seen. Wetland W-8 is located where pasture was present. W-9 is now located where cropped field was present. Wetland W-10 was a cropped farm field with wetness signatures present but no definitive wetlands seen. Wetland W-4 was a cropped farm field with wetness signatures present but no definitive wetlands seen. Wetland W-12 was a primarily cropped farm field with the NE quarter appearing to be bare dirt.

Wetland 2 was cropped farm field with no definitive wetlands present until 2005 when a road was created adjacent and was further developed in 2008.

Wetlands 1, 3, and 4 were never impacted directly by humans. These wetlands show intermittent wetness signatures and are not always cropped through time.

Wetland 5 is now located in an area that was mass graded intermittently between 1982 and 1998 and left fallow following that. Prior to mass grading the location was cropped farm field with a wetness signature in 1956 but no definitive wetlands.

Wetland 7 is now located in an area that was mass graded intermittently between 1982 and 1998 and left fallow following that. Prior to mass grading the location was cropped farm field with a wetness signature in 1955 but no definitive wetlands.

Wetlands 8 and 9 are located in depressions created by man in 1995 as part of development on the property. No significant changes after construction.

Wetland 10 is now located in an area that was mass graded in 1983. Prior to mass grading the location was cropped farm field with a wetness signature in 1956 but no definitive wetlands.

Wetland 11 is now located in an area that was mass graded intermittently between 1982 and 1998 and left fallow following that. Prior to mass grading the location was cropped farm field with a wetness signature in 1956 but no definitive wetlands.

Wetland 12 appears to have been uncropped, bare dirt barnyard and cropped field, with percentages changing over time. In 1995 the area appears to have either soil borrow pits for the building construction or stockpiled soils. Wetland 12 then remained as a mix of bare soil and cropped farm field until present day.

Site Photographs

The site photographs show Wetlands 2, 3, 4, and 7 to be heavily vegetated depressional wetlands comprised of nearly 100% reed canary grass (*Phalaris arundinacea*).

Conclusion:

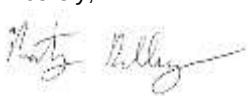
- Based upon the information provided above, the wetlands identified as Wetlands W-2, W-5, W-7, W-8, W-9, W-10, W-11, and W-12 lacked a wetland history prior to August 1, 1991 and fulfill all artificial wetland exemption standards. **Therefore, Wetlands W-2, W-5, W-7, W-8, W-9, W-10, W-11, and W-12 are exempt from state wetland regulations.**

- Based upon the information provided above, the wetlands identified as **Wetlands W-1, W-3, and W-4 had a wetland history prior to August 1, 1991 and are not exempt from state wetland regulations.**

This letter describes DNR's decision regarding the jurisdictional status of Wetlands W-1, W-2, W-3, W-4, W-5, W-6, W-7, W-8, W-9, W-10, W-11, and W-12 and is only valid for state jurisdictional purposes. For decisions regarding the federal jurisdictional status of Wetlands W-1, W-2, W-3, W-4, W-5, W-6, W-7, W-8, W-9, W-10, W-11, and W-12 you will need to contact the U.S. Army Corps of Engineers.

If you have any questions, please call me at 920 296 6507 or email.

Sincerely,



Marty Dillenburg
Water Management Specialist

Copy to: Alison Masek, GRAEF
Chris Jors, Sr. Specialist-Biologist, SEWRPC
US Army Corps of Engineers

Donges Bay Road
Donges Bay Road
W-8
0.01 Ac
W-12
0.30 Ac
W-9
0.03 Ac
W-6
12.43 Ac
W-2
0.01 Ac
W-1
0.38 Ac
W-1
0.38 Ac
W-4
0.23 Ac
W-3
0.22 Ac
W-10
0.19 Ac
W-11
0.07 Ac
W-7
0.43 Ac
W-5
2.74 Ac
Wasaukee Road
N
0
150
300
WETLAND EXEMPTIONS
DPW BUILDING
VILLAGE OF GERMANTOWN
EXHIBIT 4
GRAEF

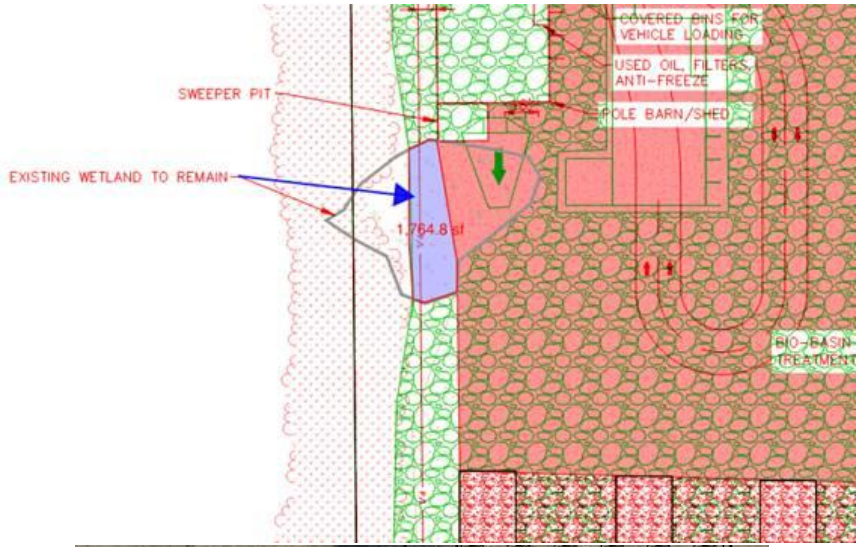
Additional Information -Germantown DPW Wetland Permit

The design iteration on this parcel began with options that showed the building much further south and impacting the finger wetland in the middle of the parcel, on the south end of the site. Recently, the team was able to shrink some hard surface and minimize impacts to this finger of wetland even further. Attached is the exhibit, which is an overlay between the May 2022 design and the July 2022 design. Below are the snippets of the wetland impact minimization efforts.

Wetland 7-

Activities in the SW wetland are sweeper pit dumping and unloading into an enclosed sanitary drain. The sweeper needs room to operate and the most efficient location for the sweeper pit room is at the SW corner of the building. This still allows the pole barn to have through movements through overhead doors at each end. The pole barn needs to be located along this west parcel line as it currently sits so the areas east of there can be used for resident recycling drop off and pick up. Residents can bring their leaves, brush and other organic material to the recycling center. After their drop off, they can also load up with mulch that is developed on site, and other yard and construction items, like stone, the Village provides. This recycling area will also see front end loader use, to push and scoop and move resident yard wastes.

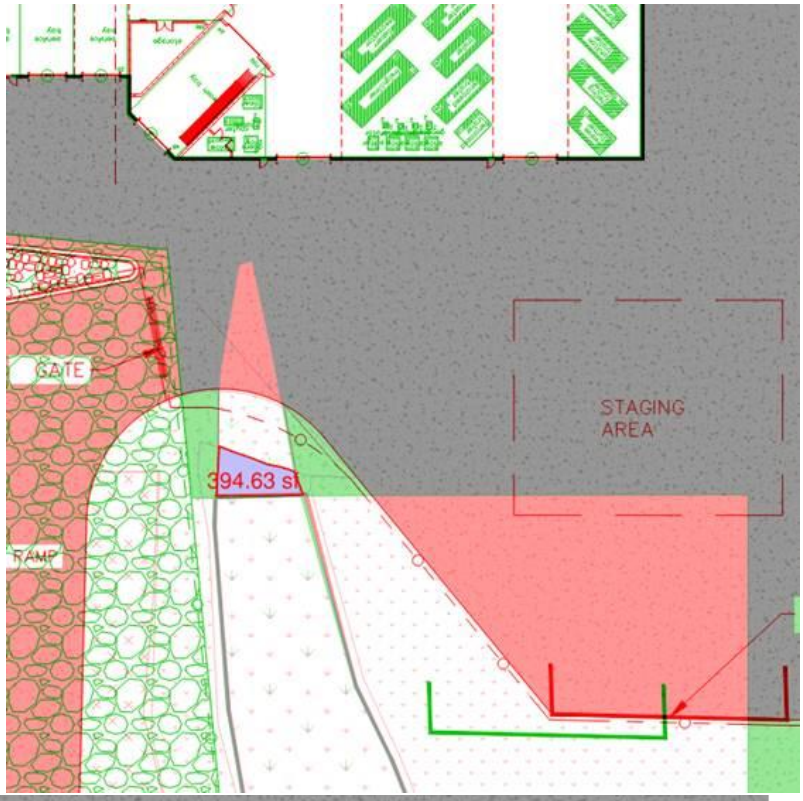
SW wetland: new impact- 3926-1764= 2,162 sf

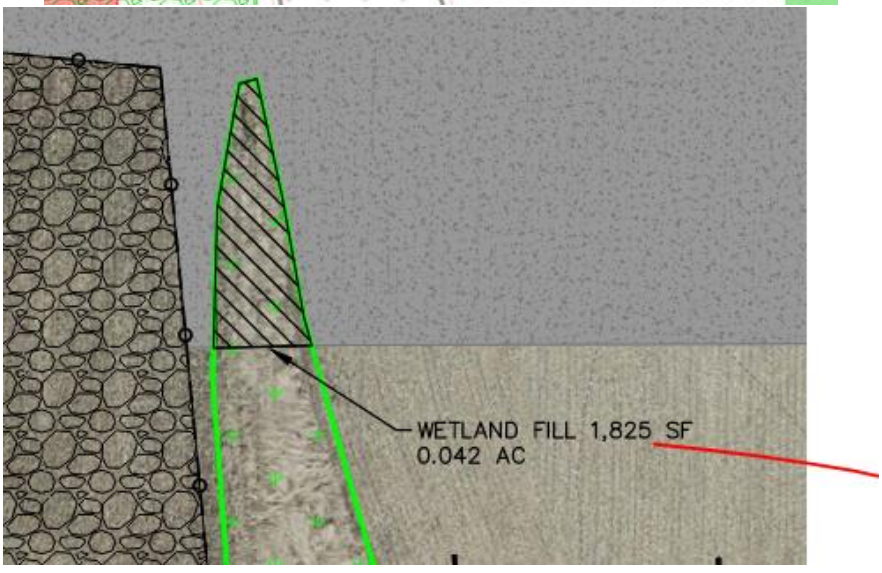


Wetland 5-

The vehicles used in are of the north finger wetland include front end loaders, dump trucks / plows, semi's for mulch pickup, and other Village owned maintenance vehicles. The vehicles will need clearance around the DPW main building as well as access to and from the recycling yard. The pavement limits were reduced in the area south of the DPW building. That amount is shown above and on the attached exhibit.

Operations originating from this site include resident recycling and village mulch production, plowing, mowing, water department operations, and DPW Operations.





Wetland 6-

The proposed road near the wetland 6 is already moved to the edge of the property on the east side as possible to minimize the wetland impact. Hence it is not possible to move the sidewalk on the west side to the east side of the road. Also, the terrace in between the road and the sidewalk is proposed according to the village's minimum requirement. It is required for the public utilities like electricity, gas etc. and to provide room for streetlight. Hence it is not possible to remove that terrace.

REGIONAL WET POND (DPW & ROADWAY) BY OTHERS, TO BE CONSTRUCTED AS PART OF TID ROAD PACKAGE

SHARED USE PATH, BY OTHERS, TO BE CONSTRUCTED AS PART OF TID ROAD PACKAGE

30 MPH SPEED LIMIT

DPW EMPLOYEE PARKING ACCESS

TRANSFORMER 6'x6'

GENERATOR

COND

VARYING SIZE PLANT BED ALONG BUILDING FACADE. SEE LANDSCAPE PLANS FOR DETAILS

CONCRETE SIDEWALK (07 C903)

CURB OPENING (11 C903)

MAIN ENTRANCE

EMPLOYEE PARKING (50 STALLS: 48 REGULAR, 2 ADA)

TREE LINE (TYP.)

WETLAND BOUNDARY (TYP.)

FLOODPLAIN (TYP.)

DPW SITE ACCESS

WEATHER STATION

GATE

12' X 12' HEATED GUARDSHED

RESTROOM

GATE

CIP WALL, SEE STRUCTURAL PLANS

ANTICIPATED RESIDENT RECYCLING MOVEMENT

GATE

COVERED BINS FOR VEHICLE LOADING

USED OIL, FILTERS, ANTI-FREEZE STORED INTERNALLY

METAL MULTI-PURPOSE BUILDING

RETAINING WALL

SWEEPER PIT

EXISTING WETLAND TO REMAIN

MULCH RAMP

BIO-BASIN (STORMWATER TREATMENT FOR MULCHING)

MULCH PILE 1

MULCH PILE 2

MULCH PILE 3

MULCH PILE 4

LAWN RESTORATION (TYP.) SEE LANDSCAPE FOR DETAILS

GATE

STORAGE AREA FOR LIGHT POLE RACK (700 SF)

STORAGE AREA FOR STORM SEWER CASTINGS (2000 SF)

STORAGE AREA FOR STORM SEWER STRUCTURES (2000 SF)

STORAGE AREA FOR CULVERTS & PIPING (5000 SF)

FUEL

FUEL FACILITY
5,000 GAL – DIESEL
5,000 GAL – REGULAR

BRINE OPERATION, FULLY ENCLOSED

58.6'

LEAN-TO FOR MATERIALS

SALT SHED

STAGING AREA

SPOILS/WASTE BASIN

WET POND (DPW ONLY)

EXISTING WETLAND TO REMAIN

R.D.

R.D.

0 25' 50' 100'
SCALE: 1" = 50'

LEGEND

- PROPOSED HEAVY DUTY ASPHALT PAVEMENT (01 C903)
- PROPOSED CONCRETE SIDEWALK (07 C903)
- PROPOSED CONCRETE PAVEMENT (09 C903)
- PROPOSED LANDSCAPING/LAWN RESTORATION
- PROPOSED BIO-BASIN (10 C902)
- PROPOSED GRAVEL SURFACE
- PROPOSED SECURITY FENCE W/ SLIDING GATE (12 C903)
- PROPOSED EDGE OF PAVEMENT
- PROPOSED TREE LINE
- SITE LIGHTING (4-FIXTURE, 1-FIXTURE) (REFER TO ELECTRICAL PLANS FOR DETAILS)
- PROPOSED RETAINING WALL
- PROPOSED STANDARD CURB & GUTTER (02 C903)
- PROPOSED HIGH SIDE CURB & GUTTER (04 C903)
- FLUSH HIGH SIDE CONCRETE CURB & GUTTER (05 C903)
- PROPOSED MANHOLE (01 C905)
- PROPOSED INLET (02 C905)
- PROPOSED CLEANOUT (03 C905)
- PROPOSED GATE VALVE (02 C906)
- PROPOSED HYDRANT (03 C906)

PROPOSED PARKING SUMMARY

PARKING PROVIDED:		
ACCESSIBLE STALLS	–	2 STALLS
NON-ACCESSIBLE STALLS	–	48 STALLS
TOTAL STALLS	–	50 STALLS

NOTES

1. SEE SHEET C900 FOR GENERAL NOTES.
2. SEE SHEET C900 FOR LAYOUT NOTES.

NOTICE:
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CLIENT:
VILLAGE OF GERMANTOWN
(PROJECT NO. 2205)

PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

A	2022-08-24	BID PACKAGE	NO.1
C	2022-09-06	BP NO. 1 ADD	NO. 2

NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-08-24
DRAWN BY:	JFA
CHECKED BY:	DSR
APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C-300

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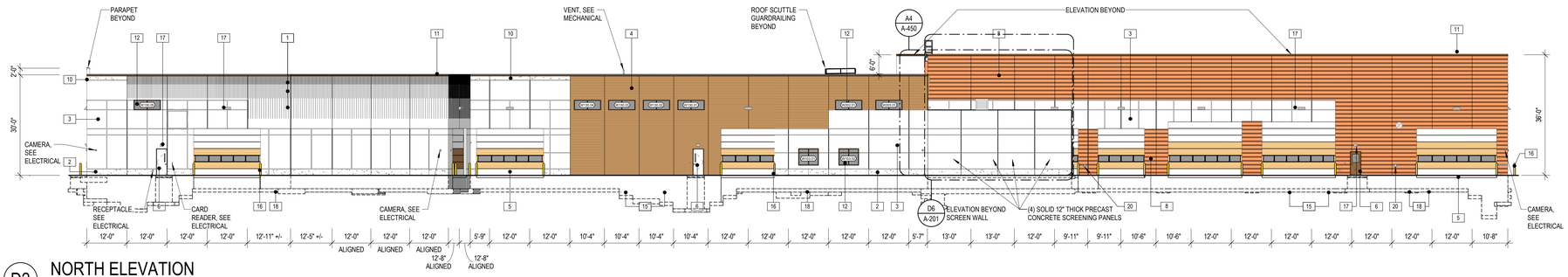
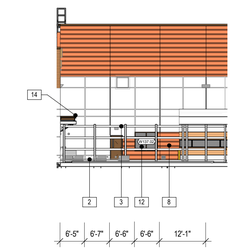


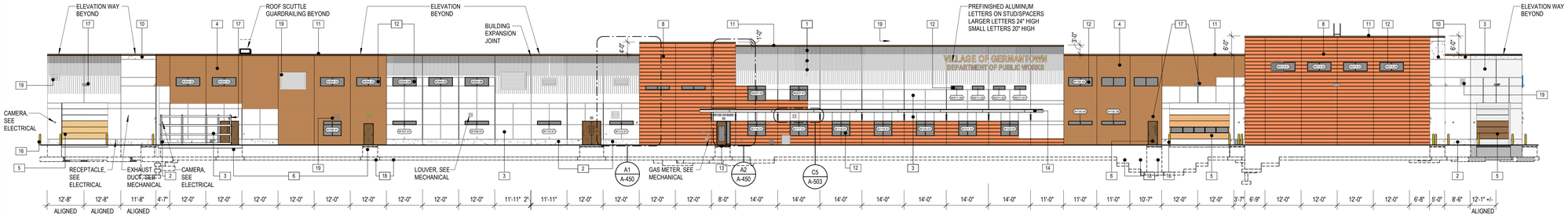
D2 NORTH ELEVATION

1/16" = 1'-0"



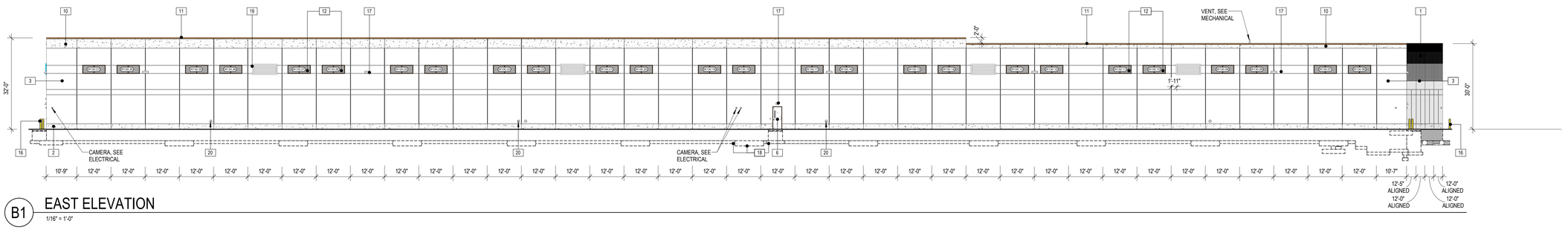
D6 NORTH ELEVATION

1/16" = 1'-0"



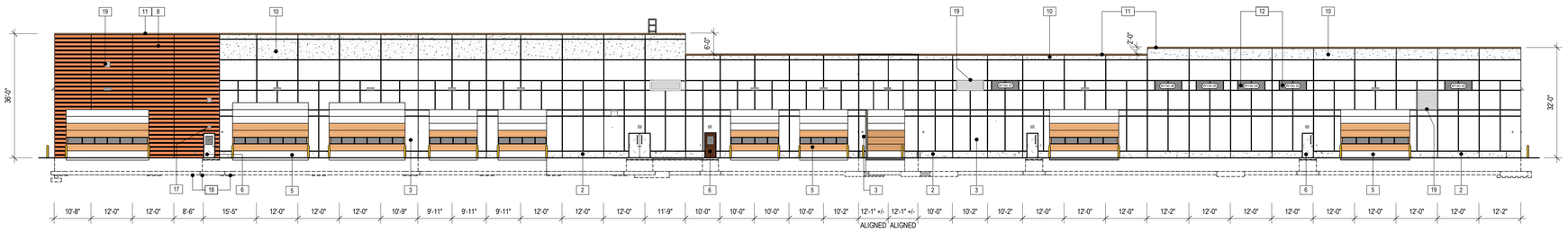
C2 WEST ELEVATION

1/16" = 1'-0"



B1 EAST ELEVATION

1/16" = 1'-0"



A2 SOUTH ELEVATION

1/16" = 1'-0"

SHEET KEYNOTES

1 1/4" WIDE VERTICAL RIBS
2 MEDIUM ACID-ETCHED BASE BAND - SEALED
3 SMOOTH INSULATED PRECAST WALL PANELS WITH 2" WIDE REVEALS - SEALED
4 1/2" WIDE HORIZONTAL SCORED INSULATED PRECAST CONCRETE WALL PANELS - PAINTED
5 PREFINISHED INSULATED OVERHEAD DOOR WITH INSULATED GLASS
6 INSULATED HOLLOW METAL DOOR AND FRAME - PAINTED
8 2" WIDE HORIZONTAL REVEALS IN INSULATED PRECAST CONCRETE WALL PANELS - PAINTED
10 MEDIUM ACID-ETCHED TOP BAND - SEALED
11 PREFINISHED SHEET METAL COPING CAP
12 THERMALLY BROKEN PREFINISHED ALUMINUM STOREFRONT WINDOW SYSTEM WITH INSULATED GLASS
13 THERMALLY BROKEN PREFINISHED ALUMINUM STOREFRONT ENTRANCE SYSTEM WITH INSULATED GLASS
14 STEEL CANOPY/SUN SHADE - PAINTED
15 FOUNDATION AND STOOP FOOTINGS
16 6" GALVANIZED STEEL PIPE CONCRETE FILLED BOLLARD - PAINTED
17 WALL MOUNTED LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
18 WALL, COLUMN AND STOOP FOOTING
19 LOUVER, SEE MECHANICAL DRAWINGS
20 LAMBS TONGUE OVERFLOW ROOF DRAIN DISCHARGE

SHEET NOTE WARNING:
IT IS NOT THE INTENTION FOR THE KEYNOTES TO IDENTIFY EVERY MATERIAL AND CONDITION IN EVERY LOCATION. THE KEYNOTES IDENTIFY MATERIALS IN GENERAL THROUGHOUT THE ELEVATIONS. NOTIFY ARCHITECT OF ANY CONDITION THAT SEEMS UNCLEAR FROM GENERAL KEYNOTES.

