

Tuesday, May 26, 2020

Village Board
7:00 PM

McFarland Municipal Center
Community Room

AGENDA

You are invited to this meeting through a Zoom webinar. The Public is strongly encouraged to watch and participate in these meetings remotely through either the webinar or telephone options listed below.

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/88409154466>

Or by Telephone:

+1 (929) 205-6099 or +1 (301) 715-8592 or +1 (312) 626-6799 or +1 (669) 900-6833 or +1 (253) 215-8782 or +1 (346) 248-7799

Webinar ID: 884 0915 4466

1. CALL TO ORDER.
2. ATTENDANCE/ROLL CALL.
3. PUBLIC ANNOUNCEMENTS AND COMMUNICATIONS.
 - a. Public Announcements
 - b. Public Communications
4. CONSENT AGENDA.
 - a. Motion to approve the minutes of the May 11, 2020 regular Village Board meeting.
 - b. Motion to approve check #76969-77038 in the amount of \$273,123.53.
 - c. Motion to approve appointing Gina Kolpek to serve on the Finance Committee for a term ending April 30, 2021.
 - d. Motion to approve appointing Rachel Fisher-Kay to serve on the Volunteer Committee for a term ending April 30, 2021.
 - e. Motion to approve appointing Jack Bernfeld to serve on the Personnel Committee for a term ending April 30, 2021.
 - f. Motion to approve contract to continue to provide flammable liquid inspections by the Fire and Rescue Department on behalf of the State of Wisconsin.

5. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. Members of the public who are present in person and wish to address the board should fill out a public comment form and turn into the meeting chairperson. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.

6. BUSINESS.

- a. Presentation and discussion by Dane County Executive Joe Parisi regarding County's response to the COVID-19 Pandemic.
- b. Plan Commission (President Czebotar & Trustee Rupert)
Public Safety Committee (Trustees Kryzenske & Brassington)
 - 1) Discussion and action on the request for expansion of the premise and associated site plan for the Class "B" Beer and "Class B" intoxicating Liquors License to add an additional 504 square feet to the outdoor patio for Angelo's McFarland, 4706 Farwell St.
 - 2) Discussion and action on the request for expansion of the premise, associated site plan, and Limited License Agreement for the Class "B" Beer and "Class B" intoxicating Liquors License to add an outdoor seating area in the front of the McFarland House Cafe, located at 5923 Exchange St. for the license period ending June 30, 2020.
- c. Plan Commission (President Czebotar & Trustee Rupert)
 - 1) Discussion and action regarding Ordinance #2020-15: an ordinance to annex lands from the Town Dunn to the Village of McFarland.
 - 2) Discussion and action regarding Ordinance #2020-16: an ordinance rezoning lands recently annexed west of CTH AB and north of the Wisconsin & Southern Railroad from from A-1 (Agricultural Transition District) to PDD-GP (Planned Development District - General Plan Approved) and PDD-DP (Planned Development District - Detailed Plan Approved) as requested by Veridian Homes Rosewood Fields LLC.
- d. Plan Commission (President Czebotar & Trustee Rupert)
Parks, Recreation, and Natural Resources Committee (Trustees Clow & Utter)
Public Utilities Committee (Trustees Kryzenske & Clow)
Public Works Committee (Trustees Clow & Rupert)
 - 1) Discussion and action regarding a request by Veridian Homes Rosewood Fields LLC regarding Preliminary Plat approval for Rosewood Fields Subdivision located west of CTH AB in the Village of McFarland.

- e. Public Utilities Committee (Trustees Kryzenske & Clow)
 - 1) Discussion and action in order to issue a Request for Proposal (RFP) for Sanitary Sewer Cleaning and Televising Services.
- f. Public Works Committee (Trustees Clow & Rupert)
 - 1) Discussion and action regarding Ordinance #2020-13: an ordinance amending the McFarland Municipal Code regarding driveways.
 - 2) Discussion and action regarding the award of contract for the 2020 Public Works Center Improvement project.
 - 3) Discussion and action regarding the award of a proposal for the addition of solar panels to the Public Works Center.
- g. Discussion and action regarding a request for a driveway variance by Sarah and John Sheehan for 6115 South Court.
- h. Discussion regarding setting dates for annual Village Board retreat.
- i. Authority, Board, Commission, and Committee agenda item requests, referrals, and updates.

7. ADJOURNMENT.

This meeting notice constitutes an official meeting of the above referenced group and was posted in accordance with all applicable laws related to Open Meetings Law. It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals. For additional information or to request this service, contact the McFarland Municipal Center at (608) 838-3153 or cassandra.suettinger@mcfarland.wi.us

VILLAGE OF MCFARLAND

Village Board Minutes

Monday, May 11, 2020 - 7:00 PM

1. CALL TO ORDER.

Village President Czebotar called the regular meeting of the McFarland Village Board to order at 7:00 pm in the Community Room of the McFarland Municipal Center.

2. ATTENDANCE/ROLL CALL.

Village Board members present: Village Trustee Stephanie Brassington, Village Trustee Carolyn Clow, Village President Brad Czebotar, Village Trustee Michael Flaherty, Village Trustee Eric Kryzenske, Village Trustee Justin Rupert, Village Trustee Clair Utter

Village Board members not present: None.

Staff Present: Administrator Matt Schuenke, Clerk/Treasurer Cassandra Suettinger, Community and Economic Development Director Andrew Bremer, and Communications & Technology Director Stephanie Miller.

3. PROCLAMATION

- a. *A Proclamation designating May 17-23, 2020 as Public Works week in McFarland, Wisconsin.*

President Czebotar proclaimed May 17-23, 2020 to be Public Works week in the Village of McFarland.

4. PUBLIC ANNOUNCEMENTS AND COMMUNICATIONS.

- a. *Public Announcements*

- 1) *Board of Review - May 28, 2020*

- 2) *Tuesday, May 26, 2020 at 7:00 pm - Special Village Board meeting date due to holiday.*

- b. *Public Communications*

5. CONSENT AGENDA.

- a. *Motion to approve the minutes of the April 27, 2020 regular Village Board meeting.*

- b. *Motion to approve pre-paid checks #76894-76906 in the amount of \$57,856.65 and current checks #76907-76968 in the amount of \$31,3438.23.*

- c. Motion to approve appointing Barb Vander Werff to serve on the Senior Outreach Committee for a term ending April 30, 2021.
- d. Motion to approve appointing Kevin Lodholz to serve on the Board of Review for a 5-year term ending April 30, 2025.

Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to approve the consent agenda as presented. Motion carries 7 - 0 - 0 by acclamation.

6. PUBLIC APPEARANCES.

- a. This is an opportunity for members of the public to address the Village Board. Please remember this is a virtual meeting conducted through the Zoom online meeting platform. Zoom meeting attendees wishing to address the board may do so using the Question and Answer feature within the Zoom online meeting platform. You may state your name, address, and provide your comments to the board for their consideration. Members of the public who are present in person and wish to address the board should fill out a public comment form and turn into the meeting chairperson. Members of the public may speak during public appearances or during their selected agenda item as they designate on the public comment form. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to cassandra.suettinger@mcfarland.wi.us to be included as part of the meeting.

Ryan Quam, Ezra Properties LLC, 4703 Terminal Drive, spoke in favor of amending the development agreement to allow for vehicles to be stored on the property at 4703 Terminal Drive.

Robert Anderson, 4703 Terminal Drive, spoke in favor of amending the development agreement to allow for vehicles to be stored on the property at 4703 Terminal Drive.

7. BUSINESS.

- a. Presentation regarding the 2019 Annual Report for the McFarland Food Pantry.
Peter Morehouse presented the 2019 Annual Report for the McFarland Food Pantry. He thanked the Village Board for their continued support. He reported that in the wake of COVID19, the pantry is most in need of financial contributions. Residents can visit the Food Pantries website for the link to make payments electronically.
- b. Discussion and action regarding an Event Permit from Karben4 Brewing LLC for the Drive-thru Taproom to be located at McFarland Park (Curling Club Parking Lot) on May 19, 2020.

Village Clerk/Treasurer Cassandra Suettinger presented an overview of the application for an event permit from Karben 4 Brewing LLC to hold a drive-thru taproom at McFarland Park on May 19, 2020. She reported it would be a drive through market featuring Village and local vendors.

Motion by Village Trustee Michael Flaherty, second by Village Trustee Justin Rupert, to approve an Event Permit from Karben4 Brewing LLC for the Drive-thru Taproom to be located at McFarland Park (Curling Club Parking Lot) on May 19, 2020. Motion carries 7 - 0 - 0 by acclamation.

- c. Discussion and action regarding Resolution #2020-12: a resolution to waive interest and penalties on property tax payment installments due on or after April 1, 2020.

Motion by Village President Brad Czebotar, second by Village Trustee Stephanie Brassington, to approve Resolution #2020-12: a resolution to waive interest and penalties on property tax payment installments due on or after April 1, 2020. Motion carries 7 - 0 - 0 by acclamation.

- d. Discussion and presentation regarding financial impacts on Village operations during COVID-19 Pandemic.

Village Administrator Matt Schuenke presented the Village financials to date, and a report on the preliminary effects of COVID19. He outlined revenues that are likely to be affected directly by COVID19. Departments would continue to monitor budgets and report back to the Board on budgetary effects.

The Board requested staff provide updated financials monthly to continue to monitor the budgetary effects of COVID19.

- e. Authority, Board, Commission, and Committee agenda item requests, referrals, and updates.

None.

8. CLOSED SESSION.

- a. Discussion and action in order to convene in Closed Session in accordance with Wis. Stats. 19.85(1)(e) to deliberate or negotiate the investment of public funds or other specified public business whenever competitive or bargaining reasons require a closed session, specifically related to the following items:

- 1) Consideration for a request by Ryan Quam, Ezra Properties LLC, to amend the Development Agreement for the property located at 4703 Terminal Drive.

- 2) Consideration to acquire property located at 5407 Bashford Street within Tax Increment District #4.

Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to convene in Closed Session at 8:30 p.m. in accordance with Wis. Stats. 19.85(1)(e) to deliberate or negotiate the investment of public funds or other specified public business whenever competitive or bargaining reasons require a closed session, specifically related to the following items:

1) - Consideration for a request by Ryan Quam, Ezra Properties LLC, to amend the Development Agreement for the property located at 4703 Terminal Drive.

2) - Consideration to acquire property located at 5407 Bashford Street within Tax Increment District #4.

Motion carries 7 - 0 - 0 on a roll call vote.

- b. Discussion and action to reconvene into Open Session.

Motion by Village President Brad Czebotar, second by Village Trustee Carolyn Clow, to reconvene into Open Session at 9:36 p.m. Motion carries 7 - 0 - 0 by acclamation.

- c. Discussion and action regarding a request by Ryan Quam, Ezra Properties LLC, to amend the Development Agreement for the property located at 4703 Terminal Drive.

Motion by Village Trustee Clair Utter, second by Village Trustee Justin Rupert, to deny a request by Ryan Quam, Ezra Properties LLC, to amend the Development Agreement for the property located at 4703 Terminal Drive and authorize staff to notify Ryan Quam that is is in default of the development agreement and that the Village will withhold further development incentive payments until he has complied with all of the terms of the agreement. Motion carries 7 - 0 - 0 by acclamation.

- d. Discussion and action regarding the acquisition of property located at 5407 Bashford Street within Tax Increment District #4.

Motion by Village Trustee Carolyn Clow, second by Village Trustee Clair Utter, to approve pursuing a right of first refusal for the property located at 5407 Bashford Street within Tax Increment District #4. Motion carries 7 - 0 - 0 by acclamation.

9. ADJOURNMENT.

Motion by Village Trustee Clair Utter, second by Village Trustee Justin Rupert, to adjourn at 9:41 p.m.

Pursuant to law, written notice of this meeting was given to the public and posted on the public bulletin boards in accordance with Open Meetings Law.

Respectfully submitted,
Cassandra Suettinger
Village Clerk/Treasurer

Pay Period Date	Journal Code	Check Issue Date	Check Number	Payee	Payee ID	Amount
05/09/2020	PC	05/15/2020	76969	PETERS, PAUL THOMAS	417	626.56
05/09/2020	PC	05/15/2020	76970	HORNBECK, JOSEPH	422	698.69
05/09/2020	CDPT	05/15/2020	76971	WI AFSCME COUNCIL 32	7	59.25
05/09/2020	CDPT	05/15/2020	76972	WI SCTF	5	207.69
05/09/2020	CDPT	05/15/2020	76973	WPPA TREASURER	6	504.00

PAYROLL RELATED

\$2,094.19

Report Criteria:

Report type: GL detail

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/13/2020	76840	17329	AMRHEIN, JENNI	ELECTION INSPECTOR & MBOC	040720	1	100-51440-120-000	98.00- V
Total 76840:									98.00-
05/20	05/13/2020	76841	17330	AMRHEIN, JIM	ELECTION INSPECTOR	040720	1	100-51440-120-000	56.00- V
Total 76841:									56.00-
05/20	05/15/2020	76974	30	ALLIANT ENERGY/WP&L	MUNICIPAL CENTER	051120	1	100-51600-220-000	2,423.18
05/20	05/15/2020	76974	30	ALLIANT ENERGY/WP&L	LIBRARY	051120	2	205-55110-220-000	1,531.62
05/20	05/15/2020	76974	30	ALLIANT ENERGY/WP&L	WELL #4	051120	3	600-53716-220-000	1,599.40
05/20	05/15/2020	76974	30	ALLIANT ENERGY/WP&L	4820 MARSH - SOCCER BUILDING	051120	4	100-55200-220-000	56.06
Total 76974:									5,610.26
05/20	05/15/2020	76975	16247	CITY TREASURER	STORMWATER CHARGE	07100600-05	1	605-53440-530-000	22.34
Total 76975:									22.34
05/20	05/15/2020	76976	1989	CORPORATE BUSINESS SYSTE	PW COPIER	27025456	1	600-53610-310-000	31.12
05/20	05/15/2020	76976	1989	CORPORATE BUSINESS SYSTE	PW COPIER	27025456	2	600-53710-310-000	31.12
05/20	05/15/2020	76976	1989	CORPORATE BUSINESS SYSTE	PW COPIER	27025456	3	605-53440-310-000	31.12
Total 76976:									93.36
05/20	05/15/2020	76977	748	PURCHASE POWER	REFILL OF POSTAGE	051020	1	100-1622	2,000.00
05/20	05/15/2020	76977	748	PURCHASE POWER	REFILL CHARGE	051020	2	100-51420-311-000	20.99
05/20	05/15/2020	76977	748	PURCHASE POWER	METER LEASE	051020	3	100-51420-311-000	94.74
Total 76977:									2,115.73
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	TRIPOD STORAGE	1D34-Y6KJ-	1	200-55600-340-000	129.98
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	PW IPAD SUPPLIES	1FK3-LWW1-	1	100-53000-340-000	16.49
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	PW IPAD SUPPLIES	1FK3-LWW1-	2	600-53610-340-000	4.49
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	PW IPAD SUPPLIES	1FK3-LWW1-	3	600-53710-340-000	4.50
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	PW IPAD SUPPLIES	1FK3-LWW1-	4	605-53440-340-000	4.50

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	BOOK CARTS	1G6T-TX33-	1	205-55110-242-000	1,028.97
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	OFFICE/PRODUCTION SUPPLIES	1G6T-TX33-	1	200-55600-340-000	81.19
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	PLASTIC BAGS	1HCQ-WY7H	1	205-55110-310-000	131.88
05/20	05/22/2020	76978	17084	AMAZON CAPITAL SERVICES	DVDS & CDS	1HX7-YTG7-	1	205-55110-345-000	137.24
Total 76978:									1,539.24
05/20	05/22/2020	76979	2216	ANDRES MEDICAL	APRIL COLLECTIONS	248981	1	100-46230-000	2,426.16
Total 76979:									2,426.16
05/20	05/22/2020	76980	17187	B&H PHOTO	TECHNOLOGY EQUIPMENT	170998232	1	100-53000-310-000	32.95
05/20	05/22/2020	76980	17187	B&H PHOTO	TECHNOLOGY EQUIPMENT	170998232	2	600-53610-310-000	8.99
05/20	05/22/2020	76980	17187	B&H PHOTO	TECHNOLOGY EQUIPMENT	170998232	3	600-53710-310-000	8.99
05/20	05/22/2020	76980	17187	B&H PHOTO	TECHNOLOGY EQUIPMENT	170998232	4	605-53440-310-000	8.98
05/20	05/22/2020	76980	17187	B&H PHOTO	ATEM PRODUCTION SUPPLIES	171371882	1	200-55600-342-000	85.70
Total 76980:									145.61
05/20	05/22/2020	76981	68	BADGER WELDING SUPP INC	BADGER WELDING - OXYGEN	244971	1	100-52200-340-000	12.95
Total 76981:									12.95
05/20	05/22/2020	76982	17141	BADGERLAND DISPOSAL	PORTABLE RESTROOM RENTALS	0001129345	1	100-55200-340-000	330.00
Total 76982:									330.00
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	JUVENILE BOOKS	2035204826	1	205-55110-344-000	15.66
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	JUVENILE BOOKS	2035204827	1	205-55110-344-000	26.79
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	JUVENILE BOOKS	2035209484	1	205-55110-344-000	192.00
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035211431	1	205-55110-344-000	360.89
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035217386	1	205-55110-344-000	266.94
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035218691	1	205-55110-344-000	278.12
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	JUVENILE BOOKS	2035221019	1	205-55110-344-000	119.12
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	2035221810	1	205-55110-344-000	250.22
05/20	05/22/2020	76983	74	BAKER & TAYLOR BOOKS	ADULT BOOKS	5016139433	1	205-55110-344-000	27.14
Total 76983:									1,536.88