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CLIENT:
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(PROJECT NO. 2205)

PROJECT VIEW KEY:

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

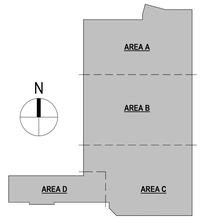
PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:
A 2022-08-24 BID PACKAGE NO. 1

NOT FOR CONSTRUCTION

KEY PLAN:



PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-08-24
DRAWN BY:	RMG/MJL
CHECKED BY:	WPT/EJ
APPROVED BY:	WPT
SCALE:	AS NOTED

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-201

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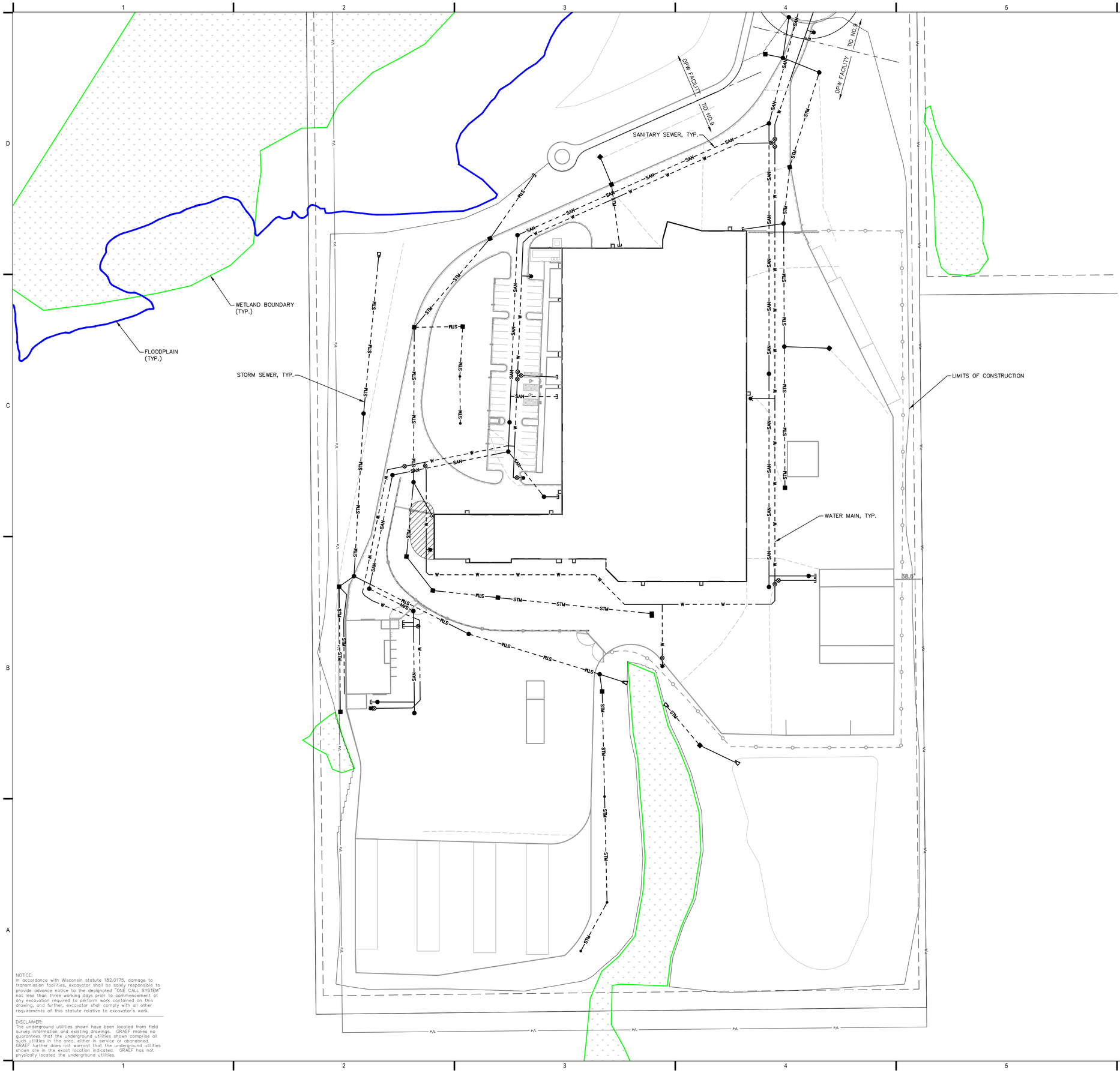

0 25' 50' 100'
SCALE: 1" = 50'

LEGEND

- STM — PROPOSED STORM SEWER
- SAN — PROPOSED SANITARY SEWER
- W — PROPOSED WATER MAIN
- EASE — PROPOSED UTILITY EASEMENT
- PROPOSED MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED GATE VALVE
- PROPOSED HYDRANT
- PROPOSED UTILITY PLUG

NOTES

1. SEE SHEET C900 FOR GENERAL NOTES.
2. SEE SHEET C900 FOR UTILITY NOTES.

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PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

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PROJECT INFORMATION:

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CHECKED BY:	DSR
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SHEET TITLE:
DPW UTILITY OVERVIEW

SHEET NUMBER:
C-500

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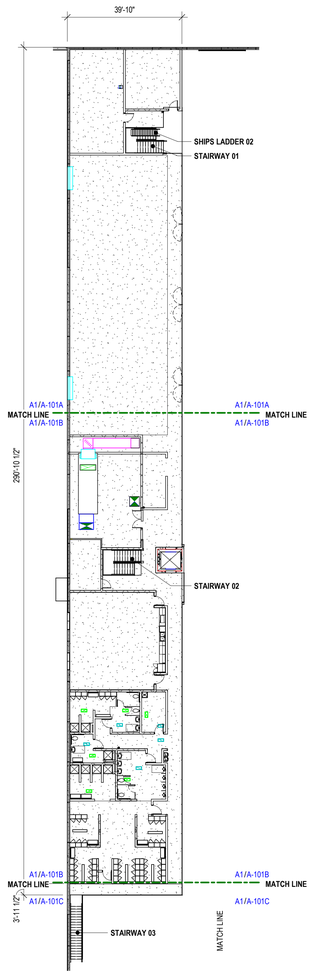
FLOOR PLAN GENERAL NOTES:

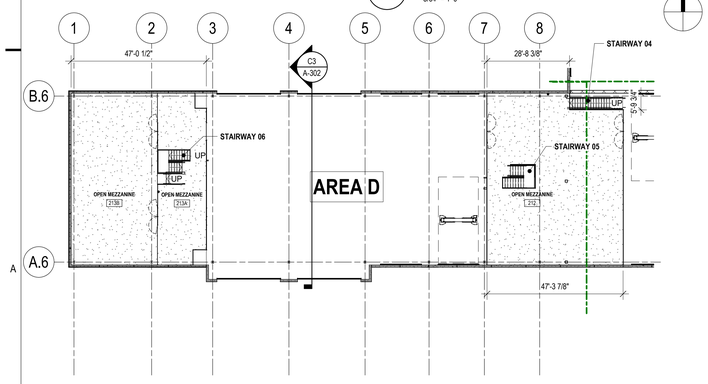
- FINISH FLOOR ELEVATION READS 100' - 0" = 797' -0" SURVEY ELEVATION. SEE CIVIL PLANS FOR ADDITIONAL GRADING INFORMATION.

PRECAST NOTE:
EDGES OF PRECAST AT STAIRWAYS AND GUARDRAILING LOCATIONS SHALL BE FLUSH FOR INSTALLATION OF BOLTED 12" STEEL PLATE

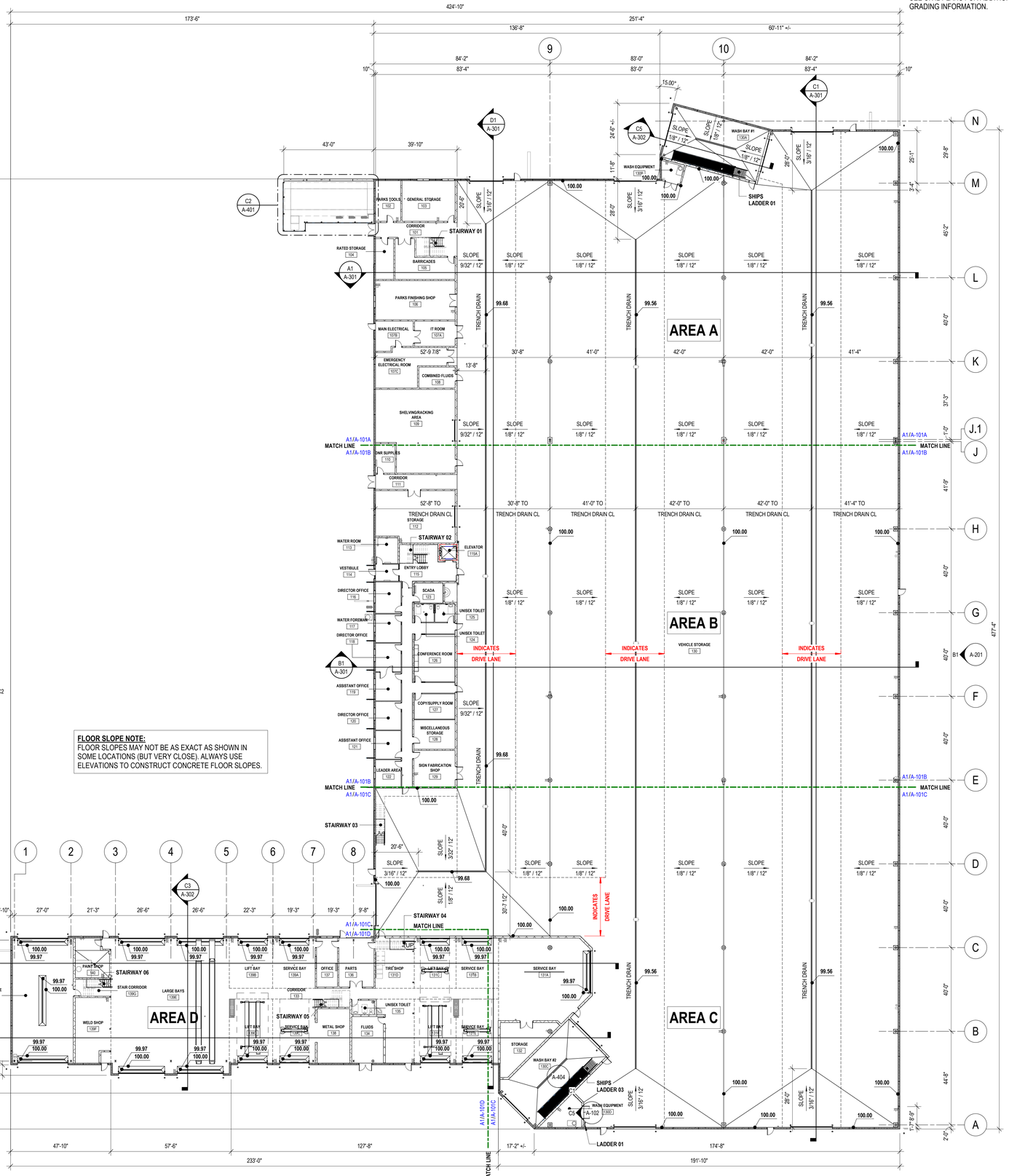
FLOOR SLOPE NOTE:
FLOOR SLOPES MAY NOT BE AS EXACT AS SHOWN IN SOME LOCATIONS (BUT VERY CLOSE). ALWAYS USE ELEVATIONS TO CONSTRUCT CONCRETE FLOOR SLOPES.



B2 MEZZANINE AT 112'-0"
3/64" = 1'-0"



A1 MEZZANINE 112'-0"/116'-0"
3/64" = 1'-0"



A3 OVERALL FLOOR PLAN
3/64" = 1'-0"

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PROJECT VIEW KEY:

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

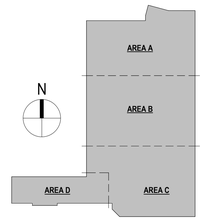
PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:
A 2022-08-24 BID PACKAGE NO. 1

NOT FOR CONSTRUCTION

KEY PLAN:



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DRAWN BY:	RMG/MJL
CHECKED BY:	WPT/EJ
APPROVED BY:	WPT
SCALE:	AS NOTED

SHEET TITLE:
OVERALL GROUND FLOOR AND MEZZANINE PLANS

SHEET NUMBER:
A-101.1

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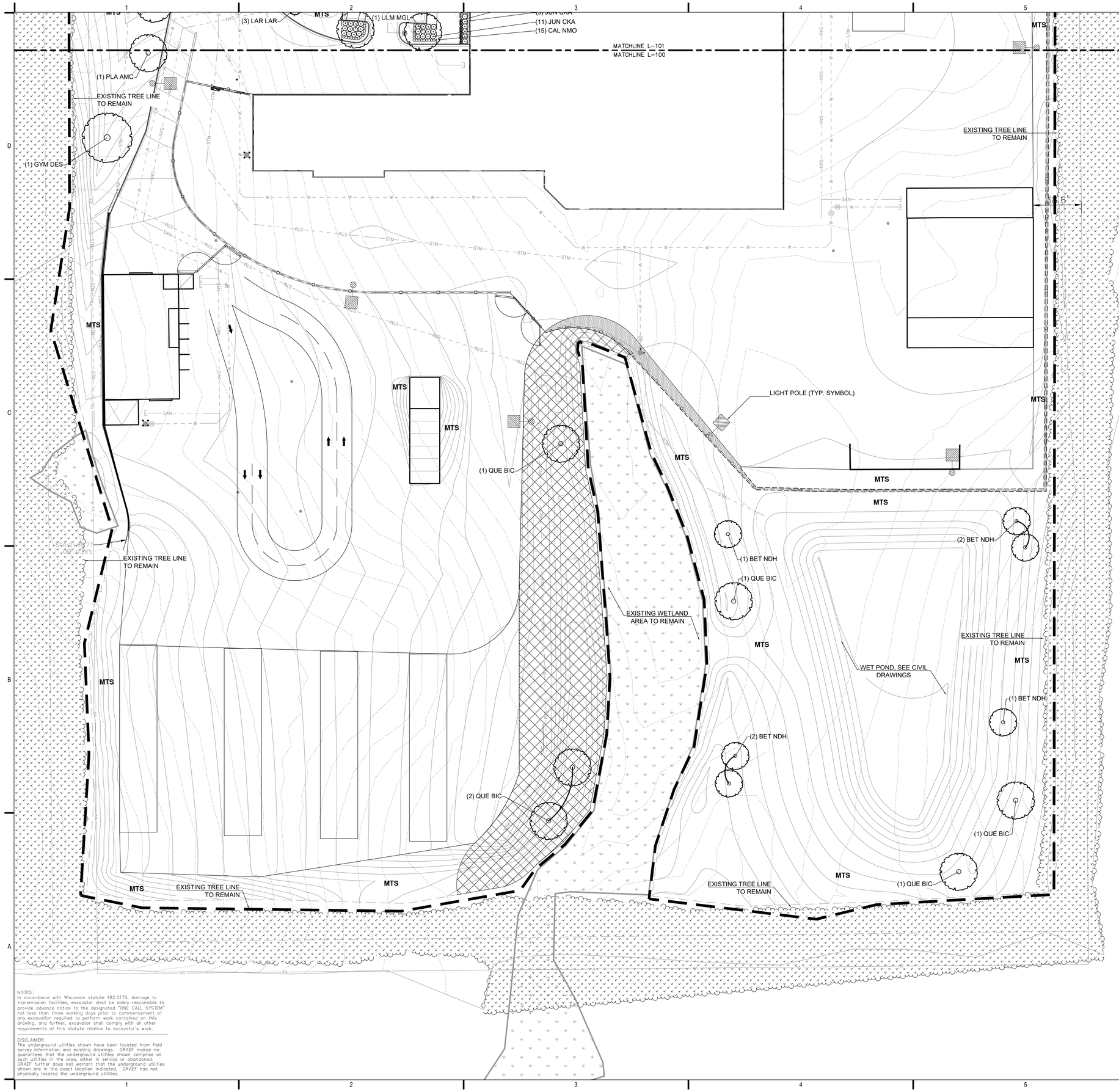

0 15' 30' 60'
SCALE: 1" = 30'

LANDSCAPE LEGEND

- LIMIT OF LANDSCAPE CONSTRUCTION
- PERMELOC PROLINE ALUMINUM EDGING COLOR: BLACK DURAFLEX OR APPROVED EQUAL (7/L900)
- EXISTING TREES TO REMAIN
- 1-1/2" AMERICAN HERITAGE LANDSCAPE STONE PROVIDED BY WAUPACA SAND & SOLUTIONS OR APPROVED EQUAL
- PRAIRIE NURSERY DETENTION BASIN BIOSWALE SEED MIX OR APPROVED EQUAL (8/L900)
- MTS — REINDERS GENERAL 30 LAWN SEED MIX OR APPROVED EQUAL (5/L900)

LANDSCAPE NOTES

TREES PLANTED WITHIN DETENTION BASIN SEED MIX NOT TO RECEIVE BARK MULCH RINGS AROUND BASE OF TRUNK.

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PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:
C 2022-09-06 BP NO. 1 ADD NO. 2

NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
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DRAWN BY:	JFA
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APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-100

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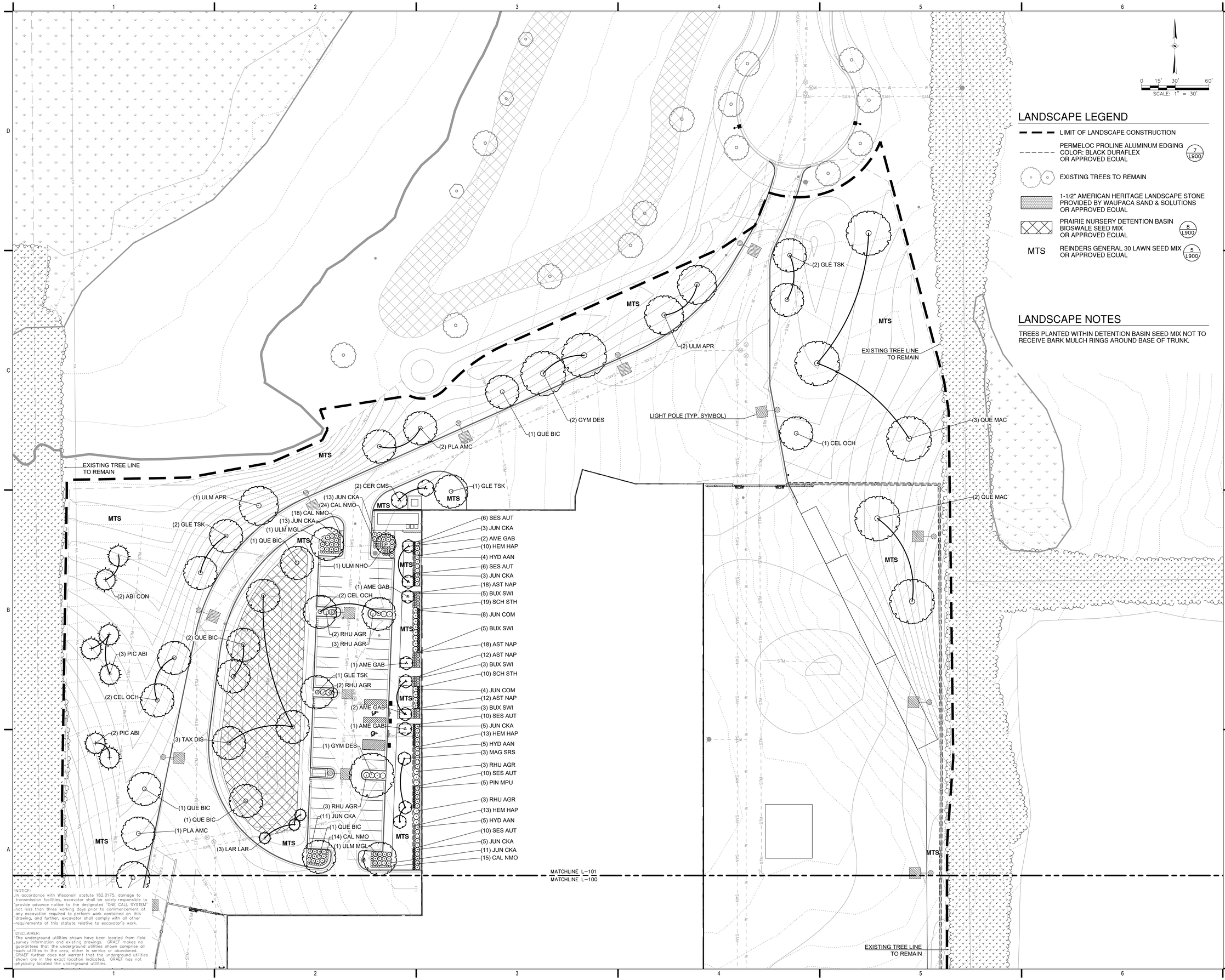

0 15' 30' 60'
SCALE: 1" = 30'

LANDSCAPE LEGEND

- LIMIT OF LANDSCAPE CONSTRUCTION
- PERMELOC PROLINE ALUMINUM EDGING COLOR: BLACK DURAFLEX OR APPROVED EQUAL (7/L900)
- EXISTING TREES TO REMAIN
- 1-1/2" AMERICAN HERITAGE LANDSCAPE STONE PROVIDED BY WAUPACA SAND & SOLUTIONS OR APPROVED EQUAL
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- MTS — REINDERS GENERAL 30 LAWN SEED MIX OR APPROVED EQUAL (5/L900)

LANDSCAPE NOTES

TREES PLANTED WITHIN DETENTION BASIN SEED MIX NOT TO RECEIVE BARK MULCH RINGS AROUND BASE OF TRUNK.