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	76984	1264	BARNES INC	CURBSIDE CHIPPING - ZONE 1 & 2	135957	1	610-53620-214-000	5,625.00
05/20	05/22/2020	76984	1264	BARNES INC	CURBSIDE CHIPPING - ZONE 1 & 2	135957	2	605-53440-214-000	5,625.00
05/20	05/22/2020	76984	1264	BARNES INC	DROPOFF SITE - INSTALLMENT 1 OF 3	135957	3	610-53620-214-000	10,500.00
05/20	05/22/2020	76984	1264	BARNES INC	DROPOFF SITE - INSTALLMENT 1 OF 3	135957	4	605-53440-214-000	10,500.00
05/20	05/22/2020	76984	1264	BARNES INC	CURBSIDE YARDWASTE PICK-UP (COVID19)	135957	5	610-53620-214-000	12,187.50
05/20	05/22/2020	76984	1264	BARNES INC	CURBSIDE YARDWASTE PICK-UP (COVID19)	135957	6	605-53440-214-000	12,187.50
Total 76984:									56,625.00
05/20	05/22/2020	76985	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83613953	1	100-52200-340-000	20.70
05/20	05/22/2020	76985	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83617235	1	100-52200-340-000	5.82
05/20	05/22/2020	76985	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83617236	1	100-52200-340-000	46.54
05/20	05/22/2020	76985	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83621839	1	100-52200-340-000	35.75
05/20	05/22/2020	76985	1256	BOUND TREE MEDICAL, LLC	EMS - SUPPLIES	83623939	1	100-52200-340-000	189.60
Total 76985:									298.41
05/20	05/22/2020	76986	2274	CAPITAL AREA REGIONAL PLAN	EAST SIDE USA AMENDMENT	517	1	600-53610-210-000	3,500.00
Total 76986:									3,500.00
05/20	05/22/2020	76987	138	CAPITAL CITY TREE EXPERTS I	TREE REMOVAL	9784	1	100-55200-210-000	1,320.00
Total 76987:									1,320.00
05/20	05/22/2020	76988	172	CITY OF MADISON TREASURE	SIGNS	29140	1	100-53000-340-000	505.02
05/20	05/22/2020	76988	172	CITY OF MADISON TREASURE	LERMS ANNUAL FEE	29193	1	100-52100-210-000	8,372.38
Total 76988:									8,877.40
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	18-82667	1	100-46230-000	156.59
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	19-117152	1	100-46230-000	375.30
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	19-59826	1	100-46230-000	375.30
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	19-69733	1	100-46230-000	375.30
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	19-87757	1	100-46230-000	375.30
05/20	05/22/2020	76989	15033	CITY OF MONONA AMBULANCE	MONONA INTERCEPT	19-99783	1	100-46230-000	375.30
Total 76989:									2,033.09

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	76990	194	CONCENTRA	PRE-EMPLOYMENT SCREENING	103176972	1	100-53000-211-000	186.00
Total 76990:									186.00
05/20	05/22/2020	76991	1989	CORPORATE BUSINESS SYSTE	COPIER LEASE	27037068	1	205-55110-240-000	142.30
Total 76991:									142.30
05/20	05/22/2020	76992	281	DIGGERS HOTLINE INC	LOCATES WATER	200 4 37601	1	600-53610-210-000	543.75
05/20	05/22/2020	76992	281	DIGGERS HOTLINE INC	LOCATES SEWER	200 4 37601	2	600-53710-210-000	543.75
Total 76992:									1,087.50
05/20	05/22/2020	76993	287	DIXON ENGINEERING INC	US CELLULAR ESCROW	20-6605	1	100-2640	2,750.00
Total 76993:									2,750.00
05/20	05/22/2020	76994	303	DWD-UI	UNEMPLOYMENT	0000100653	1	100-52200-121-000	82.35
Total 76994:									82.35
05/20	05/22/2020	76995	16517	EUROFINS EATON ANALYTICAL	WATER TESTING	S363679	1	600-53715-210-000	550.00
05/20	05/22/2020	76995	16517	EUROFINS EATON ANALYTICAL	WATER TESTING	S363683	1	600-53715-210-000	550.00
05/20	05/22/2020	76995	16517	EUROFINS EATON ANALYTICAL	WATER TESTING	S363684	1	600-53715-210-000	550.00
Total 76995:									1,650.00
05/20	05/22/2020	76996	17092	GENERAL ENGINEERING COMP	BUILDING INSPECTION SERVICES	15	1	100-52400-211-000	8,745.52
Total 76996:									8,745.52
05/20	05/22/2020	76997	1323	HARKER HEATING & COOLING	MUNICIPAL CENTER AC REPLACEMENT	1009988	1	400-57140-825-102	59,799.00
Total 76997:									59,799.00
05/20	05/22/2020	76998	17339	HOMESTEAD HOUSING	REFUND DUP PAYMENT ON FINAL BILL	051220	1	001-1115	47.51
05/20	05/22/2020	76998	17339	HOMESTEAD HOUSING	REFUND ON DUP PAYMENT ON FINAL BILL	051220-2	1	001-1115	42.38

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 76998:									89.89
05/20	05/22/2020	76999	1175	HORTON GROUP INC THE	A&S INSURANCE COVERAGE	64221	1	100-52200-510-000	3,609.00
Total 76999:									3,609.00
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	COURT	20275	1	100-51200-210-000	82.21
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	GEN ADMIN	20275	2	100-51450-210-000	328.86
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	POLICE	20275	3	100-52100-210-000	845.47
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	FIRE/EMS	20275	4	100-52200-240-000	360.38
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	OUTREACH	20275	5	100-54600-210-000	109.71
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	COMM DEV	20275	6	100-52400-210-000	82.21
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	PUBLIC WORKS	20275	7	100-53000-210-000	112.10
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	WATER	20275	8	600-53710-210-000	44.79
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	SEWER	20275	9	600-53610-210-000	44.79
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	STORMWATER	20275	10	605-53440-310-000	44.68
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	EM MGT	20275	11	100-52500-221-000	27.40
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	FAMILY FESTIVAL	20275	12	100-51450-210-000	27.40
05/20	05/22/2020	77000	16783	INFORMATION TECHNOLOGY P	SERVER AND BACK UP	20275	13	400-57140-813-101	4,532.60
Total 77000:									6,642.60
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR - STORM WATER	370428	1	605-53440-210-000	1,435.00
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR	370428	2	100-53000-230-000	3,556.00
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR - PARKS	370428	3	100-55200-210-000	1,352.00
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR - WATER UTILITY	370428	4	600-53718-822-102	1,748.00
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR - STORM WATER	370429	1	605-53440-210-000	1,995.00
05/20	05/22/2020	77001	16309	JB JOHNSON BROS. LLC	STREET REPAIR	370429	2	100-53000-230-000	6,558.00
Total 77001:									16,644.00
05/20	05/22/2020	77002	476	JEFFERSON FIRE & SAFETY IN	TOOL KIT	IN117773	1	100-52200-340-000	135.00
05/20	05/22/2020	77002	476	JEFFERSON FIRE & SAFETY IN	SENSIT COMBO GAS	IN117972	1	100-52200-240-000	303.23
Total 77002:									438.23
05/20	05/22/2020	77003	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8111283	1	605-53440-241-000	1,676.52
05/20	05/22/2020	77003	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8111283	2	600-53616-241-000	1,676.51

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	77003	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8111283	3	600-53718-241-000	1,676.51
05/20	05/22/2020	77003	2121	LAKESIDE INTERNATIONAL LLC	VEHICLE MAINTENANCE	8111283	4	100-53000-241-000	6,147.21
Total 77003:									11,176.75
05/20	05/22/2020	77004	538	LAWSON PRODUCTS INC	SHOP SUPPLIES	9307566492	1	605-53440-340-000	39.73
05/20	05/22/2020	77004	538	LAWSON PRODUCTS INC	SHOP SUPPLIES	9307566492	2	600-53616-340-000	39.73
05/20	05/22/2020	77004	538	LAWSON PRODUCTS INC	SHOP SUPPLIES	9307566492	3	600-53716-340-000	39.73
05/20	05/22/2020	77004	538	LAWSON PRODUCTS INC	SHOP SUPPLIES	9307566492	4	100-53000-340-000	145.69
Total 77004:									264.88
05/20	05/22/2020	77005	540	LEAGUE WI MUNICIPALITIES	MS4 LEAF PROJECT	81588	1	605-53440-210-000	2,000.00
Total 77005:									2,000.00
05/20	05/22/2020	77006	765	LEGAL SHIELD	LEGAL COVERAGE	0108629-MA	1	100-2156	373.85
Total 77006:									373.85
05/20	05/22/2020	77007	17338	MCGRATH, CHRISTOPHER	REFUND OF DUP PAYMENT ON FINAL BILL	051320	1	001-1115	98.25
Total 77007:									98.25
05/20	05/22/2020	77008	640	MGE	STREET LIGHT	11299443-05	1	100-53000-291-000	731.29
Total 77008:									731.29
05/20	05/22/2020	77009	2058	MICROMARKETING LLC	AUDIO BOOK DISK REPLACEMENT	805760	1	205-55110-345-000	16.00
Total 77009:									16.00
05/20	05/22/2020	77010	2089	MIDWEST METER INC	WATER METERS	0121291-IN	1	600-1824	23,151.55
05/20	05/22/2020	77010	2089	MIDWEST METER INC	WATER METERS	0121305-IN	1	600-1824	2,621.10
05/20	05/22/2020	77010	2089	MIDWEST METER INC	WATER METERS	0121461-IN	1	600-1824	336.85
Total 77010:									26,109.50
05/20	05/22/2020	77011	1941	MIDWEST TRAILER SALES	VEHICLE MAINTENANCE	1103839-00	1	100-52200-241-000	25.92

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77011:									25.92
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715551	1	605-53440-241-000	4.86
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715551	2	600-53616-241-000	4.86
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715551	3	600-53718-241-000	4.86
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715551	4	100-53000-241-000	17.80
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	CORE CREDIT FOR INV 714929	715562	1	100-52100-241-000	10.00-
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715639	1	605-53440-241-000	2.01
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715639	2	600-53616-241-000	2.01
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715639	3	600-53718-241-000	2.01
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	MOWER PARTS	715639	4	100-53000-241-000	7.37
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	VEHICLE PARTS	715649	1	100-53000-241-000	60.62-
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	VEHICLE PARTS	715649	2	600-53718-241-000	16.53-
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	VEHICLE PARTS	715649	3	600-53616-241-000	16.53-
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	VEHICLE PARTS	715649	4	605-53440-241-000	16.53-
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	BATTERY	717303	1	100-52200-241-000	130.91
05/20	05/22/2020	77012	1896	NAPA AUTO PARTS	FILTERS	719172	1	100-52200-241-000	10.65
Total 77012:									67.13
05/20	05/22/2020	77013	16547	PELLION BENEFITS	RETIREMENT VEBA PAYOUT	05082020	1	700-51430-210-000	10,897.95
Total 77013:									10,897.95
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	PW PEST CONTROL	462357	1	100-53000-340-000	21.45
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	PW PEST CONTROL	462357	2	600-53710-210-000	5.85
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	PW PEST CONTROL	462357	3	600-53610-210-000	5.85
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	PW PEST CONTROL	462357	4	605-53440-210-000	5.85
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	462358	1	100-51600-340-000	25.30
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	462358	2	600-53710-210-000	6.90
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	462358	3	600-53610-210-000	6.90
05/20	05/22/2020	77014	1245	PROFESSIONAL PEST CONTRO	MC PEST CONTROL	462358	4	605-53440-210-000	6.90
Total 77014:									85.00
05/20	05/22/2020	77015	775	PUBLIC SERVICE COMM OF WI	PSC PAYMENT	2004-I-03490	1	600-53710-210-000	123.23

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77015:									123.23
05/20	05/22/2020	77016	797	REINDERS INC	PARK TURF NUTRIENTS	2276518-00	1	100-55200-340-000	186.75
Total 77016:									186.75
05/20	05/22/2020	77017	800	RELIANT FIRE APPARATUS INC	FD VEHICLE MAINT	CI001733	1	100-52200-241-000	419.08
Total 77017:									419.08
05/20	05/22/2020	77018	9137	RICOH USA INC	RICOH COPIER EXTRA	5059480216	1	100-52100-240-000	22.23
Total 77018:									22.23
05/20	05/22/2020	77019	818	ROTO ROOTER SEWER SERVI	STORM SEWER CAMERA	196553	1	605-53440-242-000	400.00
Total 77019:									400.00
05/20	05/22/2020	77020	836	SCHILLING SUPPLY COMPANY	GLOVES	773838-00	1	205-55110-310-000	252.52
Total 77020:									252.52
05/20	05/22/2020	77021	2042	THOMSON REUTERS	WEST INFORMATION CHARGES	842275517	1	100-52100-210-000	177.10
Total 77021:									177.10
05/20	05/22/2020	77022	957	TOM'S AUTO CENTER INC	M5 MAINTENANCE	0046797	1	100-52100-241-000	115.31
Total 77022:									115.31
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	VERIDIAN/JUNIPER RIDGE - MC140	21568	1	100-2640	511.25
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2019 LOWER YAHARA TRAIL EXTENSTION -	21569	1	400-57310-824-000	1,304.05
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2019 STREET/WATERMAIN IMP - MC148	21570	1	400-57310-821-000	1,532.70
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	4703 TERMINAL/EZRA PROP-MC152	21571	1	100-2640	1,905.25
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 STREET & UTILITY IMPROVEMENTS -	21572	1	400-57310-821-000	2,472.85
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	ELVEHJEM ROAD PATH IMP - MC160	21573	1	400-57310-824-000	952.50
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 SUMP PUMP DISCHARGE - MC167	21574	1	605-53440-823-000	893.75
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 GIS SUPPORT - MC170	21576	1	605-53440-210-000	151.75