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DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:
C 2022-09-06 BP NO. 1 ADD NO. 2

NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
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DRAWN BY:	JFA
CHECKED BY:	DSR
APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L-101

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LANDSCAPING NOTES:

1. VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
2. INSPECT THE SITE PRIOR TO COMMENCING WORK. DOCUMENT IN WRITING AND PHOTOGRAPH EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO, THE LIMITS OF CONSTRUCTION. PROVIDE DIGITAL COPIES OF PHOTOGRAPHS TO THE LANDSCAPE ARCHITECT. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES NOT DOCUMENTED IN THE SUBMITTAL PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
3. SEE WRITTEN SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, BACKFILL AND OTHER RELATED REQUIREMENTS.
4. PLANT PLACEMENT IS REQUIRED AS SHOWN ON THE LAYOUT, PLANTING, AND OTHER DRAWINGS.
5. PLANT NAMES ARE ABBREVIATED ON THE DRAWINGS. SEE PLANT LIST FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.
6. PLANT BEDS AND TREE PLANTING PITS ARE TO RECEIVE 3" DEEP LAYER OF SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLANS.
7. FINE GRADE, RAKE, AND ENSURE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND THROUGHOUT SITE WITHIN THE LIMITS OF CONSTRUCTION, WITH ACCURATELY SET FLOW LINES. LOW SPOTS OR PONDING OF SURFACE WATER WILL NOT BE ACCEPTED IN THE FINAL WORK. ROCKS OR DEBRIS WILL NOT BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/–0.1 FOOT MAXIMUM.
8. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES ARE FOR INFORMATION ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CONDUCT QUANTITY TAKE–OFFS FOR PLANT MATERIALS AND SIZES SHOWN ON PLANS. PLANT SYMBOLS INDICATED ON THE PLAN TAKE PRECEDENCE IN CASE OF DISCREPANCIES BETWEEN CALLOUTS AND THE PLANT LIST.
9. COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB AND RELATED STRUCTURES WITH OTHER TRADES.
10. RESTORE AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
11. UNLESS OTHERWISE INDICATED, PLACE SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES IN STRAIGHT ROWS, EQUALLY SPACED.
12. TAKE NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS.
13. PLANTING BEDS ARE TO BE SEPARATED FROM ADJACENT TURF AREAS WITH ALUMINUM EDGING. INSTALL AT LOCATIONS INDICATED ON LANDSCAPE PLANS AND PER LANDSCAPE DETAILS.
14. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS THE LANDSCAPE CONTRACTOR CAN DEMONSTRATE THE PLANTS ARE NOT AVAILABLE FROM NURSERY SOURCES LOCATED WITHIN 100 MILES FROM THE PROJECT SITE. ANY PROPOSED PLANT SUBSTITUTION WILL REQUIRE PRIOR REVIEW AND WRITTEN ACCEPTANCE BY THE LANDSCAPE ARCHITECT.

PLANT SCHEDULE

CONIFEROUS TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
ABI CON	Abies concolor	White Fir	6`-8`-10` BB	2
LAR LAR	Larix laricina	Tamarack	6`-8`-10` BB	3
PIC ABI	Picea abies	Norway Spruce	6`-8`-10` BB	5

ORNAMENTAL TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
AME GAB	Amelanchier x grandiflora `Autumn Brilliance`	Autumn Brilliance Serviceberry	10`-12` clump BB	7
CER CMS	Cercis canadensis `Minnesota Strain`	Minnesota Strain Eastern Redbud	8`-10` clump BB	2
MAG SRS	Magnolia stellata `Royal Star`	Royal Star Magnolia	6`-8` BB	3

SHADE TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
BET NDH	Betula nigra `Dura Heat`	Dura Heat River Birch	2.5" BB	6
CEL OCH	Celtis occidentalis `Chicagoland`	Chicagoland Hackberry	2.5" BB	5
GLE TSK	Gleditsia triacanthos inermis `Skyline`	Skyline Honeylocust	2.5" BB	6
GYM DES	Gymnocladus dioica `Espresso`	Espresso Kentucky Coffeetree	2.5" BB	4
PLA AMC	Platanus x acerifolia `Morton Circle`	Exclamation London Planetree	2.5" BB	4
QUE BIC	Quercus bicolor	Swamp White Oak	2.0" BB	13
QUE MAC	Quercus macrocarpa	Bur Oak	2.0" BB	5
TAX DIS	Taxodium distichum	Baldcypress	2.5" BB	3
ULM MGL	Ulmus `Morton Glossy`	Triumph Elm	2.5" BB	2
ULM APR	Ulmus americana `Princeton`	Princeton American Elm	2.5" BB	3
ULM NHO	Ulmus japonica x pumila `New Horizon`	New Horizon Elm	2.5" BB	1

DECIDUOUS SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
HYD AAN	Hydrangea arborescens `Annabelle`	Annabelle Hydrangea	36" ht.	14
RHU AGR	Rhus aromatica `Gro Low`	Gro Low Sumac	24" spread	16

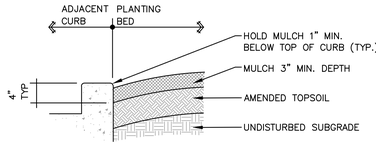
EVERGREEN SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
BUX SWI	Buxus sinica insularis `Wintergreen`	Wintergreen Korean Boxwood	18" ht.	16
JUN CKA	Juniperus chinensis `Kallays Compact`	Kallay Compact Pfitzer Juniper	18" ht.	64
JUN COM	Juniperus communis	Common Juniper	24" spread	12
PIN MPU	Pinus mugo `Pumilio`	Mugo Pine	24" spread	5

ORNAMENTAL GRASSES & SEDGES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
SCH STH	Schizachyrium scoparium `The Blues`	The Blues Little Bluestem Grass	1 gal.	29
SES AUT	Sesleria autumnalis	Autumn Moor Grass	1 gal.	42

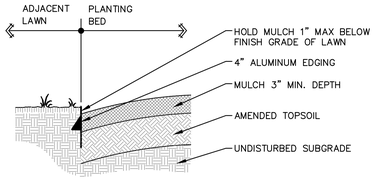
PERENNIALS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
AST NAP	Aster novae-angliae `Purple Dome`	Purple Dome New England Aster	1 gal.	60
CAL NMO	Calamintha nepeta `Montrose White`	Montrose White Calamint	1 gal.	71
HEM HAP	Hemerocallis x `Happy Returns`	Happy Returns Daylily	1 gal.	36

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

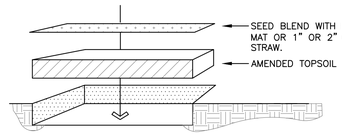
DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. GRAEF makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. GRAEF further does not warrant that the underground utilities shown are in the exact location indicated. GRAEF has not physically located the underground utilities.



6 PLANT BED EDGE AT CURB

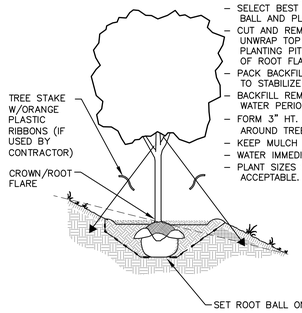


7 ALUMINUM PLANT BED EDGE



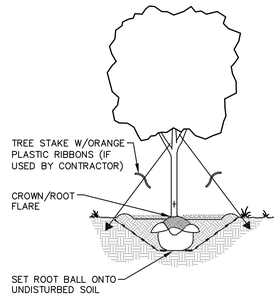
–CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO THE SOWING OF SEED.
–SEED BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION.
–SEE LANDSCAPE PLAN FOR LOCATION OF VARIOUS SEED MIXES.
–CONTRACTOR SHALL PROVIDE SEED GERMINATION AND ESTABLISH VIGOROUS PLANT GROWTH AS DESCRIBED IN WRITTEN SPECIFICATION.
–CONTRACTOR SHALL PERFORM MAINTENANCE SERVICES IN ORDER TO PROVIDE ADEQUATE WEED CONTROL. SEE WRITTEN SPECIFICATION FOR DETAILED MAINTENANCE SERVICES AND DURATION.

8 PRAIRIE / WILDFLOWER SEEDING



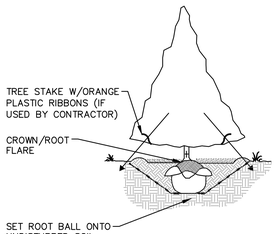
– EXCAVATE PLANTING PIT 3–TIMES THE DIA. & APPROXIMATELY THE HEIGHT OF ROOT BALL DEPTH. ROOT FLARE SHALL BE AT OR SLIGHTLY HIGHER THAN ADJACENT F.G.
– LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY.
– SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL AND PLACE IN PLANTING PIT.
– CUT AND REMOVE ALL STRING AND WIRE AND UNWRAP TOP HALF OF ROOT BALL. BACKFILL PLANTING PIT WITH EXISTING SOIL UP TO BASE OF ROOT FLARE.
– PACK BACKFILL AROUND BASE OF ROOT BALL TO STABILIZE IT.
– BACKFILL REMAINDER OF PLANTING HOLE USING WATER PERIODICALLY TO REDUCE AIR POCKETS.
– FORM 3" HT. SAUCER IN 6'–0" DIAMETER AROUND TREE & FILL WITH 3" MULCH.
– KEEP MULCH 1–2 INCHES AWAY FROM TRUNK.
– WATER IMMEDIATELY & FREQUENTLY.
– PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE.

9 TREE PLANTING ON SLOPE DETAIL



– PRIOR TO DIGGING TREE, MARK NORTH SIDE OF TRUNK. INSTALL TREE IN SAME ORIENTATION.
– EXCAVATE PLANTING PIT 3–TIMES THE DIA. & APROXIMATELY THE HEIGHT OF ROOT BALL DEPTH. ROOT FLARE SHALL BE AT OR SLIGHTLY HIGHER THAN ADJACENT F.G.
– LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY.
– SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL AND PLACE IN PLANTING PIT.
– CUT AND REMOVE ALL STRING AND WIRE AND UNWRAP TOP HALF OF ROOT BALL. BACKFILL PLANTING PIT WITH EXISTING SOIL UP TO BASE OF ROOT FLARE.
– PACK BACKFILL AROUND BASE OF ROOT BALL TO STABILIZE IT.
– BACKFILL REMAINDER OF PLANTING HOLE USING WATER PERIODICALLY TO REDUCE AIR POCKETS.
– FORM 3" HT. SAUCER IN 6'–0" DIAMETER AROUND TREE & FILL WITH 3" MULCH.
– KEEP MULCH 1–2 INCHES AWAY FROM TRUNK.
– WATER IMMEDIATELY & FREQUENTLY.
– PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE.

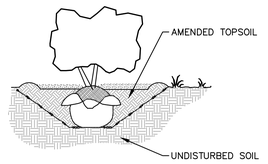
1 TREE PLANTING DETAIL



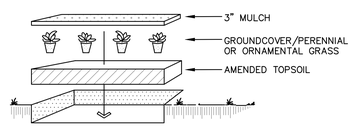
– PRIOR TO DIGGING TREE, MARK NORTH SIDE OF TRUNK. INSTALL TREE IN SAME ORIENTATION.
– EXCAVATE PLANTING PIT 3–TIMES THE DIA. & APROXIMATELY THE HEIGHT OF ROOT BALL DEPTH. ROOT FLARE SHALL BE AT OR SLIGHTLY HIGHER THAN ADJACENT F.G.
– LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY.
– SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL AND PLACE IN PLANTING PIT.
– CUT AND REMOVE ALL STRING AND WIRE AND UNWRAP TOP HALF OF ROOT BALL. BACKFILL PLANTING PIT WITH EXISTING SOIL UP TO BASE OF ROOT FLARE.
– PACK BACKFILL AROUND BASE OF ROOT BALL TO STABILIZE IT.
– BACKFILL REMAINDER OF PLANTING HOLE USING WATER PERIODICALLY TO REDUCE AIR POCKETS.
– FORM 3" HT. SAUCER IN 6'–0" DIAMETER AROUND TREE & FILL WITH 3" MULCH.
– KEEP MULCH 1–2 INCHES AWAY FROM TRUNK.
– WATER IMMEDIATELY & FREQUENTLY.
– PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE.

2 EVERGREEN PLANTING DETAIL

–EXCAVATE PLANTING PIT TWICE THE DIAMETER OF BALL & EQUAL IN DEPTH
–LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY
–PLACE PLANTING SOIL IN PLANTING PIT & FOOT TAMP
–SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL & PLACE IN PLANTING PIT
–UNWRAP TOP HALF OF ROOT BALL
–BACKFILL TO FINISHED GRADE WITH AMENDED TOPSOIL & TAMP
–FORM 3" SAUCER TO ENCIRCLE STOCK & FILL WITH 3" MULCH
–WATER IMMEDIATELY & FREQUENTLY.
–PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE

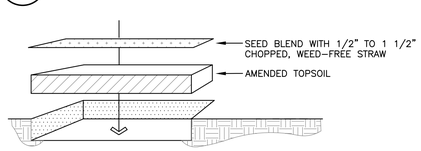


3 SHRUB PLANTING DETAIL



–LAYOUT PLANT MATERIAL AT SPACING AS SHOWN PER PLANT MATERIALS SCHEDULE
–HAND BROADCAST UNIFORM 3" MULCH THROUGHOUT GROUNDCOVER / PERENNIAL / ORNAMENTAL GRASS BED.
–FLOOD IMMEDIATELY & WATER FREQUENTLY
–PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE

4 GROUND COVER / ORNAMENTAL GRASS / PERENNIAL PLANTING DETAIL



–CONTRACTOR TO PROVIDE FINISHED TURF GRADE PER DRAWINGS WITH UNIFORM, NATURAL SLOPES PRIOR TO THE SOWING OF SEED. SEED BLEND & APPLICATION PROCEDURES ARE DESCRIBED IN WRITTEN SPECIFICATION
–LANDSCAPE CONTRACTOR SHALL ESTABLISH VIGOROUS GROWTH AND MOW & MAINTAIN AS SPECIFIED.

5 MANICURED TURF SEEDING

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CLIENT:
VILLAGE OF GERMANTOWN
(PROJECT NO. 2205)

PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

NOT FOR CONSTRUCTION

C 2022-09-06 BP NO. 1 ADD NO. 2

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-08-24
DRAWN BY:	JFA
CHECKED BY:	DSR
APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
LANDSCAPE DETAILS, NOTES, & PLANT LIST

SHEET NUMBER:
L-900

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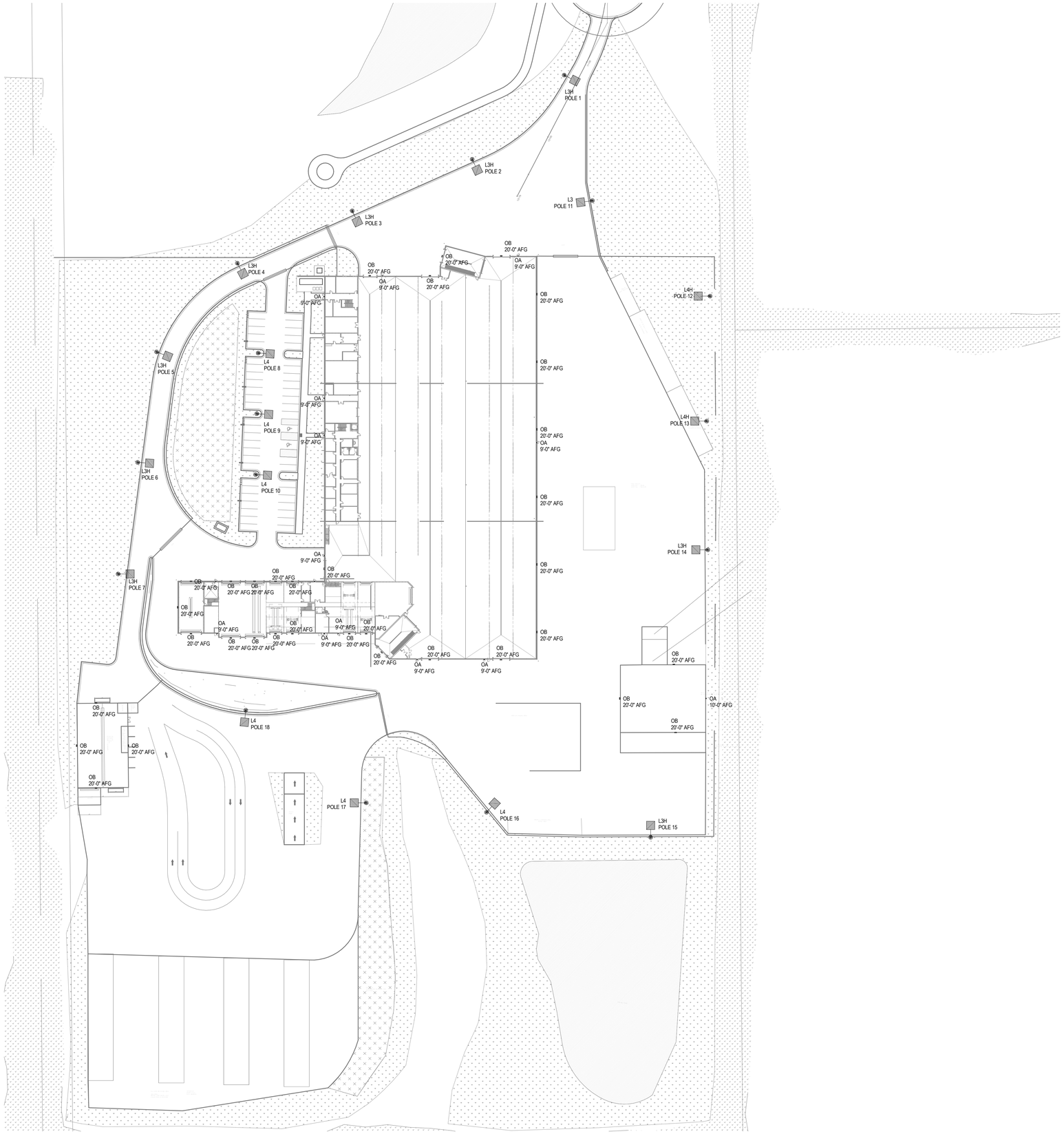

A1 SITE PLAN LIGHTING

1" = 50'-0"