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 GIS SUPPORT - MC170	21576	2	600-53710-210-000	151.75
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 GIS SUPPORT - MC170	21576	3	600-53610-210-000	151.75
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 GIS SUPPORT - MC170	21576	4	100-53000-210-000	151.75
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 GIS SUPPORT - MC170	21576	5	100-52400-210-000	151.75
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	VERIDIAN/UTTERBACK - MC171	21577	1	100-2640	471.25
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	2020 STORMWATER SUPPORT - MC172	21578	1	605-53440-211-000	312.50
05/20	05/22/2020	77023	958	TOWN & COUNTRY ENGINEER	PARK DEVEL-ORCHARD HILL-MC175	21580	1	400-57620-827-116	6,288.50
Total 77023:									17,403.35
05/20	05/22/2020	77024	17340	TOWN OF LISBON	ELECTION SUPPLIES	051820	1	100-51440-340-000	12.18
Total 77024:									12.18
05/20	05/22/2020	77025	1917	ULINE SHIPPING SUPPLY	STORAGE ROOM ORGANIZATION	119739456	1	200-55600-340-000	380.96
Total 77025:									380.96
05/20	05/22/2020	77026	1015	VILLAGE OF MCFARLAND	4313 TRIANGLE BUILDING COSTS	043020-TRIA	1	305-56700-242-000	189.31
Total 77026:									189.31
05/20	05/22/2020	77027	16181	WILS	DATABASE SUBSCRIPTIONS	492362	1	205-55110-342-000	593.32
Total 77027:									593.32
05/20	05/22/2020	77028	1910	ZURBUCHEN OIL INC	DYED DIESEL FUEL	243610	1	100-53000-341-000	424.16
Total 77028:									424.16
05/20	05/22/2020	77029	30	ALLIANT ENERGY/WP&L	2860 HIDDEN FARM - FLOOD LIGHT	051520	1	100-55200-220-000	27.61
05/20	05/22/2020	77029	30	ALLIANT ENERGY/WP&L	3234 CTY RD AB	051520	2	100-55200-220-000	16.12
Total 77029:									43.73
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	OUTLOOK	24777-0420	1	100-51100-210-000	1,389.50
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	OUTLOOK	24777-0420	2	600-53610-321-000	138.95
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	OUTLOOK	24777-0420	3	600-53710-321-000	138.95
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	OUTLOOK	24777-0420	4	605-53440-321-000	555.80

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	OUTLOOK	24777-0420	5	610-53620-321-000	555.80
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	AD FOR BIDS - PW FACILITY	28886-0420	1	100-51100-321-000	109.74
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	PLAN PUBLIC HEARING - UTTERBACK CSM	28886-0420	2	100-51100-321-000	34.63
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	PLAN PUBLIC HEARING - VERIDIAN PRELIM	28886-0420	3	100-51100-321-000	35.17
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	PLAN PUBLIC HEARING - FISHER/KAY CSM	28886-0420	4	100-51100-321-000	33.54
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	BOR NOTICE	28886-0420	5	100-51100-321-000	112.73
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	TYPE D NOTICE	28886-0420	6	100-51440-321-000	25.41
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	TYPE B NOTICE	28886-0420	7	100-51440-321-000	351.15
05/20	05/22/2020	77030	17232	APG OF SOUTHERN WISCONSI	TYPE E NOTICE - REVISED	28886-0420	8	100-51440-321-000	55.24
Total 77030:									3,536.61
05/20	05/22/2020	77031	408	GRAINGER INC	SAFETY GLASSES	9536941678	1	100-52200-343-000	62.50
Total 77031:									62.50
05/20	05/22/2020	77032	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1212654	1	605-53440-340-000	8.99
05/20	05/22/2020	77032	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1212654	2	600-53616-340-000	8.99
05/20	05/22/2020	77032	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1212654	3	600-53716-340-000	8.99
05/20	05/22/2020	77032	1904	HUMPHREY SERVICE PARTS IN	SHOP SUPPLIES	1212654	4	100-53000-340-000	32.98
Total 77032:									59.95
05/20	05/22/2020	77033	452	HYDRITE CHEMICAL	WATER CHEMICALS	02363259	1	600-53717-340-000	253.50
Total 77033:									253.50
05/20	05/22/2020	77034	2082	NASSCO INC	PARK SUPPLIES	S2595555.00	1	100-55200-340-000	70.26
05/20	05/22/2020	77034	2082	NASSCO INC	PARK SUPPLIES	S2595555.00	1	100-55200-340-000	23.42
05/20	05/22/2020	77034	2082	NASSCO INC	CLEANING SUPPLIES	S2617043.00	1	100-51600-242-000	121.14
Total 77034:									214.82
05/20	05/22/2020	77035	17342	PALMERSHEIM DETTMANN, S.C	REBRANDING - TRADEMARK	050120	1	400-57700-211-000	2,537.50
Total 77035:									2,537.50
05/20	05/22/2020	77036	802	RENNERT'S FIRE EQUIP SRV IN	E1 REPAIRS	42162	1	100-52200-241-000	1,919.05

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GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Description	Invoice Number	Invoice Sequence	Invoice GL Account	Check Amount
Total 77036:									1,919.05
05/20	05/22/2020	77037	17318	TDS	ADMIN INTERNET/PHONE	052220	1	100-51420-221-000	101.20-
05/20	05/22/2020	77037	17318	TDS	COMMTECH INTERNET/PHONE	052220	2	200-55600-221-000	63.90
05/20	05/22/2020	77037	17318	TDS	FIRE/EMS TV/INTERNET/PHONE	052220	3	100-52200-221-000	277.05
05/20	05/22/2020	77037	17318	TDS	PD TV/INTERNET/PHONE	052220	4	100-52100-221-000	129.74
05/20	05/22/2020	77037	17318	TDS	PW INTERNET/PHONE	052220	5	100-53000-221-000	48.29
05/20	05/22/2020	77037	17318	TDS	OUTREACH INTERNET/PHONE	052220	6	100-54600-221-000	48.29
05/20	05/22/2020	77037	17318	TDS	COMMDEV INTERNET/PHONE	052220	7	100-52400-221-000	48.29
05/20	05/22/2020	77037	17318	TDS	WATER INTERNET/PHONE	052220	8	600-53710-221-000	109.81
05/20	05/22/2020	77037	17318	TDS	SEWER INTERNET/PHONE	052220	9	600-53610-221-000	109.81
05/20	05/22/2020	77037	17318	TDS	STORMWATER INTERNET/PHONE	052220	10	605-53440-221-000	65.07
05/20	05/22/2020	77037	17318	TDS	LIBRARY INTERNET/PHONE	052220	11	205-55110-221-000	48.29
Total 77037:									847.34
05/20	05/22/2020	77038	1709	VON BRIESEN & ROPER S.C.	PERSONNEL ISSUES	321890	1	100-51300-210-103	228.00
05/20	05/22/2020	77038	1709	VON BRIESEN & ROPER S.C.	PERSONNEL ISSUES	321891	1	100-51300-210-103	427.50
Total 77038:									655.50
Grand Totals:									270,875.34