ELECTRICAL ABBREVIATIONS

1P	-	ONE POLE	KVA	-	KILOVOLT AMPERE
2P	-	TWO POLE	KVAR	-	KILOVOLT AMPERE REACTIVE
3P	-	THREE POLE	KW	-	KILOWATT
4P	-	FOUR POLE	LP	-	LIGHTING PANEL
1P, 1W	-	ONE POLE, ONE WIRE	LS	-	LIMIT SWITCH
1P, 2W	-	ONE POLE, TWO WIRE	LTG	-	LIGHTING
2P, 2W	-	TWO POLE, TWO WIRE	LV	-	LOW VOLTAGE
2P, 3W	-	TWO POLE, THREE WIRE	MC	-	MECHANICAL CONTRACTOR
3P, 2W	-	THREE POLE, TWO WIRE	MCA	-	MINIMUM CIRCUIT AMPS
3P, 3W	-	THREE POLE, THREE WIRE	MCC	-	MOTOR CONTROL CENTER
3P, 4W	-	THREE POLE, FOUR WIRE	MDP	-	MAIN DISTRIBUTION PANEL
4P, 4W	-	FOUR POLE, FOUR WIRE	MISC	-	MISCELLANEOUS
A	-	AMPERE	MH	-	MANHOLE
AC	-	ALTERNATING CURRENT	MLO	-	MAIN LUGS ONLY
AF	-	AMPERE FRAME	MTD	-	MOUNTED
AFF	-	ABOVE FINISHED FLOOR	MTG	-	MOUNTING
AFG	-	ABOVE FINISHED GRADE	MTS	-	MANUAL TRANSFER SWITCH
AIC	-	AMPERE INTERRUPTING CAPACITY	MW	-	MICROWAVE
ANSI	-	AMERICAN NATIONAL STANDARDS INSTITUTE	MV	-	MEDIUM VOLTAGE
AL	-	ALUMINUM	N / A	-	NOT APPLICABLE
AS	-	AMP SWITCH	NC	-	NORMALLY CLOSED
AT	-	AMP TRIP	NEC	-	NATIONAL ELECTRIC CODE
ARCH	-	ARCHITECT	NIC	-	NOT IN CONTRACT
ATS	-	AUTOMATIC TRANSFER SWITCH	NO	-	NORMALLY OPEN
A / V	-	AUDIO VISUAL	#	-	NUMBER
AWG	-	AMERICAN WIRE GRADE	NTS	-	NOT TO SCALE
B	-	PEDESTAL MOUNTED ON BENCH TOP	OSP	-	OUTSIDE PLANT
BF	-	BELOW FLOOR	P	-	POLE
BFC	-	BELOW FINISHED CEILING	PB	-	PULL BOX
BFF	-	BELOW FINISHED FLOOR	PC	-	PLUMBING SYSTEM CONTRACTOR
BFG	-	BELOW FINISHED GRADE	PH	-	PHASE
BLDG	-	BUILDING	PNL	-	PANEL OR PANELBOARD
C	-	CONDUIT	PP	-	POWER PANEL
CAM	-	CAMERA	PR	-	PAIR
CAT	-	CATALOG	PRI	-	PRIMARY
CATV	-	CABLE TELEVISION	PROJ	-	PROJECTOR
CB	-	CIRCUIT BREAKER	PVC	-	POLYVINYL CHLORIDE
CKT	-	CIRCUIT	REC	-	RECESSED
CLG	-	CEILING MOUNTED	RE / CKT	-	REUSE EXISTING CIRCUIT
CO	-	CURRENT TRANSFORMER	REF	-	REFRIGERATOR
CT	-	CURRENT TRANSFORMER	RSC	-	RIGID STEEL CONDUIT
CU	-	COPPER	SC	-	SECURITY CONTRACTOR
CL	-	CENTERLINE	SEC	-	SECONDARY
DC	-	DIRECT CURRENT	SN	-	SOLID NEUTRAL
DR	-	DRYER	SP	-	SPARE
Δ	-	DELTA	SS	-	STAINLESS STEEL
DISC	-	DISCONNECT	ST	-	SHUNT TRIP
DW	-	DISHWASHER	STP	-	SHIELDED TWISTED PAIR
DWG	-	DRAWING	SUSP	-	SUSPENDED
E	-	EMERGENCY	SW	-	SWITCH
EC	-	ELECTRICAL CONTRACTOR	SWBD	-	SWITCHBOARD
EMT	-	ELECTRIC METALLIC TUBING	T	-	TAMPER RESISTANT SAFETY RECEPTACLE
ETR	-	EXISTING TO REMAIN	TBB	-	TELECOMMUNICATIONS BONDING BACKBONE
ER	-	EQUIPMENT ROOM	TC	-	TELEPHONE CABINET
ERL	-	EXISTING TO BE RELOCATED	TCI	-	TELECOMMUNICATIONS CABLING INSTALLER
ERLD	-	RELOCATED EQUIPMENT'S NEW LOCATION	TELE / DATA	-	TELEPHONE / DATA
EWC	-	ELECTRIC WATER COOLER	TEL	-	TELEPHONE
EX	-	EXISTING	TELECOM	-	TELECOMMUNICATIONS
FA	-	FIRE ALARM	TGB	-	TELECOMMUNICATIONS GROUNDING BUSBAR
FLA	-	FULL LOAD AMPS	TMGB	-	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
FO	-	FIBER OPTIC	TP	-	TWISTED PAIR
FPC	-	FIRE PROTECTION CONTRACTOR	TYP	-	TYPICAL
GC	-	GENERAL CONTRACTOR	UG	-	UNDERGROUND
GDS	-	GENERATOR DOCKING STATION	UTP	-	UNSHIELDED TWISTED PAIR
GFCI	-	GROUND FAULT CIRCUIT INTERRUPTER	UOI	-	UNLESS OTHERWISE INDICATED
GFPE	-	GROUND FAULT PROTECTION EQUIPMENT	V	-	VOLT
GND	-	GROUND	W	-	WATT
GRC	-	GALVANIZED RIGID CONDUIT	WA	-	WASHER
HH	-	HANDHOLE	WAP	-	WIRELESS ACCESS POINT
HP	-	HORSEPOWER	WP	-	WEATHERPROOF
HVAC	-	HEATING, VENTILATING, AND AIR CONDITIONING	XFMR	-	TRANSFORMER
HZ	-	HERTZ (CYCLE) PER SECOND	XR	-	XRAY
ISP	-	INSIDE PLANT	XV	-	XRAY VIEWER
IT	-	INFORMATION TECHNOLOGY	Y	-	WYE
JB	-	JUNCTION BOX	ZAM	-	ZONE ADAPTER MODULE

LIGHTING FIXTURES

- SURFACE OR PENDANT MOUNTED
- RECESS MOUNTED
- WALL SURFACE MOUNTED
- WALL RECESS MOUNTED
- STRIP LIGHT OR UNDER CABINET LIGHT
- LIGHTING TRACK
  - LENGTH AS INDICATED ON DRAWINGS
  - NUMBER AND DIRECTION OF FIXTURES AS INDICATED ON DRAWINGS AND / OR SCHEDULE
- SURFACE MOUNTED ACCENT
  - ARROW INDICATES DIRECTION OF ILLUMINATION
- RECESS MOUNTED ACCENT
  - ARROW INDICATES DIRECTION OF ILLUMINATION
- POLE MOUNTED WITH ARM
- POST TOP POLE
- BOLLARD
- FLOOD LIGHT
- EMERGENCY BATTERY UNIT
  - WALL MOUNT AT 8'-0" AFF UOI
- EMERGENCY BATTERY UNIT CEILING
- EMERGENCY BATTERY SINGLE REMOTE HEAD
  - WALL MOUNT AT 8'-0" AFF UOI
- EMERGENCY BATTERY DUAL REMOTE HEAD
  - WALL MOUNT AT 8'-0" AFF UOI
- WALL MOUNTED EXIT LIGHT FIXTURE WITH EMERGENCY HEADS
  - MOUNT AT 8'-0" AFF UOI
  - SHADING INDICATES FACE(S)
  - ARROW(S) AND FACE(S) AS INDICATED ON DRAWINGS
- CEILING MOUNTED EXIT LIGHT FIXTURE WITH EMERGENCY HEADS
  - SHADING INDICATES FACE(S)
  - ARROW(S) AND FACE(S) AS INDICATED ON DRAWINGS
- CEILING MOUNTED EXIT LIGHT FIXTURE
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414 / 259 0037 fax

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CLIENT:
VILLAGE OF GERMANTOWN

PROJECT VIEW KEY:

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

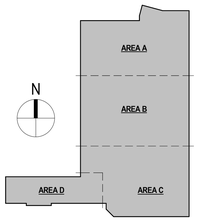
PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS BUILDING

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

PLAN COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION

KEY PLAN:



PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-07-15
DRAWN BY:	BB, GB
CHECKED BY:	ES
APPROVED BY:	ES
SCALE:	AS NOTED

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NUMBER:
PH-100

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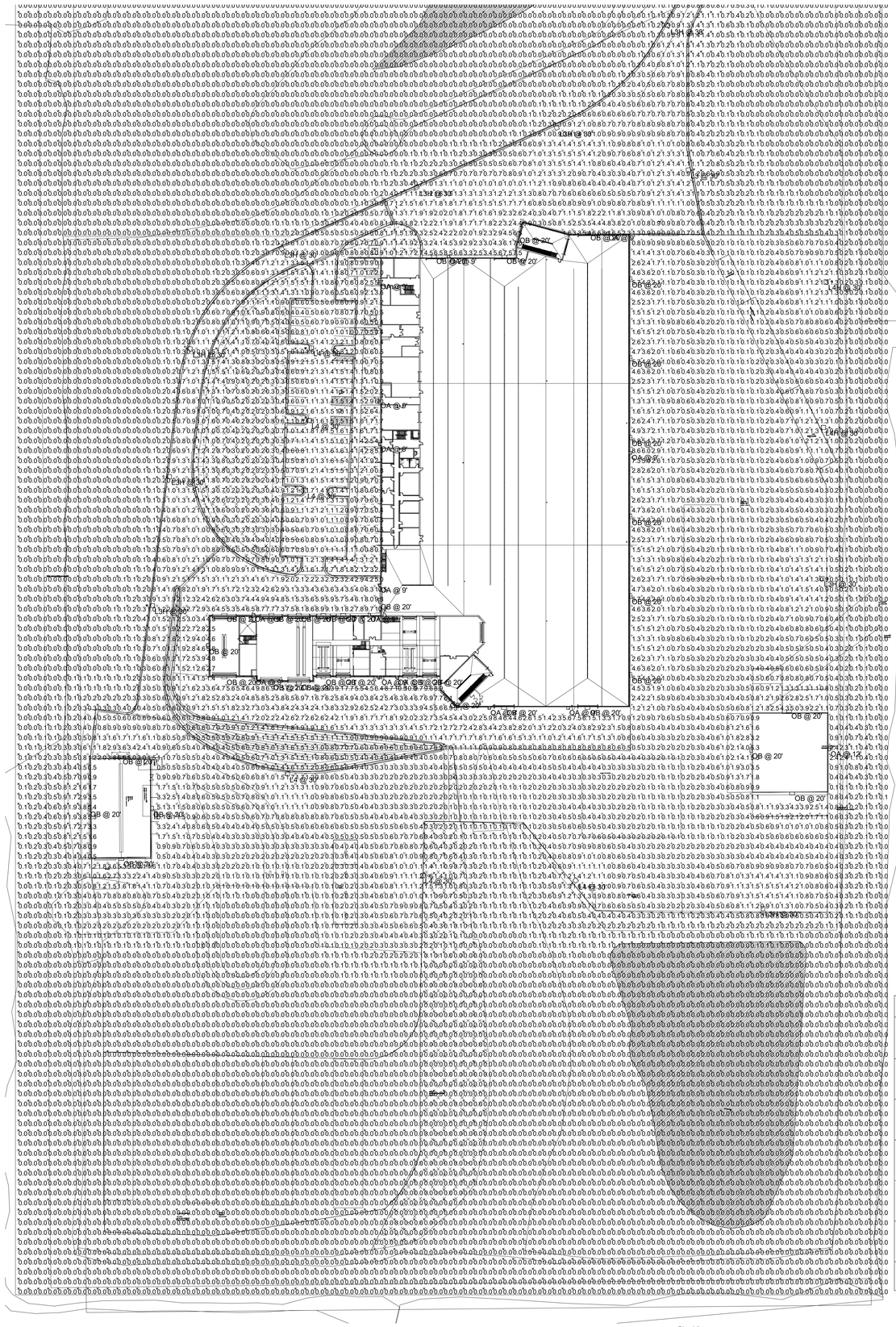

Statistics					
Description	Symbol	Avg	Max	Min	Avg/Min
EAST SIDE AREA	+	0.7 fc	8.6 fc	0.1 fc	7.0:1
GUARD SHACK AREA	□	0.7 fc	5.5 fc	0.1 fc	7.0:1
MAIN ENTRANCE	×	1.4 fc	8.5 fc	0.3 fc	4.7:1
PARKING LOT	+	1.1 fc	1.8 fc	0.4 fc	2.8:1
SERVICE BAY ENTRANCE	×	3.4 fc	10.5 fc	0.5 fc	6.8:1
WEST DRIVEWAY	□	1.0 fc	2.1 fc	0.4 fc	2.5:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
□	L3	1	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-3-40-70CRI	1	13237	0.8	85
□	L3H	9	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-3-40-70CRI-IH	1	10457	0.8	85
□	L4	6	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-FT-40-70CRI	1	13143	0.8	85
□	L4H	2	LSI INDUSTRIES, INC.	MRM-LED-12L-SIL-FT-40-70CRI-IH	1	9439	0.8	85
□	OA	15	LSI INDUSTRIES, INC.	SSW-LED-03L-FT-UNV-DIM-40	1	3143	0.8	23
□	OB	34	LSI INDUSTRIES, INC.	SLW-LED-14L-FT-UNV-DIM-40	1	13850	0.8	104

A1 ELECTRICAL PHOTOMETRIC PLAN

1" = 50'-0"

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GRAEF
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Milwaukee, WI 53203
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414 / 259 0037 fax

www.graef-usa.com

CLIENT:
VILLAGE OF GERMANTOWN

PROJECT VIEW KEY:

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

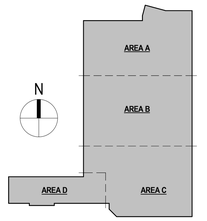
PROJECT TITLE:
DEPARTMENT OF PUBLIC WORKS BUILDING

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

PLAN COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION

KEY PLAN:



PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-07-15
DRAWN BY:	BB, GB
CHECKED BY:	ES
APPROVED BY:	ES
SCALE:	AS NOTED

SHEET TITLE:
ELECTRICAL PHOTOMETRIC PLAN

SHEET NUMBER:
PH-101

Catalog #: _____ Project: _____

Prepared By: _____ Date: _____ Type: _____

Mirada Medium (MRM)

Outdoor LED Area Light

IP66 IK08

OVERVIEW	
Lumen Package	7,000 - 48,000
Wattage Range	48 - 401
Efficacy Range (LPW)	117 - 160
Weight lbs(kg)	30 (13.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip' polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 37 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, SW, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and house-side shield (IH) options available for improved backlight control without sacrificing street side performance. See page 3 for more details.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 5)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L and 48L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls

- Optional integral passive infrared Bluetooth™ motion and photocell sensor (see page 9 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 9 for more details).

Installation

- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products. (See drawing on page 9)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- Patented Silicone Optics (US Patent NO. 10,816,165 B2)
- IK08 rated luminaire per IEC 66262 mechanical impact code

L3, L3H, L4, AND L4H CUT SHEET

Type: _____

Mirada Medium Outdoor LED Area Light

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package	Light Output	Distribution	Orientation[2]	Voltage	Driver
MRM - Mirada	**LED**	**7L** - 7,000 lms **9L** - 9,000 lms **12L** - 12,000 lms **18L** - 18,000 lms **24L** - 24,000 lms **30L** - 30,000 lms **36L** - 36,000 lms **42L** - 42,000 lms **48L** - 48,000 lms **Custom Lumen Packages[1]**	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **SW** - Type 5 Wide **FT** - Forward Throw **FTA** - Forward Throw Automotive **AM** - Automotive Merchandise	**(blank)** - standard **L** - Optics rotated left 90° **R** - Optics rotated right 90°	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **30** - 3,000 CCT **AMB** - Phosphor Converted Amber[3]	**70CRI** - 70 CRI	**BLK** - Black **BRZ** - Dark Bronze **GMG** - Gun Metal Gray **GPT** - Graphite **MSV** - Metallic Silver **PLP** - Platinum Plus **SVG** - Satin Verde Green **WHT** - White	**(Blank)** - None **IH** - Integral Houseside Shield[4] **IL** - Integral Louver (Sharp Spill Light Cutoff)[4]

Controls (Choose One)

(Blank) - None

Wireless Controls System.
ALSC - AirLink Synapse Control System
ALSCH - AirLink Synapse Control System Host / Satellite[5]
ALSCSD - AirLink Synapse Control System with 12-20' Motion Sensor
ALSCHSD2 - AirLink Synapse Control System Host / Satellite with 12-20' Motion Sensor[5]
ALSCS04 - AirLink Synapse Control System with 20-40' Motion Sensor
ALSCHS04 - AirLink Synapse Control System Host / Satellite with 20-40' Motion Sensor[5]
ALSC31 - AirLink Bluetooth® Motion & Photo Sensor Controller (8-24' mounting height)
ALSC52 - AirLink Bluetooth® Motion & Photo Sensor Controller (25-40' mounting height)

Stand-Alone Controls
EXT - 0-10v Dimming leads extended to housing exterior
CR7P - 7 Pin Control Receptacle ANSI C136.41[6]
IMSBT1- Integral Bluetooth® Motion and Photocell Sensor (8-24' MH)*
IMSBT2- Integral Bluetooth® Motion and Photocell Sensor (25-40' MH)*
Button Type Photocells
PC120 - 120V
PC200-277 - 208 -277V
PC347 - 347V

Lutron Limelight Controls
LLC - LimeLight Integral Wireless Radio Control by Lutron®
LLCS1 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 8-15' int height*
LLCS2 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 16-30' int height*
LLCS3 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 31-40' int height*

Accessory Ordering Information[7]

Controls Accessories

Description	Order Number**
PC120 Photocell for use with CR7P option (120V)*	1225514
PC208-277 Photocell for use with CR7P option (208V, 240V, 277V)*	1225515
Twist Lock Photocell (347V) for use with CR7P.*	1225516
Twist Lock Photocell (480V) for use with CR7P.*	1225180
AirLink 5 Pin Twist Lock Controller.*	6614499
AirLink 7 Pin Twist Lock Controller.*	6614498
PMR5024-240 Pole-Mounted Occupancy Sensor (24V)	6602964CLR
Shorting Cap for use with CR7P	1490328

Fusing Options[10]

Description	Order Number
Single Fusing (120V)	See Fusing Accessory Guide
Single Fusing (277V)	
Double Fusing (208V, 240V)	
Double Fusing (480V)	
Double Fusing (347V)	

Shielding Options

Mirada Small	See Shielding Guide
Mirada Medium	
Mirada Large	
Zone Medium	
Zone Large	
Slice Medium	

Mounting Accessories[8]

Description	Order Number**
Universal Mounting Bracket	6848162CLR
Adjustable Slip Fitter (2" - 3 3/8" Tenon)	6881382CLR
Horizontal Slip Fitter (2" - 2 3/8" Tenon)	6627615CLR
Quick Mount Pole Bracket (Square Pole)	6870730LR
Quick Mount Pole Bracket (4.5" Round Pole)	6899003LR
13 7/8 Quick Mount Pole Bracket (Square Pole)	6900005LR
13 7/8 Quick Mount Pole Bracket (4.5" Round Pole)	6899005LR
Wall Mount Bracket	3821323LR
Wood Pole Bracket (6" Minimum Pole Diameter)	7512196LR

Miscellaneous Accessories

Description	Order Number
Integral Louver/Shield	6909981
Integral House Side Shield	7434115
10' Linear End Spike Kit (3' Recommended per Luminaire)	751632

FOOTNOTES:
1. Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.
2. Not available with SW distribution.
3. Consult Factory for availability.
4. Not available in HV.
5. IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
6. Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
7. Accessories are shipped separately and field installed.
8. Factory installed CR7P option required. See Options.
9. "CLR" denotes finish. See Finish options.
10. Only available with ALSC/ALSCH control options.
11. Fusing must be located in hand hole of pole. See Fusing Accessory Guide for compatability.
12. Only available in 9L, 12L, 18L and 24L Lumen Packages. Consult factory for lead time and availability.

Type: _____

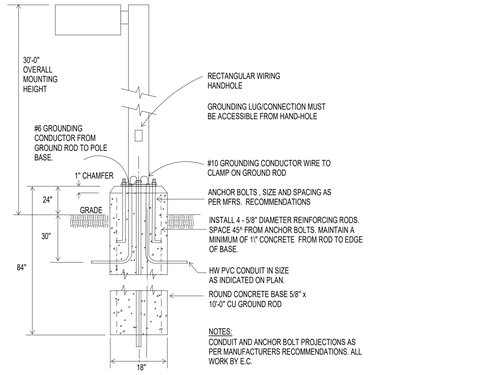
Mirada Medium Outdoor LED Area Light

PERFORMANCE

Back to Quick Links

Delivered Lumens*

Lumen Package	Distribution	CRI	3000K CCT Delivered Lumens	3000K CCT Efficacy	3000K CCT BUG Rating	4000K CCT Delivered Lumens	4000K CCT Efficacy	4000K CCT BUG Rating	5000K CCT Delivered Lumens	5000K CCT Efficacy	5000K CCT BUG Rating	Wattage
7L	2	70	7560	157	B2-U0-G2	7560	157	B2-U0-G2	7560	157	B2-U0-G2	48
	3		7616	159	B1-U0-G2	7616	159	B1-U0-G2	7616	159	B1-U0-G2	
	SW		7292	152	B3-U0-G1	7292	152	B3-U0-G1	7292	152	B3-U0-G1	
	FT		7562	158	B2-U0-G2	7562	158	B2-U0-G2	7562	158	B2-U0-G2	
	FTA		7595	158	B2-U0-G2	7595	158	B2-U0-G2	7595	158	B2-U0-G2	
	AM		7687	160	B1-U0-G1	7687	160	B1-U0-G1	7687	160	B1-U0-G1	
9L	2	70	9853	159	B2-U0-G2	9853	159	B2-U0-G2	9853	159	B2-U0-G2	62
	3		9926	160	B2-U0-G2	9926	160	B2-U0-G2	9926	160	B2-U0-G2	
	SW		9504	153	B3-U0-G2	9504	153	B3-U0-G2	9504	153	B3-U0-G2	
	FT		9856	159	B2-U0-G3	9856	159	B2-U0-G3	9856	159	B2-U0-G3	
	FTA		9900	160	B2-U0-G2	9900	160	B2-U0-G2	9900	160	B2-U0-G2	
	AM		10019	162	B2-U0-G1	10019	162	B2-U0-G1	10019	162	B2-U0-G1	
12L	2	70	13135	155	B3-U0-G2	13135	155	B3-U0-G2	13135	155	B3-U0-G2	85
	3		13232	156	B2-U0-G2	13232	156	B2-U0-G2	13232	156	B2-U0-G2	
	SW		12669	149	B4-U0-G2	12669	149	B4-U0-G2	12669	149	B4-U0-G2	
	FT		13138	155	B3-U0-G3	13138	155	B3-U0-G3	13138	155	B3-U0-G3	
	FTA		13196	155	B2-U0-G2	13196	155	B2-U0-G2	13196	155	B2-U0-G2	
	AM		13355	157	B2-U0-G2	13355	157	B2-U0-G2	13355	157	B2-U0-G2	
18L	2	70	19318	143	B3-U0-G3	19318	143	B3-U0-G3	19318	143	B3-U0-G3	135
	3		19461	144	B3-U0-G3	19461	144	B3-U0-G3	19461	144	B3-U0-G3	
	SW		18633	138	B4-U0-G2	18633	138	B4-U0-G2	18633	138	B4-U0-G2	
	FT		19324	143	B3-U0-G3	19324	143	B3-U0-G3	19324	143	B3-U0-G3	
	FTA		19408	144	B3-U0-G3	19408	144	B3-U0-G3	19408	144	B3-U0-G3	
	AM		19641	145	B3-U0-G2	19641	145	B3-U0-G2	19641	145	B3-U0-G2	
24L	2	70	25957	147	B4-U0-G3	25957	147	B4-U0-G3	25957	147	B4-U0-G3	176
	3		26149	149	B3-U0-G4	26149	149	B3-U0-G4	26149	149	B3-U0-G4	
	SW		25037	142	B5-U0-G3	25037	142	B5-U0-G3	25037	142	B5-U0-G3	
	FT		25964	148	B3-U0-G4	25964	148	B3-U0-G4	25964	148	B3-U0-G4	
	FTA		26077	148	B3-U0-G3	26077	148	B3-U0-G3	26077	148	B3-U0-G3	
	AM		26393	150	B3-U0-G2	26393	150	B3-U0-G2	26393	150	B3-U0-G2	
30L	2	70	32417	140	B4-U0-G3	32417	140	B4-U0-G3	32417	140	B4-U0-G3	232
	3		32696	141	B4-U0-G4	32696	141	B4-U0-G4	32696	141	B4-U0-G4	
	SW		31267	135	B5-U0-G3	31267	135	B5-U0-G3	31267	135	B5-U0-G3	
	FT		32424	140	B3-U0-G4	32424	140	B3-U0-G4	32424	140	B3-U0-G4	
	FTA		32566	140	B4-U0-G3	32566	140	B4-U0-G3	32566	140	B4-U0-G3	
	AM		32960	142	B3-U0-G3	32960	142	B3-U0-G3	32960	142	B3-U0-G3	
36L	2	70	38275	133	B4-U0-G4	38275	133	B4-U0-G4	38275	133	B4-U0-G4	288
	3		38557	134	B4-U0-G5	38557	134	B4-U0-G5	38557	134	B4-U0-G5	
	SW		36917	128	B5-U0-G4	36917	128	B5-U0-G4	36917	128	B5-U0-G4	
	FT		38283	133	B4-U0-G5	38283	133	B4-U0-G5	38283	133	B4-U0-G5	
	FTA		38450	134	B4-U0-G4	38450	134	B4-U0-G4	38450	134	B4-U0-G4	
	AM		38916	135	B3-U0-G3	38916	135	B3-U0-G3	38916	135	B3-U0-G3	