Summary by General Ledger Account Number

GL Account	Debit	Credit	Proof
001-1115	188.14	.00	188.14
001-2120	.00	188.14-	188.14-
100-1622	2,000.00	.00	2,000.00
100-2120	325.82	67,008.11-	66,682.29-
100-2156	373.85	.00	373.85
100-2640	5,637.75	.00	5,637.75
100-46230-000	4,459.25	.00	4,459.25
100-51100-210-000	1,389.50	.00	1,389.50
100-51100-321-000	325.81	.00	325.81

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GL Account	Debit	Credit	Proof
100-51200-210-000	82.21	.00	82.21
100-51300-210-103	655.50	.00	655.50
100-51420-221-000	.00	101.20-	101.20-
100-51420-311-000	115.73	.00	115.73
100-51440-120-000	.00	154.00-	154.00-
100-51440-321-000	431.80	.00	431.80
100-51440-340-000	12.18	.00	12.18
100-51450-210-000	356.26	.00	356.26
100-51600-220-000	2,423.18	.00	2,423.18
100-51600-242-000	121.14	.00	121.14
100-51600-340-000	25.30	.00	25.30
100-52100-210-000	9,394.95	.00	9,394.95
100-52100-221-000	129.74	.00	129.74
100-52100-240-000	22.23	.00	22.23
100-52100-241-000	115.31	10.00-	105.31
100-52200-121-000	82.35	.00	82.35
100-52200-221-000	277.05	.00	277.05
100-52200-240-000	663.61	.00	663.61
100-52200-241-000	2,505.61	.00	2,505.61
100-52200-340-000	446.36	.00	446.36
100-52200-343-000	62.50	.00	62.50
100-52200-510-000	3,609.00	.00	3,609.00
100-52400-210-000	233.96	.00	233.96
100-52400-211-000	8,745.52	.00	8,745.52
100-52400-221-000	48.29	.00	48.29
100-52500-221-000	27.40	.00	27.40
100-53000-210-000	263.85	.00	263.85
100-53000-211-000	186.00	.00	186.00
100-53000-221-000	48.29	.00	48.29
100-53000-230-000	10,114.00	.00	10,114.00
100-53000-241-000	6,172.38	60.62-	6,111.76
100-53000-291-000	731.29	.00	731.29
100-53000-310-000	32.95	.00	32.95
100-53000-340-000	721.63	.00	721.63
100-53000-341-000	424.16	.00	424.16
100-54600-210-000	109.71	.00	109.71
100-54600-221-000	48.29	.00	48.29
100-55200-210-000	2,672.00	.00	2,672.00
100-55200-220-000	99.79	.00	99.79
100-55200-340-000	610.43	.00	610.43

M = Manual Check, V = Void Check

GL Account	Debit	Credit	Proof
200-2120	.00	741.73-	741.73-
200-55600-221-000	63.90	.00	63.90
200-55600-340-000	592.13	.00	592.13
200-55600-342-000	85.70	.00	85.70
205-2120	.00	5,419.02-	5,419.02-
205-55110-220-000	1,531.62	.00	1,531.62
205-55110-221-000	48.29	.00	48.29
205-55110-240-000	142.30	.00	142.30
205-55110-242-000	1,028.97	.00	1,028.97
205-55110-310-000	384.40	.00	384.40
205-55110-342-000	593.32	.00	593.32
205-55110-344-000	1,536.88	.00	1,536.88
205-55110-345-000	153.24	.00	153.24
305-2120	.00	189.31-	189.31-
305-56700-242-000	189.31	.00	189.31
400-2120	.00	79,419.70-	79,419.70-
400-57140-813-101	4,532.60	.00	4,532.60
400-57140-825-102	59,799.00	.00	59,799.00
400-57310-821-000	4,005.55	.00	4,005.55
400-57310-824-000	2,256.55	.00	2,256.55
400-57620-827-116	6,288.50	.00	6,288.50
400-57700-211-000	2,537.50	.00	2,537.50
600-1824	26,109.50	.00	26,109.50
600-2120	33.06	40,540.64-	40,507.58-
600-53610-210-000	4,253.04	.00	4,253.04
600-53610-221-000	109.81	.00	109.81
600-53610-310-000	40.11	.00	40.11
600-53610-321-000	138.95	.00	138.95
600-53610-340-000	4.49	.00	4.49
600-53616-241-000	1,683.38	16.53-	1,666.85
600-53616-340-000	48.72	.00	48.72
600-53710-210-000	876.27	.00	876.27
600-53710-221-000	109.81	.00	109.81
600-53710-310-000	40.11	.00	40.11
600-53710-321-000	138.95	.00	138.95
600-53710-340-000	4.50	.00	4.50
600-53715-210-000	1,650.00	.00	1,650.00
600-53716-220-000	1,599.40	.00	1,599.40
600-53716-340-000	48.72	.00	48.72
600-53717-340-000	253.50	.00	253.50

M = Manual Check, V = Void Check

GL Account	Debit	Credit	Proof
600-53718-241-000	1,683.38	16.53-	1,666.85
600-53718-822-102	1,748.00	.00	1,748.00
605-2120	16.53	37,977.85-	37,961.32-
605-53440-210-000	5,594.50	.00	5,594.50
605-53440-211-000	312.50	.00	312.50
605-53440-214-000	28,312.50	.00	28,312.50
605-53440-221-000	65.07	.00	65.07
605-53440-241-000	1,683.39	16.53-	1,666.86
605-53440-242-000	400.00	.00	400.00
605-53440-310-000	84.78	.00	84.78
605-53440-321-000	555.80	.00	555.80
605-53440-340-000	53.22	.00	53.22
605-53440-530-000	22.34	.00	22.34
605-53440-823-000	893.75	.00	893.75
610-2120	.00	28,868.30-	28,868.30-
610-53620-214-000	28,312.50	.00	28,312.50
610-53620-321-000	555.80	.00	555.80
700-2120	.00	10,897.95-	10,897.95-
700-51430-210-000	10,897.95	.00	10,897.95
Grand Totals:	<u>271,626.16</u>	<u>271,626.16-</u>	<u>.00</u>

Report Criteria:

Report type: GL detail

From: Gina Kolpek <gkolpek@yahoo.com>
Sent: Monday, May 11, 2020 7:27 PM
To: Admin <Village.Administration@mcfarland.wi.us>
Subject: Finance Committee

To Whomever it May Concern,

I read the article in Spring/Summer "The Outlook", that you may need a committee member for the Finance Committee. I am looking for a volunteer position to help our community. We moved to McFarland from Verona in October of 2018 and absolutely love it here. If I can help please contact me at the below contact information.