POLE BASE DETAIL

NTS

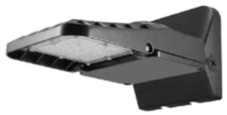
Catalog #: _____ Project: _____

Prepared By: _____ Date: _____

Small Commerical Wall (SSW)

LED Wall Light

IP65



OVERVIEW	
Lumen Package	3,000
Wattage Range	23
Efficacy Range (LPW)	137
CCT (K)	4,000, 5,000
Controls	Button Photocell
Weight lbs(kg)	3.5 (1.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing for maximum durability and reliability.
- IP65 rated luminaire protects integral components from harsh environments.

Optical System

- Premium engineered IP65 rated polycarbonate optic assemblies deliver IES Type 3 or 4 (FT) distributions.
- Zero Uplight.
- Available in 5000K & 4000K color temperatures per ANSI C78.377.
- Minimum CRI of 70.

Electrical

- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz
- L70 Calculated Life: >50K Hours
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +40°C (-40°F to +104°F).
- Power factor: >.90
- Input power stays constant over life.
- High-efficacy LED circuit board mounted to cast housing to maximize heat dissipation

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick and easy access to the electrical compartment for installing/servicing.
- Back box accessory available for surface conduit and wiring.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsi-industries.com/resources/terms-and-warranty.aspx for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Suitable for wet Locations.
- IP65 rated Luminaire.
- DesignLights Consortium® (DLC® Premium) qualified product.

OA CUT SHEET

Small Commerical LED Wall Light

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **SSW LED 3L FT UNV DIM 40 BRZ PC**

Prefix	Light Source	Lumen Package	Distribution	Voltage
SSW - Small Commercial Wall	**LED**	**3L** - 3,000 lm	**3** - Type 3 **FT** - Forward Throw Type 4	**UNV** - Universal Voltage (120-277V)

Driver	Color Temperature	Color Rendering	Finish	Options
DIM - 0-10v Dimming (10-100%)	**50** - 5,000 CCT **40** - 4,000 CCT	**BLANK** - 70 CRI	**BRZ** - Bronze	**PC** - Button Photocontrol (120-277V) **EB8** - External Battery Backup Box (0°C, 120-277V)

Accessory Ordering Information

Description	Order Number
Wet Location Surface Conduit/Wiring box (Bronze)	739106

PERFORMANCE

Back to Quick Links

DELIVERED LUMENS*

Lumen Package	Distribution	CRI	4000K CCT Delivered Lumens	4000K CCT Efficacy	4000K CCT BUG Rating	5000K CCT Delivered Lumens	5000K CCT Efficacy	5000K CCT BUG Rating	Wattage
3L	FT	70	3143	137	B1-U0-G1	3224	140	B1-U0-G1	23
	3	70	3173	139	B1-U0-G1	3255	142	B1-U0-G1	

*LEDs are frequently updated therefore values are nominal

ELECTRICAL DATA*

Lumen Package	Wattage	240V	277V	347V	480V
3L	23	0.10	0.08	0.07	0.05

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

Catalog #: _____ Project: _____

Prepared By: _____ Date: _____

Large Commerical Wall (SLW)

LED Wall Light

IP65

OVERVIEW	
Lumen Output Range	14,000 - 20,000
Wattage Range	104 - 156
Efficacy Range (LPW)	123 - 138
Weight lbs(kg)	10 (4.5)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing for maximum durability and reliability.
- IP65 rated luminaire protects integral components from harsh environments.

Optical System

- Premium engineered IP65 rated polycarbonate optic assemblies deliver IES Type 3 or 4 (FT) distributions.
- Zero Uplight.
- Available in 5000K & 4000K color temperatures per ANSI C78.377.
- Minimum CRI of 70.

Electrical

- High-performance driver features short-circuit and over temperature protection with integral surge protection (6kV).
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac)
- L70 Calculated Life: >50K Hours
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +40°C (-40°F to +104°F).
- Power factor: > 90
- Input power stays constant over life.
- High-efficacy LED circuit board mounted to cast housing to maximize heat dissipation
- Optional emergency battery pack box provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the box for ease of maintenance. The fixture delivers approximately 900 lumens during emergency mode.

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick and easy access to the electrical compartment for installing/servicing.
- Back box accessory available for surface conduit and wiring.

Warranty

- LSI luminaires carry a 5-year limited warranty. Complete warranty terms are located on our website.

Listings

- Listed to UL 1598 and UL 8750.
- Suitable for wet Locations.
- IP65 rated Luminaire.
- DesignLights Consortium® (DLC® Premium) qualified product.

OB CUT SHEET

Large Commerical LED Wall Light

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **SLW LED 20L FT UNV DIM 40 BRZ PC**

Prefix	Light Source	Lumen Package*	Distribution	Voltage
SLW - Large Commercial Wall	**LED**	**14L** - 14,000 lm **20L** - 20,000 lm	**3** - Type 3 **FT** - Forward Throw Type 4	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347 - 480V)

Driver	Color Temperature	Color Rendering	Finish	Options
DIM - 0-10v Dimming (10-100%)	**50** - 5,000 CCT **40** - 4,000 CCT	**BLANK** - 70 CRI	**BRZ** - Bronze	**PC** - Button Photocontrol (120-277V) **SP1** -Surge Protection 10kV **EB8** - External Battery Backup Box (0°C, 120-277V)

Accessory Ordering Information

Description	Order Number
Wet Location Surface Conduit/Wiring box (Bronze)	739106

PERFORMANCE

Back to Quick Links

DELIVERED LUMENS*

Lumen Package	Distribution	CRI	4000K CCT Delivered Lumens	4000K CCT Efficacy	4000K CCT BUG Rating	5000K CCT Delivered Lumens	5000K CCT Efficacy	5000K CCT BUG Rating	Wattage
14L	FT	70	13848	134	B3-U0-G3	14204	137	B3-U0-G2	104
	3	70	13937	135	B3-U0-G3	14296	138	B3-U0-G3	
20L	FT	70	19827	127	B3-U0-G3	20337	130	B3-U0-G3	156
	3	70	19955	129	B3-U0-G3	20469	132	B3-U0-G3	

*LEDs are frequently updated therefore values are nominal

ELECTRICAL DATA*

Lumen Package	Wattage	240V	277V	347V	480V
14L	104	0.43	0.37	0.30	0.22
20L	156	0.65	0.56	0.45	0.33

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

GRÄEF

275 West Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax

www.graef-usa.com

CLIENT:

VILLAGE OF GERMANTOWN

PROJECT VIEW KEY:

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6

PROJECT TITLE:

DEPARTMENT OF PUBLIC WORKS BUILDING

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

PLAN COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION

KEY PLAN:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-07-15
DRAWN BY:	BB, GB
CHECKED BY:	ES
APPROVED BY:	ES
SCALE:	AS NOTED

SHEET TITLE:

ELECTRICAL CUT SHEETS

SHEET NUMBER:

PH-102

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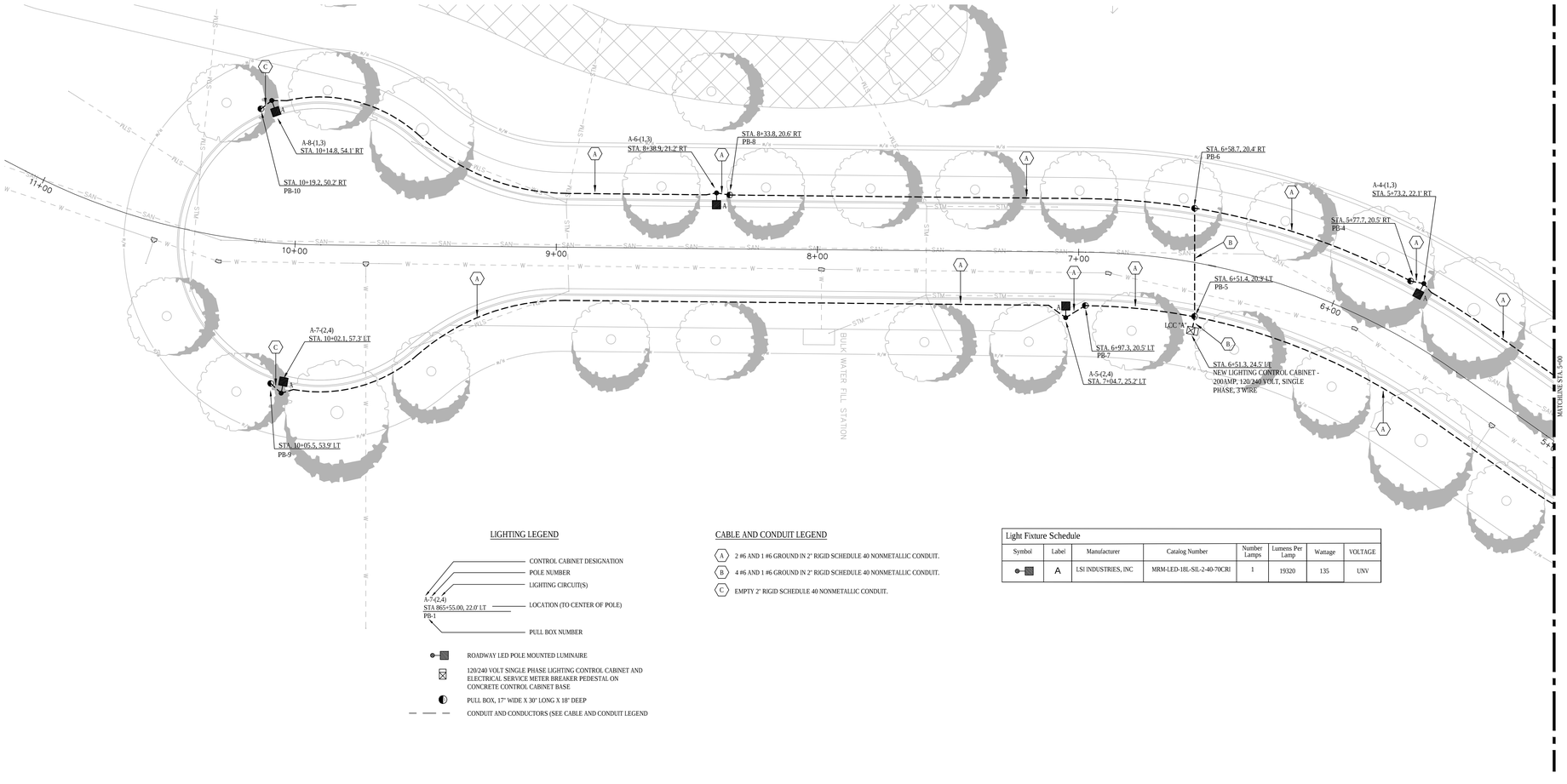


0 10' 20' 40'
SCALE: 1" = 20'

LIGHTING LEGEND

ROADWAY LED POLE MOUNTED LUMINAIRE

120/240 VOLT SINGLE PHASE LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE

PULL BOX, 17" WIDE X 30" LONG X 18" DEEP

CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND

CABLE AND CONDUIT LEGEND

(A) 2 #6 AND 1 #6 GROUND IN 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.

(B) 4 #6 AND 1 #6 GROUND IN 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.

(C) EMPTY 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.

Light Fixture Schedule

Symbol	Label	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Wattage	VOLTAGE
	A	LSI INDUSTRIES, INC	MRM-LED-18L-SIL-2-40-70CRI	1	19320	135	UNV

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. GRAEF makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. GRAEF further does not warrant that the underground utilities shown are in the exact location indicated. GRAEF has not physically located the underground utilities.

GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500

CLIENT:
VILLAGE OF GERMANTOWN

PROJECT TITLE:
TID NO.9 ROADWAY

12668 DONGES BAY ROAD
GERMANTOWN, WI 53022

ISSUE:

NO.	DATE	REVISIONS	BY

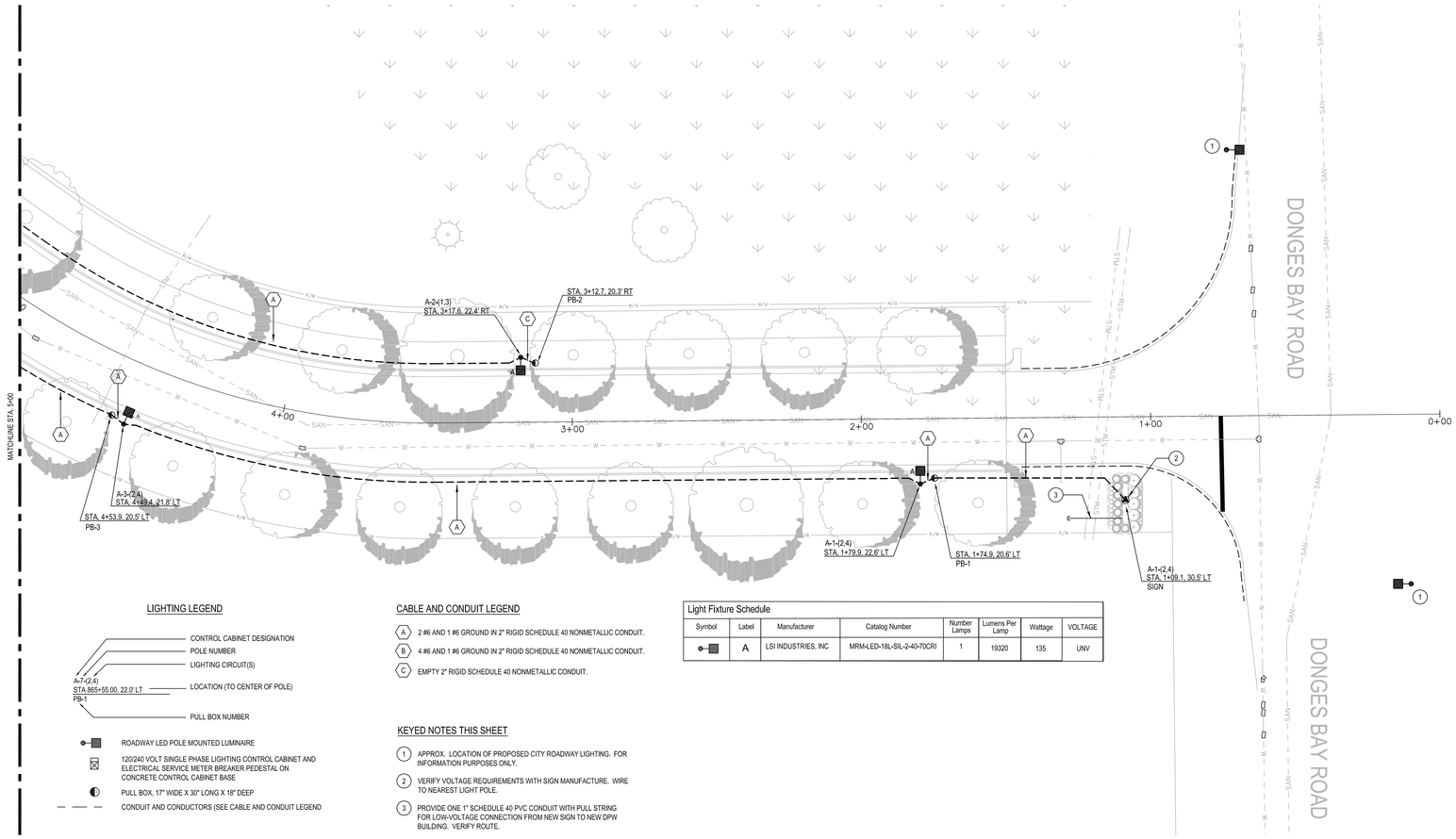
PLAN COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.04
DATE:	2022-07-15
DRAWN BY:	DLC
CHECKED BY:	ES
APPROVED BY:	RJ
SCALE:	AS NOTED

SHEET TITLE:
ROADWAY LIGHTING PLAN

SHEET NUMBER:
E100



SCALE: 1" = 20'

LIGHTING LEGEND

- ROADWAY LED POLE MOUNTED LUMINAIRE
- 120/240 VOLT SINGLE PHASE LIGHTING CONTROL CABINET AND ELECTRICAL SERVICE METER BREAKER PEDESTAL ON CONCRETE CONTROL CABINET BASE
- PULL BOX, 17" WIDE X 30" LONG X 18" DEEP
- CONDUIT AND CONDUCTORS (SEE CABLE AND CONDUIT LEGEND

CABLE AND CONDUIT LEGEND

- (A) 2 #6 AND 1 #6 GROUND IN 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.
- (B) 4 #6 AND 1 #6 GROUND IN 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.
- (C) EMPTY 2" RIGID SCHEDULE 40 NONMETALLIC CONDUIT.

KEYED NOTES THIS SHEET

1. APPROX. LOCATION OF PROPOSED CITY ROADWAY LIGHTING. FOR INFORMATION PURPOSES ONLY.
2. VERIFY VOLTAGE REQUIREMENTS WITH SIGN MANUFACTURE. WIRE TO NEAREST LIGHT POLE.
3. PROVIDE ONE 1" SCHEDULE 40 PVC CONDUIT WITH PULL STRING FOR LOW-VOLTAGE CONNECTION FROM NEW SIGN TO NEW DPW BUILDING. VERIFY ROUTE.

Light Fixture Schedule

Symbol	Label	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Wattage	VOLTAGE
	A	LSI INDUSTRIES, INC	MRM-LED-18L-SIL-2-40-70CRI	1	19320	135	UNV

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
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GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500

CLIENT:
VILLAGE OF GERMANTOWN

PROJECT TITLE:
TID NO.9 ROADWAY

12668 DONGES BAY ROAD
GERMANTOWN, WI 53022

ISSUE:
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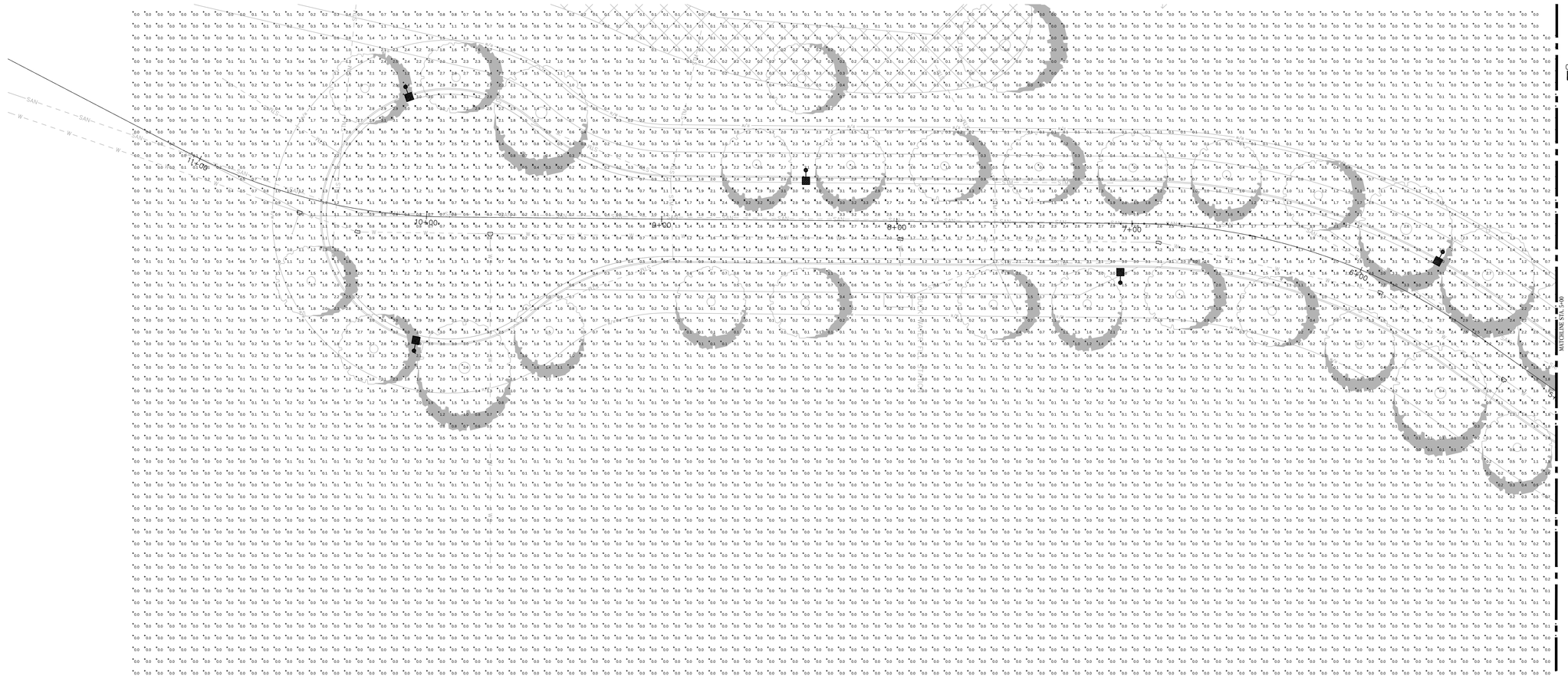
SHEET TITLE:
ROADWAY LIGHTING PLAN

SHEET NUMBER:
E101



LIGHTING LEGEND

ROADWAY LED POLE MOUNTED LUMINAIRE

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Roadway Only	+	2.1 fc	3.4 fc	0.6 fc	5.7:1	3.5:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	8	LSI INDUSTRIES, INC	MRM-LED-18L-SIL-2-40-70CRI	1	MRM-LED-18L-SIL-2-40-70CRI.IES	19320	1	135

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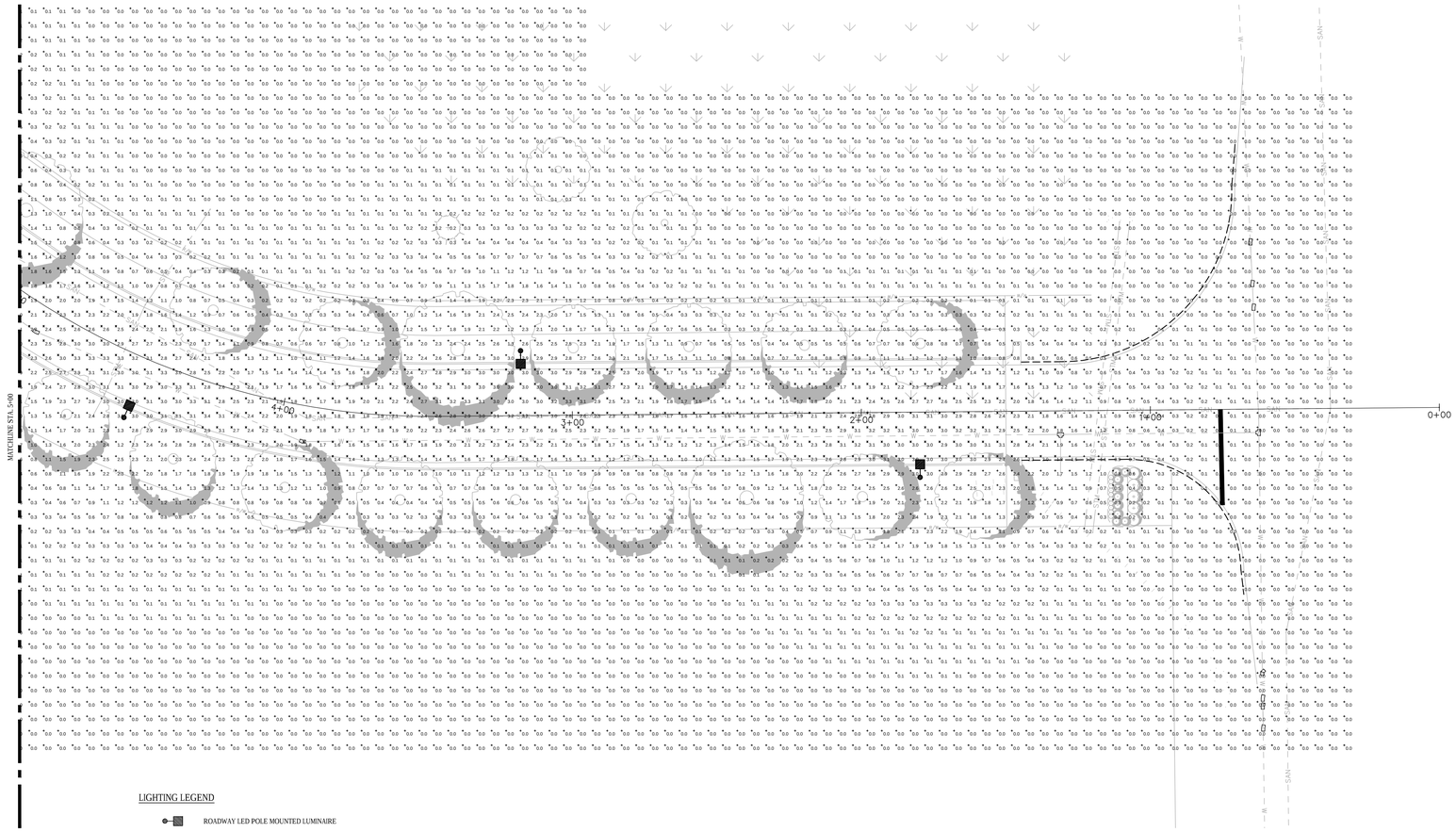
SHEET TITLE:
ROADWAY PHOTOMETRIC PLAN

SHEET NUMBER:
E200



0 10' 20' 40'
SCALE: 1" = 20'

LIGHTING LEGEND

ROADWAY LED POLE MOUNTED LUMINAIRE

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Roadway Only		2.1 fc	3.4 fc	0.6 fc	5.7:1	3.5:1

Schedule								
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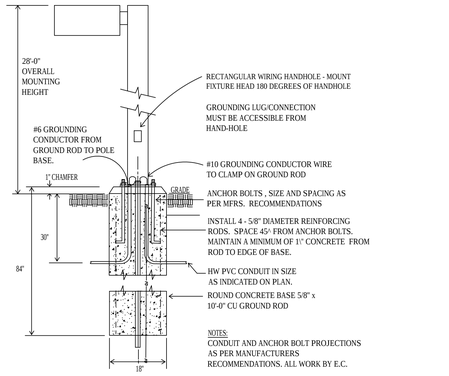
ROADWAY PHOTOMETRIC PLAN

SHEET NUMBER:
E201



POLE BASE DETAIL

NOT TO SCALE

ABBREVIATIONS

A	AMP	MLO	MAIN LUGS ONLY
ACT	ABOVE COUNTER TOP	MR#	MULTI-RECEPTACLE, # INDICATES MULTI-RECEPTACLE DESIGNATION
AFF	ABOVE FINISHED FLOOR	MS	MANUAL STARTER
AFG	ABOVE FINISHED GRADE	MSB	MAIN SWITCHBOARD
ALT	ALTERNATE	MSP	MANUAL SWITCH WITH PILOT LIGHT
AQ	AQUA-STAT	MT	EMPTY
AS	AS SHOWN	MTD	MOUNTED
AU	AT UNIT	NC	NEAR CIRCULATOR (REFER TO HVAC & PLUMBING DRAWINGS FOR EXACT LOCATION.)
B, JB	JUNCTION BOX	NIC	NOT IN CONTRACT
BCP	BOILER CONTROL PANEL	NP	NEAR PUMP (REFER TO HVAC & PLUMBING DRAWINGS FOR EXACT LOCATION.)
BDH	BUS DUCT, # INDICATES BUS DUCT DESIGNATION	NTS	NOT TO SCALE
BFG	BELOW FINISHED GRADE	NU	NEAR UNIT (REFER TO HVAC & PLUMBING DRAWINGS FOR EXACT LOCATION.)
BOL	BUILT-IN OVERLOAD	OOS	ON/OFF SWITCH
C	CONTACTOR	OU	ON UNIT
CB, C/B	CIRCUIT BREAKER(S)	P#	PHOTOCELL, # INDICATES PHOTOCELL DESIGNATION
CCB	COMBINATION CIRCUIT BREAKER FULL VOLTAGE STARTER	PBL	PUSH BUTTON WITH PILOT LIGHT
CDT	CONDUIT	PBS	PUSH BUTTON STATION
CEF	CEILING EXHAUST FAN	PC	PLUMBING CONTRACTOR
CF	COMBINATION FUSIBLE FULL VOLTAGE STARTER	PCP	PRE-WIRED CONTROL PANEL
CKT	CIRCUIT	PE	PNEUMATIC ELECTRIC SWITCH
CM	CONSTRUCTION MANAGER	PEC	PROJECT ELECTRICAL CONTRACTOR
CPT	CONTROL POWER TRANSFORMER	PL	PILOT LIGHT
CS	COMBINATION STARTER	PRV	POWER ROOF VENTILATOR
CU	COPPER	PW	PART WINDING STARTER
CUH	CABINET UNIT HEATER	R	RECEPTACLE
D, DS	DISCONNECT SWITCH	RAF	RETURN AIR FAN
DD	DOUBLE DUPLEX	RAI	REMAIN AS IS
DM	DOOR MANUFACTURER	RAT	REVERSE ACTING THERMOSTAT
DN	DOWN	RMN	EXISTING TO REMAIN
DRWGS	DRAWINGS	RMV	EXISTING TO BE REMOVED
EC	BY ELECTRICAL CONTRACTOR	RPL	EXISTING TO BE REPLACED
EDH	ELECTRIC DUCT HEATER	RVS	REDUCED VOLTAGE STARTER
EF	EXHAUST FAN	S	STERILIZER
EM	EMERGENCY	SAV	SOLENOID AIR VALVE
EP	EXPLOSION PROOF	SC	STERILIZER CONTROLS
ER	EXISTING TO BE REMOVED	SF	SUPPLY FAN
ERL	EXISTING RELOCATED (NEW LOCATION)	SP	SHOCKPROOF
ET	ELAPSED TIMER	SPC	SPACE
ETL	EXISTING TO BE RELOCATED (OLD LOCATION)	SPR	SPARE
EUH	ELECTRIC UNIT HEATER	SPS	SELECTOR SWITCH
EWH	ELECTRIC WALL HEATER	SS	SPEED SWITCH
EX	EXISTING TO REMAIN	S/S	SPEAKER/STROBE
F	FURNISHED BY	SSP	START-STOP WITH PILOT LIGHT
FS	FLOW SWITCH	STAT	THERMOSTAT
FZS	FREEZE STAT	SVS	SUPERVISORY SWITCH
G, GFI	GROUND FAULT INTERRUPTER TYPE	SWBD	SWITCHBOARD
GC	PROJECT GENERAL CONTRACTOR	SWGR	SWITCH GEAR
GND, GRND	GROUND	TC	TIME CLOCK
GS	MAGNETIC STARTER	TCC	TEMPERATURE CONTROL CONTRACTOR
GV	GATE VALVE	TCP	TEMPERATURE CONTROL PANEL
H, HV	HEATING/VENTILATING CONTRACTOR	TL#	TRACK LIGHT, # INDICATES TRACK LIGHT DESIGNATION
HOA	HAND/OFF/AUTO SELECTOR SWITCH	TO	TYPICAL OUTLET
HP	HORSEPOWER	TS	TAMPER SWITCH
H/S	HORN/STROBE	TV	TELEVISION
I	INSTALLED BY	UFD	UNDERFLOOR DUCT
IG	ISOLATED GROUND	UG	UNDERGROUND
IL	INTERLOCK	UGD	UNDERGROUND DUCT
IS	IN STARTER COVER	UH	UNIT HEATER
IU	IN UNIT	UO	UNIQUE OUTLET
KS	KEY SWITCH	U0I	UNLESS OTHERWISE INDICATED
KVA	KILOVOLT-AMPERES	USS	UNIT SUBSTATION
KW	KILOWATT	V	VENDOR SUPPLYING EQUIPMENT
LD	LOAD (KW OR HP)	W	WIRED BY
LVT	LINE VOLTAGE THERMOSTAT (120V)	W/	WITH
MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
MD	MOTORIZED DAMPER	WT	WIRING TROUGH
MFR	MANUFACTURER	XFMR	TRANSFORMER
MG	MOTOR GENERATOR		

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Catalog #: MRMLED18LSIL2UNVDIM4070CRIBRZ 689903BRZ Project: _____

Prepared By: _____ Date: _____ Type: FIXTURE TYPE "A"

Mirada Medium (MRM)

Outdoor LED Area Light

IP66 IK08

OVERVIEW	
Lumen Package	7,000 - 48,000
Wattage Range	48 - 401
Efficacy Range (LPW)	117 - 160
Weight lbs(kg)	30 (13.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square or round poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 37 lbs in carton.

Optical System
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and house-side shield (IH) options available for improved backlight control without sacrificing street side performance. See page 3 for more details.

Electrical
- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Customer input and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 5)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L and 48L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Controls
- Optional integral passive infrared Bluetooth® motion and photocell sensor (see page 9 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see page 9 for more details).

Installation
- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes LSI's traditional 3" drill pattern B3 for easy fastening of LSI products. (See drawing on page 9)

Warranty
- LSI LED Fixtures carry a 5-year warranty.

Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- Patented Silicone Optics (US Patent NO. 10,816,165 B2)
- IK08 rated luminaire per IEC 66262 mechanical impact code

Specifications and dimensions subject to change without notice.

Type: _____

Mirada Medium Outdoor LED Area Light

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package	Light Output	Distribution	Orientation[2]	Voltage	Driver
MRM - Mirada	**LED**	**7L** - 7,000 lms **9L** - 9,000 lms **12L** - 12,000 lms **18L** - 18,000 lms **24L** - 24,000 lms **30L** - 30,000 lms **36L** - 36,000 lms **42L** - 42,000 lms **48L** - 48,000 lms **Custom Lumen Packages[1]**	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **5W** - Type 5 Wide **FT** - Forward Throw **FTA** - Forward Throw Automotive **AM** - Automotive Merchandise	**(blank)** - standard **L** - Optics rotated left 90° **R** - Optics rotated right 90°	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Finish	Options
50 - 5,000 CCT **40** - 4,000 CCT **30** - 3,000 CCT **AMB** - Phosphor Converted Amber[12]	**70CRI** - 70 CRI	**BLK** - Black **BRZ** - Dark Bronze **GMG** - Gun Metal Gray **GPT** - Graphite **MSV** - Metallic Silver **PLP** - Platinum Plus **SVG** - Satin Verde Green **WHT** - White	**(Blank)** - None **IH** - Integral Houseside Shield[9] **IL** - Integral Louver (Sharp Spill Light Cutoff)[9]

Controls (Choose One)

(Blank) - None

Wireless Controls System
ALSC - AirLink Synapse Control System
ALSCH - AirLink Synapse Control System Host / Satellite[3]
ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor
ALSCH202 - AirLink Synapse Control System Host / Satellite with 12-20' Motion Sensor [3]
ALSC04 - AirLink Synapse Control System with 20-40' Motion Sensor
ALSCH04 - AirLink Synapse Control System Host / Satellite with 20-40' Motion Sensor [3]
ALBC01 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height)
ALBC02 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height)

Stand-Alone Controls
EXT - 0-10v Dimming leads extended to housing exterior
CR7P - 7 Pin Control Receptacle (ANSI C136.41 [4]
IMSBT1 - Integral Bluetooth™ Motion and Photocell Sensor (8-24' MH)[3]
IMSBT2 - Integral Bluetooth™ Motion and Photocell Sensor (25-40' MH)[3]

Button Type Photocells
PC120 - 120V
PC208-277 - 208 -277V
PC347 - 347V

Lutron Limelight Controls
LLC – LimeLight Integral Wireless Radio Control by Lutron[4]
LLCS1 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 8-15' mt height[4]
LLCS2 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 16-30' mt height[4]
LLCS3 – Limelight Integral Wireless Radio Control and PIR Motion/ Daylight Sensor by Lutron 31-40' mt height[4]

Accessory Ordering Information[7]

Controls Accessories	
Description	Order Number[8]
PC120 Photocell for use with CR7P option (120V)[7]	122514
PC208-277 Photocell for use with CR7P option (208V, 240V, 277V)[7]	122515
Twist Lock Photocell (347V) for use with CR7P.[7]	122516
Twist Lock Photocell (480V) for use with CR7P.[7]	122530
AirLink 5 Pin Twist Lock Controller [3]	661409
AirLink 7 Pin Twist Lock Controller [3]	661410
PMOS24-24V Pole-Mounted Occupancy Sensor (24V)	6832940LR
Shorting Cap for use with CR7P	149328

Fusing Options[10]	
Description	Order Number
Single Fusing (120V)	See Fusing Accessory Guide
Single Fusing (277V)	
Double Fusing (208V, 240V)	
Double Fusing (480V)	
Double Fusing (347V)	

Mounting Accessories[6]	
Description	Order Number[8]
Universal Mounting Bracket	6948190LR
Adjustable Slip Fitter (2" - 2 3/8" Tenon)	688138OLR
Horizontal Slip Fitter (2" - 2 3/8" Tenon)	692701OLR
Quick Mount Pole Bracket (Square Pole)	6970730LR
Quick Mount Pole Bracket (4-5" Round Pole)	689900OLR
15 Tilt Quick Mount Pole Bracket (Square Pole)	698000OLR
15 Tilt Quick Mount Pole Bracket (4-5" Round Pole)	689900OLR
Wall Mount Bracket	3801302LR
Wood Pole Bracket (8" Minimum Pole Diameter)	7312190LR

Miscellaneous Accessories	
Description	Order Number
Integral Louver/Shield	690981
Integral House Side Shield	743415
10' Linear Bird Spike Kit (3' Recommended per Luminaire)	751932

FOOTNOTES:
1. Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.
2. Not available with 5W distribution
3. Consult Factory for availability.
4. Not available in 347V.
5. IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
6. Control device or shorting cap must be ordered separately. See Accessory Ordering Information.
7. Accessories are shipped separately and field installed.
8. Factory installed CR7P option required. See Options.
9. "CLR" denotes finish. See Finish options.
10. Only available with ALSC/ALSCH control options.
11. Fusing must be located in hand hole of pole. See Fusing Accessory Guide for compatability.
12. Only available in 9L and 12L Lumen Packages. Consult factory for lead time and availability.

FIXTURE TYPE "A" CUT SHEET

NOT TO SCALE

Catalog #: 5RP B5 S07G 28 S (DARK) BRZ DGP Project: _____

Prepared By: _____ Date: _____

Round Poles

Round Straight

QUICK LINKS

Ordering Guide | Configurations | Dimensions | EPA

FEATURES & SPECIFICATIONS

Pole Shaft
- Steel round poles are 4" or 5" in diameter
- Pole shaft is electro-welded ASTM-A500 Grade C Steel Tubing with a minimum yield strength of 46,000 psi.
- On Tenon Mount steel poles, tenon is high-strength pipe. Tenon N option is 2-3/8" O.D. x 4-3/4" tall. Tenon 4N option is 4" O.D. x 4-7/8" tall.

Hand-Hole
- Standard hand-hole location is 12" above pole base.
- Poles 18' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

Base
- Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi.
- Two-piece square base cover is optional. Decorative base cover is also available.

Anchor Bolts
- Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional.
- Anchor Bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 PSI.

Ground Lug
- Ground lug is standard.

Duplex Receptacle
- Weatherproof duplex receptacle is optional.

Ground Fault Circuit Interrupter
- Self-testing ground fault circuit interrupter is optional.

Finishes
- Every pole is provided with the DuraGrip® Protection System and a 5-year limited warranty:
- When the top-of-the line DuraGrip Plus Protection System is selected, in addition to the DuraGrip Protection System, a non-porous, automotive-grade corrosion coating is applied to the lower portion of the pole interior sealing and further protecting it from corrosion. This option extends the limited warranty to 7 years.

Determining The Luminaire/Pole Combination For Your Application:
- Select luminaire from luminaire ordering information.
- Select bracket configuration if required
- Determine EPA value from luminaire/ bracket EPA chart
- Select Pole Height
- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value of luminaire/bracket EPA
- Consult factory for special wind load requirements and banner brackets.

Pole Vibration Damper
- A pole vibration damper is recommended in open terrain areas of the country where low steady state winds are common.
- Non-tapered poles and lightly loaded poles are more susceptible to destructive vibration if a damper is not installed.

Listings
- UL Listed
- BAA/TAA Compliant

Round Straight Poles

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: **4RPU B3 S07G 24 S PLP DGP**

Pole Series	Mounting Method	Material	Height[8]	Mounting Configuration	Pole Finish	Options
4RP - 4" Diameter Round Straight Pole (New Build) **5RP** - 5" Diameter Round Straight Pole (New Build) **4RPU** - 4" Diameter Round Straight Pole (Retrofit) **5RPU** - 5" Diameter Round Straight Pole (Retrofit)	**Bolt-On Mount[1]** - See pole selection guide for patterns and fixture matches. **B5** - 5" Traditional Drilling Pattern **B3** - 3" Reduced Drilling Pattern **B2** - 2" Reduced Drilling Pattern **T** - Tenon Mount - See pole selection guide for tenon and fixture/bracket matches. **I** - No Mounting Holes[2] - Use with: BKA-PM4 - Flush Mount Adapter[8] Greenlee Lifestyle OH Mounting Style Enterprise, Lexington, Constitution PT Single Mounting[8]	**S07G** - 07 Ga. Steel (5RP/5RPU Only) **S10G** - 10 Ga. Steel (4RP/4RPU Only) **S11G** - 11 Ga. Steel (5RP/5RPU Only)	8' 10' 12' 14' 15' 16' 17' 17' 6" 18' 20' 22' 22' 6" 24' 25' 26' 27' 28' 30'	**S** - Single/Parallel **D180** - Double **D90** - Double **DN90** - Double **T90** - Triple **TN120** - Triple **Q90** - Quad **QN90** - Quad **N** - Tenon Mount (Standard Tenon size is 2-3/8" O.D.)† **4N** - Tenon Mount (5RPT only. For 4" poles only, use 4RPI) **4N-6** - Tenon Mount (5RPT only. For 4" poles use 4RPI)	DARK **BRZ** - Bronze **BLK** - Black **PLP** - Platinum Plus **WHT** - White **SVG** - Satin Verde Green **GPT** - Graphite **MSV** - Metallic Silver **BZA** - Alternate Bronze	**GA** - Galvanized Anchor Bolts **SF** - Single Flood[9] **DF** - Double Flood[9] **DGF** - DuraGrip® Plus **LAB** - Less Anchor Bolts **CRXX** - Conduit Raceway[9]

Accessory Ordering Information

Description	Order Number
4" SRMC Square Base Cover	1594003LR
5" SRMC Square Base Cover	1594012LR
4" /5" GBC Decorative Base Cover	4838590LR
ER2 – Weatherproof Duplex Receptacle (Poles below 18')	1229557OLR
ER2 – Weatherproof Duplex Receptacle for Reinforced Hand-hole (Poles 18' and above)	1229560LR
GFI – Ground Fault Circuit Interrupter (Poles below 18')	1229583LR
GFI – Ground Fault Circuit Interrupter for Reinforced Hand-hole (Poles 18' and above)	2256712LR
MH5 - Mounting Hole Plugs for use with 5" traditional drill pattern (3 set of 3 plugs)	130336

Description	Order Number
MH3 - Mounting Hole Plugs for use with 3" reduced drill pattern (3 sets of 3 plugs)	691139
MH2 - Mounting Hole Plugs for use with 2" reduced drill pattern (3 sets of 3 plugs)	729841
B8 - Banner Brackets	Consult Factory for EPA calculations

FOOTNOTES:
1 - See Area Light Brackets - 3" Reduced Drill Pattern and Area Light Brackets - 5" Traditional Drill Pattern Spec Sheets.
2 - For Enterprise, Lexington, and Constitution PT mounting configuration styles, see Tenon (T) Mounting (4PU and Lifestyle Sixth Pole Series).
3 – Stainless steel black pole cap provided. Domed Greenlee pole cap will ship with SA4 and SA5 Enterprise and Lexington fixtures, SA Lifestyle Fixtures, BK MPT BO, and UCL Brackets.
4 – Pole heights will have a +/- 1/2" tolerance. Max height for 4RP S10G is 24'. Max height of the 5RP S10G is 26'.
5 – For Enterprise and Lexington D180 or other mounting configuration styles using BK MPT BO accessories order with B3 or B5 drill pattern.
6 – See Flood Lighting Brackets section for choice of FBO Brackets.
7 – Only use with 4 inch pole.
8 – Use with BKA-IPM4.

FIXTURE TYPE "A" POLE CUT SHEET

NOT TO SCALE

GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500

CLIENT:
VILLAGE OF GERMANTOWN

PROJECT TITLE:
TID NO.9 ROADWAY

12668 DONGES BAY ROAD
GERMANTOWN, WI 53022

ISSUE:

NO.	DATE	REVISIONS	BY

PLAN COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.04
DATE:	2022-07-15
DRAWN BY:	DLC
CHECKED BY:	ES
APPROVED BY:	RJ
SCALE:	AS NOTED

SHEET TITLE:
ROADWAY LIGHTING CUT SHEET AND DETAILS.

SHEET NUMBER:
E300

Germantown DPW Site Wetland Delineation Washington County

November 2021

Prepared for
The Village of Germantown

Prepared by

275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203
(414) 259-1500

Scientist: Alison Masek
Alison.Masek@graef-usa.com

www.graef-usa.com

Project No.: 2021-0820.02

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Appendix B: WSS Hydric Soil List
Appendix C: WETS Analysis
Appendix D: Wetland Delineation Map
Appendix E: Site Photographs
Appendix F: Wetland Determination Data Forms
Appendix G: Plant Lists
Appendix H: Statement of Qualifications

1.0 INTRODUCTION

Per the request of the Village of Germantown, GRAEF conducted a wetland delineation within a designated Study Area at N104W12667 Donges Bay Road and N104W12703 Donges Bay Road. Germantown, Wisconsin (Figure 1, Appendix A). The site is located in [Section 35 and 36, Township 19 North, Range 10 East and Sections 15, 16, 21, 22, 27, 28, 29, 30, 31, and 32, Township 19 N, Range 11 East in the City of Wautoma, Waushara County, Wisconsin. The study area is three large residential lots historically and, in some areas, currently used for farming.

The purpose of this wetland delineation was to determine the current location and extent of wetlands located within designated Study Areas. Our study is presented here in terms of methodology, results, and conclusions.

The wetlands delineation field investigation was conducted by GRAEF scientists Alison Masek and Cameron Wien October 2021. A Statement of Qualifications on the field investigator is provided in Appendix H.

2.0 METHODS

This delineation was conducted in accordance with the guidelines of the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, 2010), the Corps of Engineers and the Wisconsin Department of Natural Resources guidance on delineation reports (2015), and in general accordance with Wisconsin Department of Natural Resources guidelines (WI Department of Administration, WI Coastal Management Program, 1995) and Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guidelines (1993). National Wetland Indicator status and taxonomic nomenclature is referenced from The National Wetland Plant List (Lichvar et al., 2016). National Wetland Indicator status is based on the Midwest Region.

Prior to conducting fieldwork, GRAEF scientists reviewed several maps including the United States Geological Survey (USGS) 7.5' Quadrangle maps, Wisconsin Wetland Inventory Map, Natural Resource Conservation Service (NRCS) Soil Survey Map, and aerial photographs. *Note: NRCS no longer releases their NRCS Wetland Inventory Maps to other than the landowner or operator without documented permission from the landowner or operator; therefore they were not reviewed nor are they included with this report.*

Precipitation data from approximately 90 days prior to the field investigation was obtained from a weather station near the Study Area and compared with 30-year average precipitation data obtained from an NRCS WETS Table for the County where the Study Area was located to determine if antecedent hydrologic conditions at the time of the site visit were normal for the time of the year.

Sampling points were located in areas exhibiting wetland and upland characteristics to document the presence and/or absence of wetlands and to provide support for the delineated wetland boundaries. At each sampling point, data were collected to document the vegetation, soils, and indicators of wetland

hydrology. The wetland boundaries were staked using wire pin flags (pink for boundary locations and orange for samples points) and when needed flagging tape. Wetland boundaries were generally determined by distinct to subtle differences in the abundance of hydrophytic vegetation and upland vegetation, apparent topographic breaks, and regular probing of soils.

A Floristic Quality Assessment (FQA) for each wetland was conducted using the guidelines described in Development of a Floristic Quality Assessment for Wisconsin (Bernthal, 2003) as adopted and amended from the Plants of the Chicago Region (Swink and Wilhelm, 1994). A meander survey was performed for each wetland area to identify and document all vascular plant species present and identifiable at the time of the site visit. Based on the data collected, mean C and Floristic Quality Index (FQI) values were calculated using coefficients of conservatism values made available by the University of Wisconsin-Madison Herbarium's "Checklist of the Vascular Plants of Wisconsin".

3.0 RESULTS AND DISCUSSION

3.1 BACKGROUND REVIEW

3.1.1 Wisconsin Wetland Inventory

The Wisconsin Wetland Inventory (WWI) map (Figure 2, Appendix A) depicted three wetland types within the Study Area.

WWI Wetland	Classification
E2K	Emergent wet meadow, narrow leaved persistent, wet soil palustrine
E2Ka	Emergent wet meadow, narrow leaved persistent, wet soil palustrine, abandoned
T3K	Forested, mud, wet soil palustrine

3.1.2 Soils

According to the NRCS Soil Survey map (Figure 3, Appendix A) eight mapped soil series are located within the Study Area. The types of mapped soils are listed on Table 1 below. Additional information provided by Web Soil Survey for the hydric soil components can be found in Appendix B.

Table 1. Mapped Soil Series

Soil Series	Taxonomic Classification	Hydric Classification
Casco loam	Inceptic Hapludalfs	Non-Hydric

Dresden silt loam	Mollic Hapludalfs	Non-Hydric
Drummer silt loam	Typic Endoaquolls	Hydric
Matherton silt loam	Udollic Endoaqualfs	Non-Hydric
Mequon silt loam	Udollic Endoaqualfs	Non-Hydric
Ozaukee silt loam	Oxyaquic Hapludalfs	Non-Hydric
Pella silt loam	Typic Endoaquolls	Hydric
Radford silt loam	Fluvaquentic Hapludolls	Non-Hydric
Virgil silt loam	Udollic Endoaqualfs	Non-Hydric

3.1.3 Topography

The USGS topographic map (Figure 4, Appendix A) showed elevations ranging from 760 feet to 880 feet above sea level. Topography was complex with scattered hills and slopes, a general elevation pattern was not observed.

3.1.4 Precipitation Data.

The WETS analysis worksheet is provided in Appendix C. According to the Field Office Technical Guide [eFTOG], the total precipitation from a nearby weather station (GERMANTOWN WASTEWATER UTILITY, WI) for the 14 days prior to the site visit was 1.15 inches. The most recent rainfall event prior to the site visits was 0.52 inches, which occurred on October 8th. The total precipitation for the three months prior to the month of October was approximately 10.44 inches inches, which was 1.41 inches below a 30-year average. The precipitation data for the three-month period preceding the month of July were entered into a WETS analysis worksheet to determine antecedent hydrologic conditions at the time of the site visit for field investigation purposes. Based on this analysis, the precipitation total for the three months prior to the site visits was considered average, suggesting that the surface or near-surface hydrology at the time of the site visit was normal and that hydrologic conditions during the site visit were typical.

3.2 FIELD STUDY

3.2.1 Site Description

The Study The study area is three large residential lots historically and, in some areas, currently used for farming.

3.2.2 Wetlands

Eleven wetlands (W-1 through W-11) were delineated. The delineated wetland boundaries and data points are shown on maps (Exhibit 1) in Appendix D. Photographs were taken at each data point and other notable locations (Appendix F). Data was collected and recorded on Wetland Determination Data Forms at 43 data points to document wetland and upland locations (Appendix F).

4.0 CONCLUSION

Based on the wetland delineation completed by GRAEF Elven wetlands (W-1 through W-11) were delineated with a total of 15.12 acres.

Activity in delineated wetlands or waterways may require permits from the U.S. Army Corps of Engineers, Wisconsin Department of Natural Resources, and local governments prior to beginning any work.

5.0 LIMITATIONS

The results of this field study are based on site conditions at the time of the field study, which was conducted in accordance with current regulatory policy and methods. Unknown and future conditions that affect observations of field indicators, and change in interpretation of regulatory policy, may modify future findings.

Statements within this report about the connectivity of the delineated wetlands to surface waters are the professional opinions of GRAEF's scientists and are not significant nexus determinations or jurisdictional determinations. Opinions on connectivity are based on general field observations and a cursory review available map resources. The ultimate authority to determine jurisdiction resides with the U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources.

The U.S. Army Corps of Engineers and the Wisconsin Department of Natural Resources have the ultimate authority to determine wetland boundaries, and adjustments to wetland boundaries may occur based on decisions made by these regulatory agencies.

APPENDIX A

Figures

Legend

Study Area

Mequon Rd 167 Mequon Rd 167 Mequon Rd W Mequon Rd 167

Pheasant Ln Crestview Dr Martin Dr Forest Dr Equine Trl Wasaukee Rd N Ashbury Woods Dr

Patton Ct N Eisenhower Dr Washington Dr Patton Ct S Ellsworth Dr Strawgrass Ln Coneflower Cir Trillium Way

Country Aire Dr

White Pine Ct Overlook Ct Wooded Hills Dr Amen Ct Magnolia Dr Evergreen Ct Fond du Lac Ave 145

Bradley Way Grant Dr Washington Dr

W Shawnee Pass N Council Hills Dr W Tomahawk Trl N Oconnell Ln

Victory Center Donges Bay Rd Donges Bay Rd W Donges Bay Rd

St Johns United Church of Christ

Emmanuel (Albright Brethren) Cemetery

Gatewood Pl Berrywood Ct Berrywood Ln Spaten Ct Sunberry Rd Fond du Lac Ave 145 Wasaukee Rd

Storaway Pl Sunburst Ct Seven Pines Way Ridgewood Ln Amber Dr Knollcrest Cir Midland Dr

FVW WSOR Village of Germantown Milwaukee Washington Ozaukee Canadian National RR

County Line Rd County Line Rd County Line Rd W County Line Rd

Fountain Blvd 145 N 124th St

N

0 500 1,000

Feet

1 in = 1,000 ft

SITE LOCATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 1

GRAEF

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Date Saved: 10/27/2021 9:44:03 AM
User: 1956
Proj. Number: 2021-0820.02
Source: ESRI

Legend

Study Area

WWI Wetlands

Washington Drive

Donges Bay Road

T3K

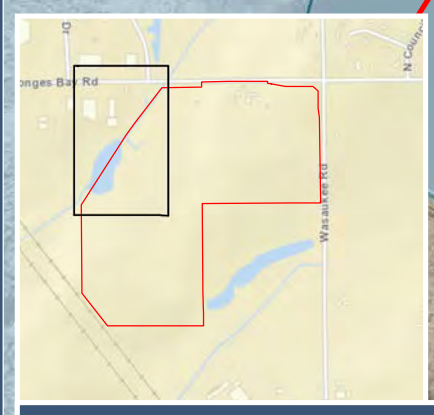
S3/E2K

E2H

W0Hx

E2K

W0Hx



N

0 50 100

Feet

1 in = 100 ft

WISCONSIN WETLAND INVENTORY

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 2-1

GRAEF

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Proj. Number: 2021-0820.02 Source: Washington County & WDNR

WISCONSIN WETLAND INVENTORY

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 2-2

N

0 50 100

Feet

1 in = 100 ft

GRAEF

Date Saved: 10/8/2021 10:32:51 AM Path: X:\ML\2021\2021\0820-02\Design\GIS\DPW Alternative SiteWetlandDelineation\Maps\Figure 2 - WWI.mxd

User: 1956

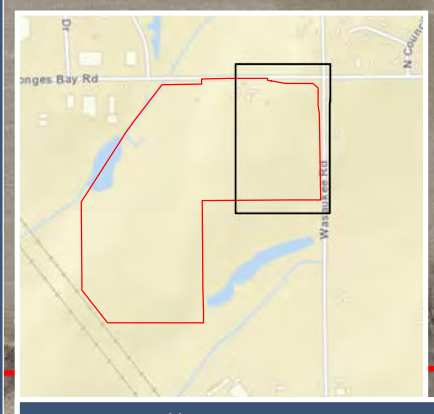
Proj. Number: 2021-0820.02 Source: Washington County & WDNR

Legend

- Study Area
- WWI Wetlands

Donges Bay Road

Wasaukee Road



N

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Feet

1 in = 100 ft

WISCONSIN WETLAND INVENTORY

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 2-3

GRAEF

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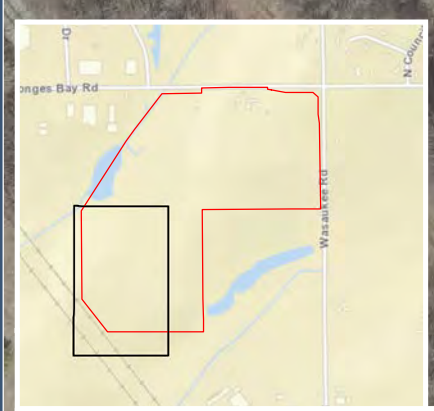
Proj. Number: 2021-0820.02 Source: Washington County & WDNR

Legend

- Study Area
- WWI Wetlands

E2Ka

T3K



N

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Feet

1 in = 100 ft

WISCONSIN WETLAND INVENTORY

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 2-4

GRAEF

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User: 1956
Proj. Number: 2021-0820.02
Source: Washington County & WDNR

Legend

Study Area

WWI Wetlands

E2Ka

T3K

$T3K

W0Hx

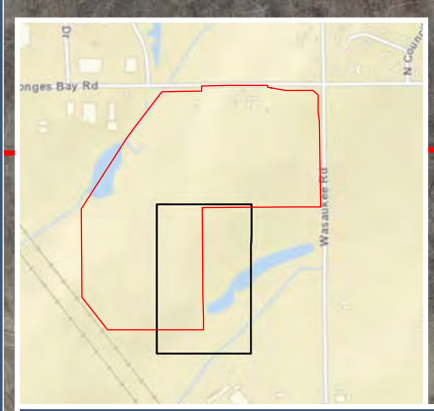
T3K

$E2K

T3/E2K

T3K

T3/E2K



N

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Feet

1 in = 100 ft

WISCONSIN WETLAND INVENTORY

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

FIGURE 2-5

GRAEF

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APPENDIX D

Wetland Delineation Map

Legend

- Sample Point
- Study Area
- Wetland Delineation

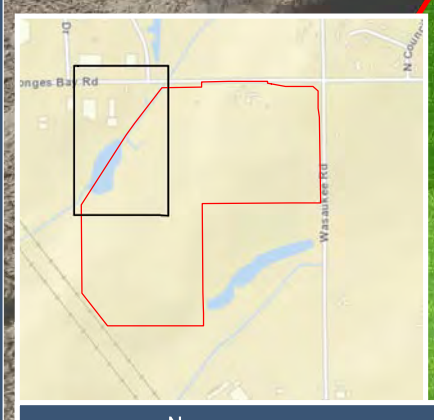
Donges Bay Road

Washington Drive

W-6
12.34 Ac

SP-36

SP-35



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Feet

1 in = 100 ft

WETLAND DELINEATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

EXHIBIT 1-1

GRAEF

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Legend

- Sample Point
- Study Area
- Wetland Delineation

Donges Bay Road

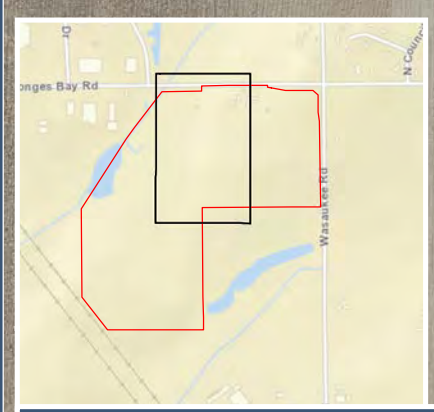
SP-34
SP-33
SP-22
SP-21
SP-20
SP-23
SP-24
SP-25
SP-26
SP-15
SP-13
SP-14

W-6
12.34 Ac

W-9
0.03 Ac

W-8
0.01 Ac

W-4
0.23 Ac



N

0 50 100
Feet
1 in = 100 ft

WETLAND DELINEATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

EXHIBIT 1-2

GRAEF

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Legend

- Sample Point
- Study Area
- Wetland Delineation

Donges Bay Road

Wasaukee Road

SP-30
SP-31
SP-29
SP-32
SP-28
SP-27
SP-1
SP-25
SP-26
SP-2
SP-7
SP-6
SP-5
SP-3
SP-4
SP-8
SP-9
SP-10
SP-12
SP-11

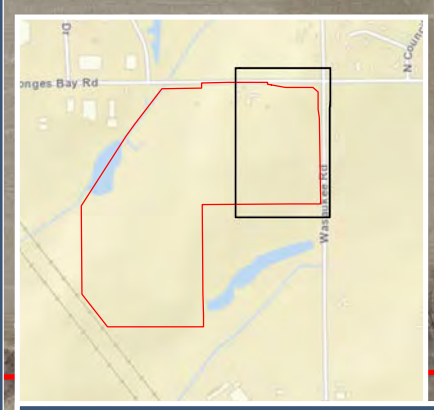
W-9
0.03 Ac

W-2
0.01 Ac

W-1
0.38 Ac

W-1
0.38 Ac

W-3
0.22 Ac



N

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Feet
1 in = 100 ft

WETLAND DELINEATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

EXHIBIT 1-3

GRAEF

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Proj. Number: 2021-0820.02 Source: Washington County

Legend

- Sample Point
- Study Area
- Wetland Delineation

W-6
12.34 Ac

W-10
0.19 Ac

SP-38

SP-37

SP-40

SP-39

W-11
0.07 Ac

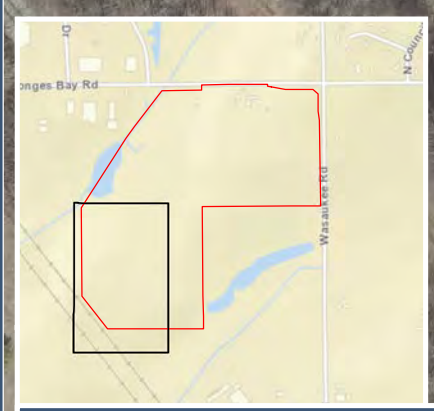
SP-19

SP-18

W-7
0.43 Ac

SP-42

W-5
1.21 Ac



N

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Feet

1 in = 100 ft

WETLAND DELINEATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

EXHIBIT 1-4

GRAEF

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Legend

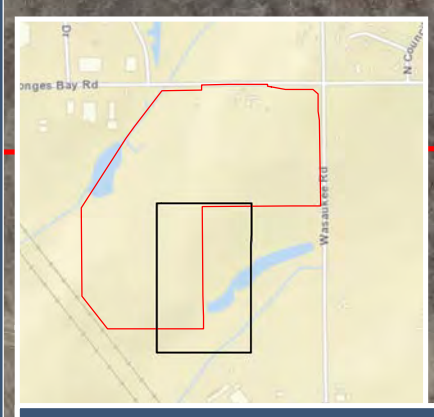
- Sample Point
- Study Area
- Wetland Delineation

W-4
0.23 Ac

W-5
1.21 Ac

SP-17

SP-16



N

0 50 100
Feet
1 in = 100 ft

WETLAND DELINEATION

DPW BUILDING

VILLAGE OF GERMANTOWN
WASHINGTON COUNTY, WISCONSIN

EXHIBIT 1-5

GRAEF

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NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. GRAEF makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. GRAEF further does not warrant that the underground utilities shown are in the exact location indicated. GRAEF has not physically located the underground utilities.

GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500
www.graef-usa.com

PROJECT TITLE:
GERMANTOWN DPW

N112W17001 MEQUON RD.,
GERMANTOWN, WI 53022

ISSUE:
NO. DATE REVISIONS BY

PROJECT STATUS

PROJECT INFORMATION:
PROJECT NUMBER: 2022-0820.02
DATE: 04/29/2022
DRAWN BY: SRK
CHECKED BY: JH
APPROVED BY: JPH
SCALE: AS SHOWN

SHEET TITLE:
WETLAND EXHIBIT

SHEET NUMBER:
WE 2

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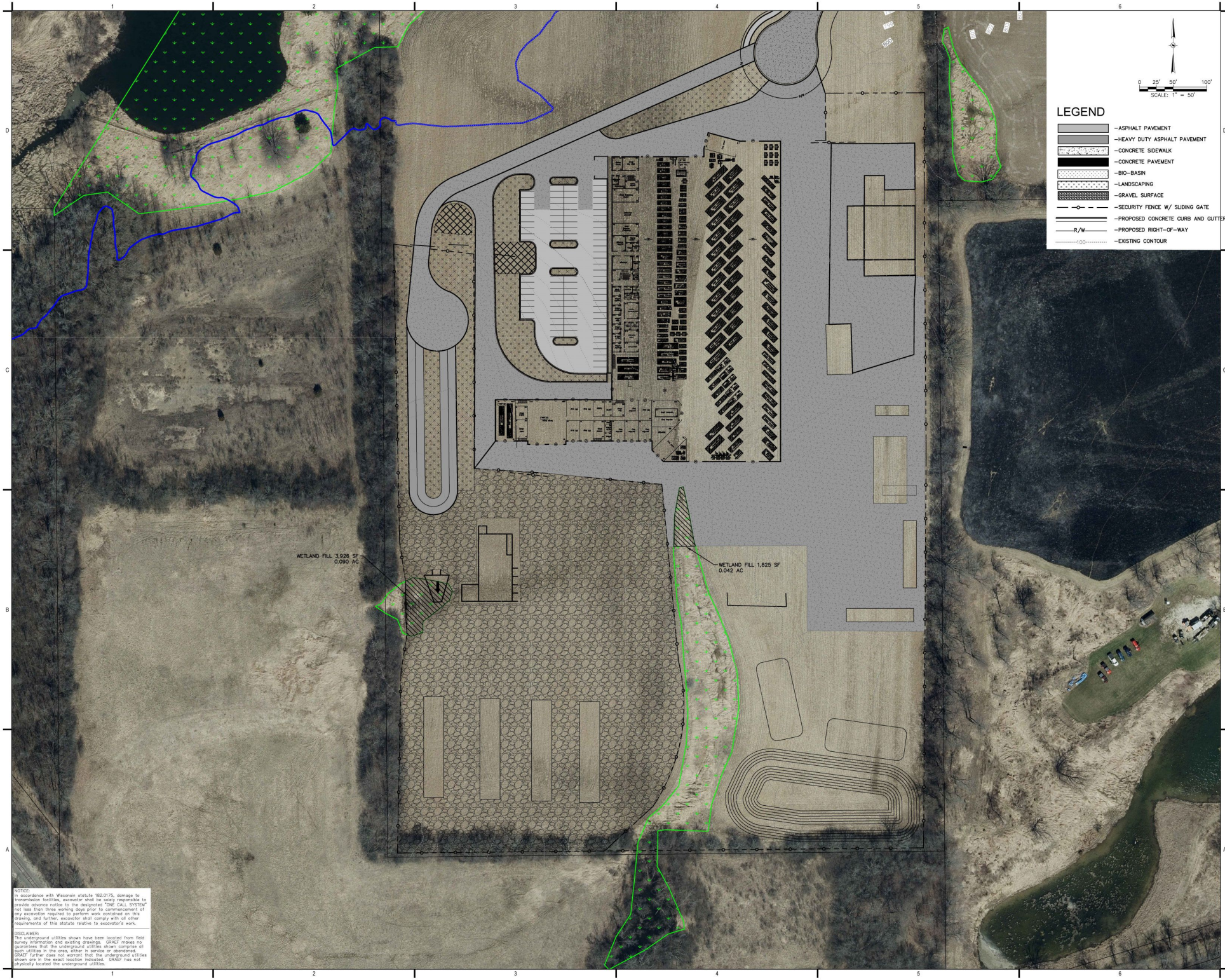

0 25' 50' 100'
SCALE: 1" = 50'

LEGEND

- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- BIO-BASIN
- LANDSCAPING
- GRAVEL SURFACE
- SECURITY FENCE W/ SLIDING GATE
- PROPOSED CONCRETE CURB AND GUTTER
- R/W — PROPOSED RIGHT-OF-WAY
- 100 — EXISTING CONTOUR

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

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GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500
www.graef-usa.com

PROJECT TITLE:
GERMANTOWN DPW

N112W17001 MEQUON RD.,
GERMANTOWN, WI 53022

ISSUE:

NO.	DATE	REVISIONS	BY

PROJECT STATUS

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	04/29/2022
DRAWN BY:	SRK
CHECKED BY:	JH
APPROVED BY:	JPH
SCALE:	AS SHOWN

SHEET TITLE:
WETLAND EXHIBIT

SHEET NUMBER:
WE 1

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The Avenue
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Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

GRAEF

collaborate / formulate / innovate

MEMORANDUM

TO: Jeffrey W. Retzlaff

FROM: Jeremy Hinds, P.E.

DATE: 9/9/2022

SUBJECT: Wetland Setback Compensation Plan
Mitigation Plan Narrative

The following narrative summarizes the mitigation practices provided for the shoreland and wetland setback areas associated with Parcel GTNV_361992 in the Village of Germantown, known as the Department of Public Works Facility and Omega Hills Parkway (TID NO.9). The setback requirements follow the guidelines established by Ordinance No. 23-07 and Section 24.04 of the Village of Germantown Municipal Code.

The mitigation proposed for this project includes creating permanent wetland setback or vegetative buffer equal to the disturbance area (1:1) for horizontal development.

Wetland Mitigation Plan

Exhibit 1 and 2 identifies post-construction wetland setback areas and vegetative buffers totaling 1.07 acres. The vegetative buffer areas will be permanently stabilized with a native seed mix made up of grades and forbs that are indigenous to the area. The native seed mix once established, will provide a permanent cover and vegetative buffer within the setback area.

Summary

Wetland Setback Area Disturbed (1:1 Mitigation Area)	0.88 acres
Native Seed Restoration	0.58 acres
Vegetative Buffer	1.07 acres

Mitigation Ratio: 1: 1.88

AR/ar
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0 25' 50' 100'
SCALE: 1" = 50'

NOTES

1. FOR GENERAL NOTES, SEE SHEET C900.
2. FOR GRADING NOTES, SEE SHEET C900.

LEGEND

- WETLAND
- WETLAND 25' SETBACK
- VEGETATIVE BUFFER
- NATIVE SEED RESTORATION
- CONSTRUCTION LIMITS

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CLIENT:
VILLAGE OF GERMANTOWN
(PROJECT NO. 2205)

PROJECT TITLE:
DEPARTMENT OF PUBLIC
WORKS FACILITY

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

A	2022-08-24	BID PACKAGE NO. 1
C	2022-09-06	BP NO. 1 ADD NO. 2
D	2022-09-09	BP NO. 1 ADD NO. 3

NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-09-09
DRAWN BY:	AR
CHECKED BY:	
APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
WETLAND SETBACK EXHIBIT

SHEET NUMBER:
EX-1

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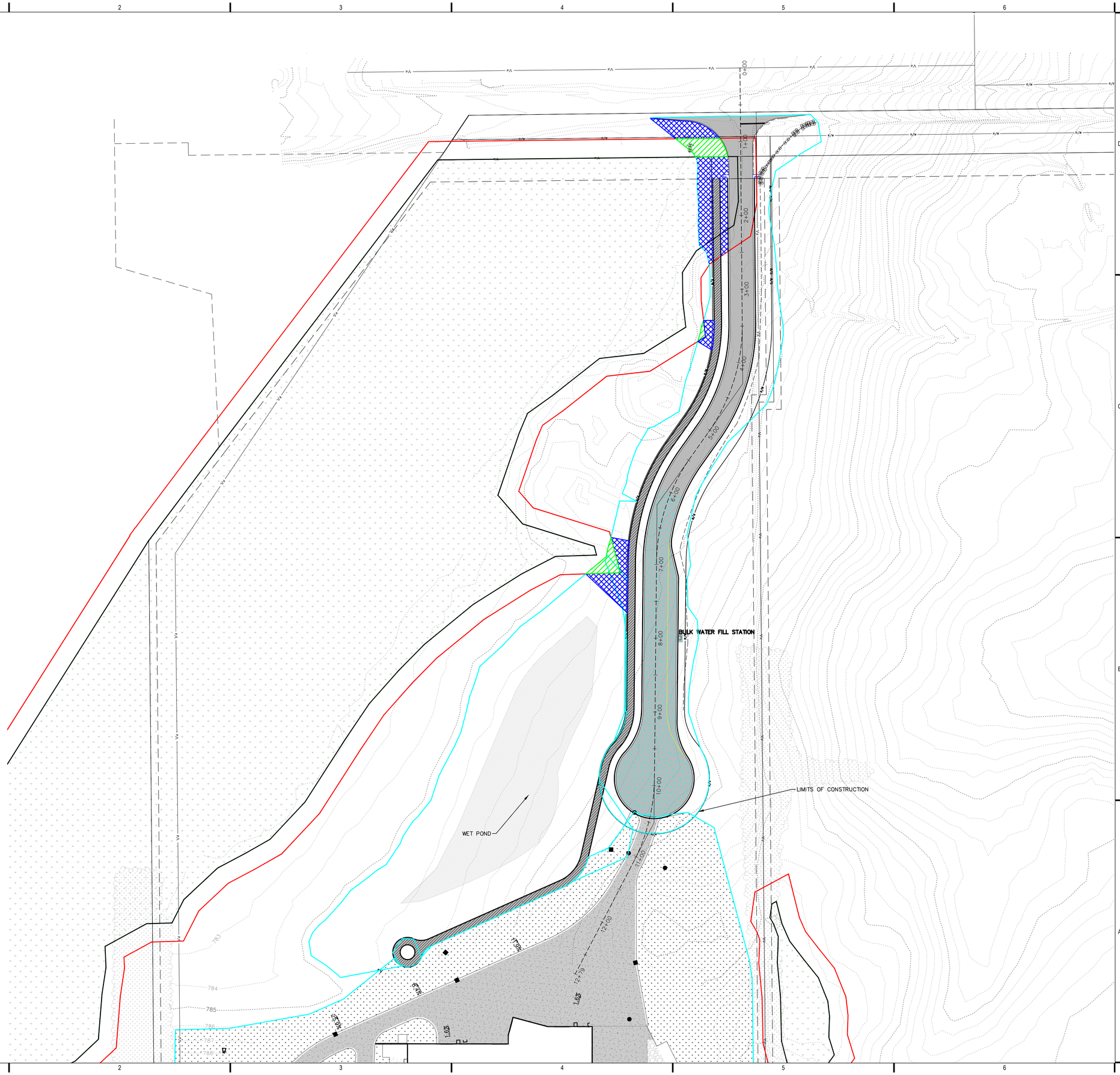

NOTES

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LEGEND

- WETLAND
- WETLAND 25' SETBACK
- VEGETATIVE BUFFER
- NATIVE SEED RESTORATION
- CONSTRUCTION LIMITS

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CLIENT:
VILLAGE OF GERMANTOWN
(PROJECT NO. 2205)

PROJECT TITLE:
TID NO.9

W130 N10200 OMEGA HILLS PARKWAY
VILLAGE OF GERMANTOWN, WI 53022

ISSUE:

A	2022-08-24	BID PACKAGE NO. 1
C	2022-09-06	BP NO. 1 ADD NO. 2
D	2022-09-09	BP NO. 1 ADD NO. 3

NOT FOR CONSTRUCTION

PROJECT INFORMATION:

PROJECT NUMBER:	2022-0820.02
DATE:	2022-09-09
DRAWN BY:	AR
CHECKED BY:	
APPROVED BY:	JLH
SCALE:	AS NOTED

SHEET TITLE:
WETLAND SETBACK EXHIBIT

SHEET NUMBER:
EX-2

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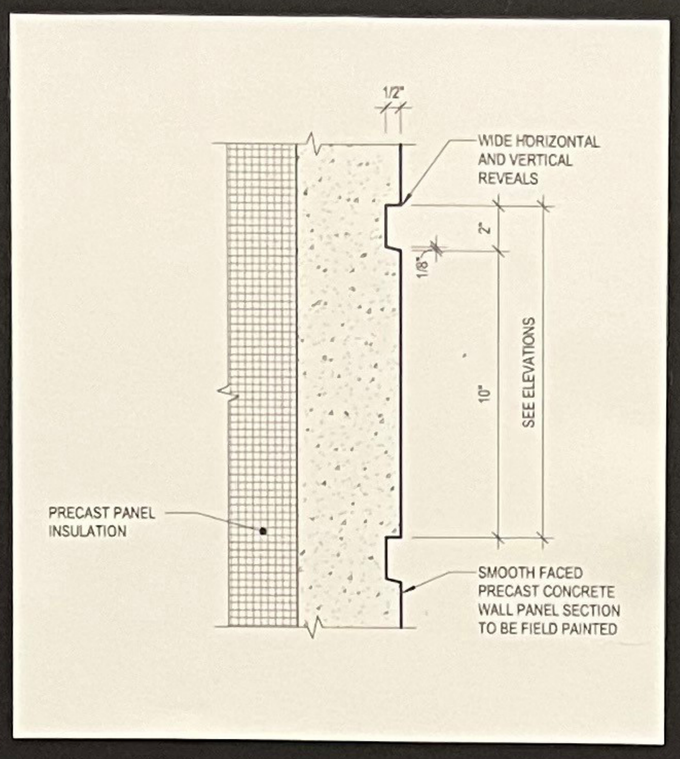
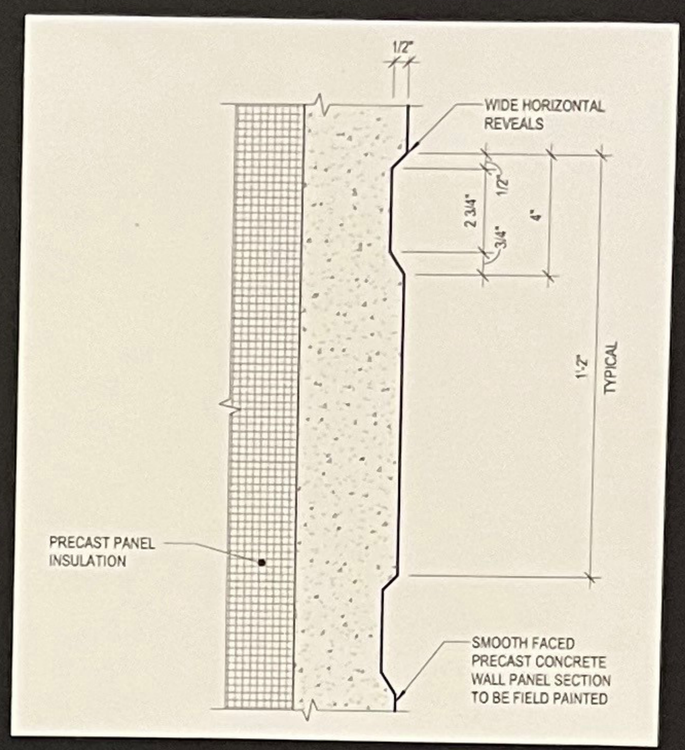
VILLAGE OF GERMANTOWN
Department of Public Works Building
Material Board

PRECAST CONCRETE PANEL FINISH COLOR



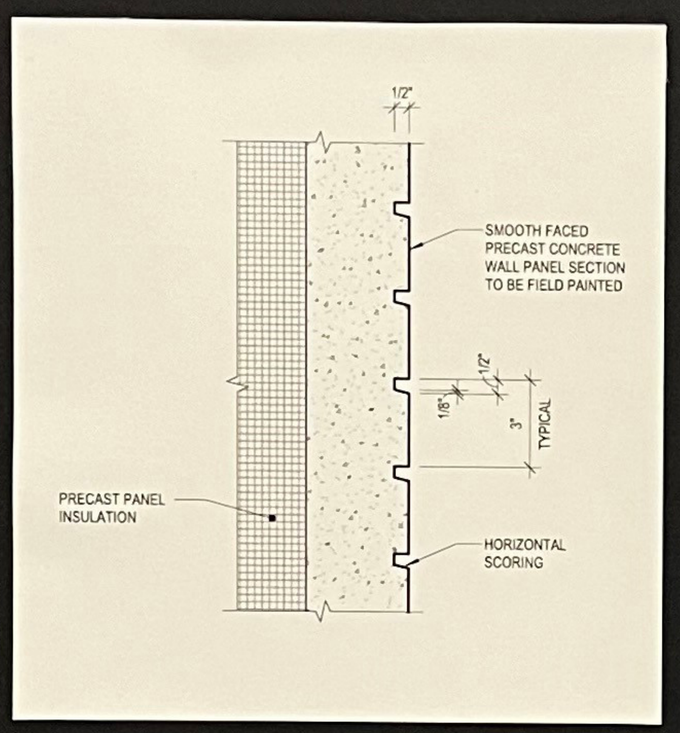
2" HORIZONTAL & VERTICAL REVEALS

PRECAST CONCRETE PANEL PAINT COLOR



4" HORIZONTAL REVEAL

PRECAST CONCRETE PANEL PAINT COLOR

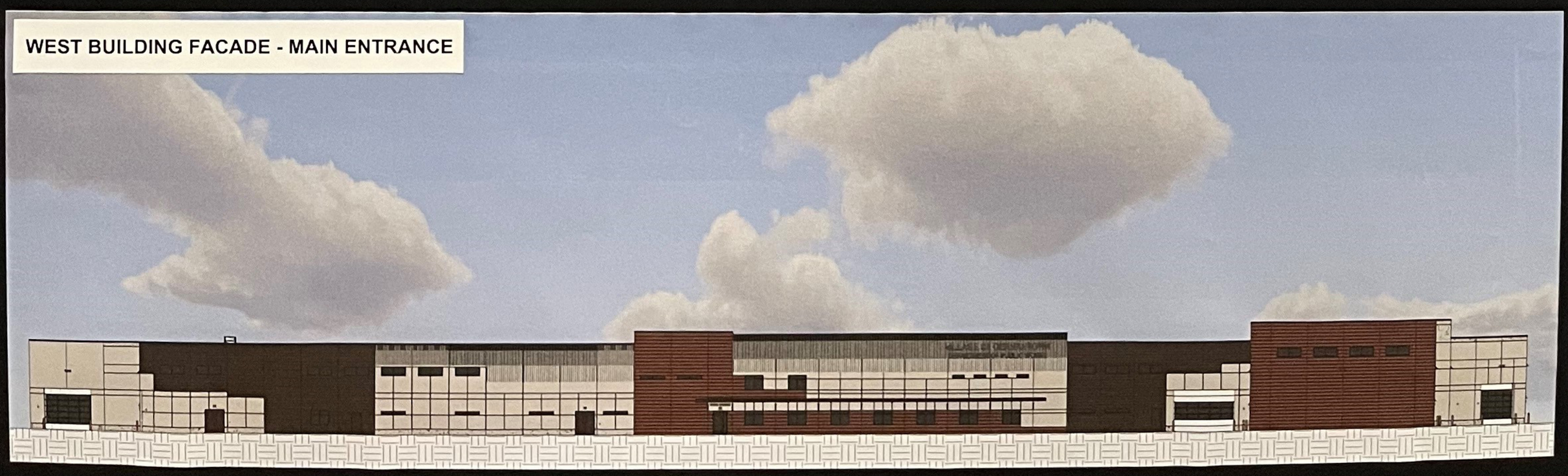


1/2" HORIZONTAL REVEALS

METAL TRIM, MANDOOR & WINDOW FRAME COLOR

METAL COPING CAP

AERIAL BUILDING PERSPECTIVE



WEST BUILDING FACADE - MAIN ENTRANCE