I am a UW Madison graduate of the Business School with an Accounting Degree and a CPA. I started my career at Arthur Andersen in Milwaukee and have worked for Dean Medical Group for 28 years. I love my profession and if you think my skills would be helpful or would like to discuss my background more please contact me.

Gina Kolpek
gkolpek@yahoo.com
5271 Lodgecliffe Lane
608-279-7885

Rachel Fisher-Kay
5121 Glen Road
McFarland, WI 53558
608-556-9424

RE: Senior Out- Reach Services Committee OR Volunteer Committee

I have lived in McFarland for about 5 years now and have wanted to get involved in the Community, I have 3 boys, high school, middle school and soon to be 4K and want to show them how important it is to get involved. I am a returning adult online college student at Arizona State University completing my degree in Sociology and I work for Dane County Human Services in the Payee Unit.

I have over 10 years' experience working with individuals in our community and can bring a variety of skills to the folks in McFarland; some examples of skills include creativity, problem- solving, team building, hardworking, caring and honesty.

I hope this letter of interest finds everyone well and look forward to hearing back.

Thank you for your time,

Rachel Fisher-Kay

JACK S. BERNFELD

5007 Falling Leaves Ln., McFarland, WI 53558

Phone: 608.513.4612

E-mail: jsbernfeld@gmail.com

PROFESSIONAL EXPERIENCE

Leadership:

- Developed and assisted in formulating and implementing organization-wide strategic plans and goals
- Hired, supervised, directed, managed and evaluated professional and support staff
- Developed and assisted in preparation and implementation of annual budgets
- Investigated and resolved conflicts between the staff and members or the elected leadership
- Served as spokesperson in a variety public, media and legislative venues

Collective Bargaining:

- Served as the union advocate, researcher, coordinator and advisor to locals and staff for all phases of traditional and consensus based negotiations and policy development
- Prepared exhibits, presented and made written arguments in interest arbitration cases

Contract and Rights Protection

- Served as the union advocate and advisor to locals and staff for all grievance phases
- Prepared, researched, advocated and made written arguments in grievance arbitration cases
- Initiated, prepared, advocated, made written arguments and served as advisor to locals and staff for various types of litigation before the Wisconsin state agencies and the NLRB (e.g. unit clarifications, declaratory rulings, prohibited practices, Unemployment Compensation hearings)

Training:

- Developed programs, trained, mentored and advised professional staff, local affiliates and members in collective bargaining, contract enforcement, organizing, mobilizing and political action
- Developed and implemented professional staff and local union leadership training and member professional development
- Developed and instructed undergraduate level course relating to public sector labor relations

Organizing:

- Developed and implemented organizing strategies and goals and the necessary data collection systems to attract new members and represent new bargaining units in the public and private sectors.
- Developed and implemented plans to mobilize members regarding a variety of issues

Political Action:

- Developed and participated in a variety of political activities and campaigns
- Built effective relationships with elected officials, administrators and community activists to facilitate advocacy on issues of importance to union members and locals

EMPLOYMENT HISTORY

WEAC Region 6: A union representing approximately 5,000 Teachers and Education Support Staff employed in school districts located throughout South Central Wisconsin. 2014-2017

- **Director:** An advocacy and organizing position for affiliated locals and members. Working with

colleagues and governance to create and implement a program for a sustainable future including refocussing work toward organizing, member empowerment and professional development.

Racine Education UniServ Council: A local option UniServ in a culturally diverse urban setting with 2 affiliated locals representing more than 2,000 Teachers and Education Support Staff employed by the Racine Unified School District. 2011-2014

- **Executive Director:** An advocacy, managerial and supervisory position. Advisor to governance in the development and implementation of goals, policies and budgets for the 2 locals and UniServ. Developed and managed programs and processes, and responsible for overall operation including hiring, staff assignment and organizational management. Responsible for all aspects of representation.

Wisconsin Council 40, AFSCME, AFL-CIO: This Union represented more than 30,000 members, primarily public employees, in approximately 450 local unions in Wisconsin. 1977-2011

- **Associate Director:** A managerial/supervisory position responsible for the oversight of field services operations and the day to day supervision of twenty-seven (27) professional staff and responsible for directing and supervising support staff. Assisted in overall Council operations. 2007-2011
- **Assistant Director:** Interim position during the extended absence of the Associate Director. A managerial and administrative position responsible for assisting the Executive Director in the oversight of the professional staff and for accomplishing the mission of Council 40. This position was held in conjunction with my position as Staff Representative. 2004-2006
- **Staff Representative:** Responsible for specific affiliated bargaining units, including the largest and most complex; served as the statewide troubleshooter for all affiliated local unions and as primary resource person for professional staff. Responsible for all aspects of union organizing, negotiations and advocacy. 1977-2007

University of Wisconsin - Madison, Industrial Relations Research Institute

- **Associate Lecturer,** Industrial Relations-539 - Public Sector Collective Bargaining. Fall Semester 2003

OTHER RELEVANT EXPERIENCE

- Guest speaker and lecturer in variety of forums regarding labor unions, collective bargaining and topical issues before the Wisconsin Employment Relations Commission, School for Workers, University of Wisconsin-Madison, University of Wisconsin Law School and other venues
- Volunteer Mediator. Trained and appointed by the Department of Agriculture, Trade and Consumer Protection to mediate farm disputes

EDUCATION

- **Master of Science Degree, Industrial Relations.** Industrial Relations Research Institute, University of Wisconsin-Madison
- **Honors Bachelor of Arts Degree, Sociology.** State University of New York at Stony Brook
- **Harvard Kennedy School - Senior Executives in State and Local Government program**



Department of Agriculture, Trade and Consumer Protection

**Wisconsin Administrative Code Chapter ATCP 93
Local Program Operator Contract
Between
Wisconsin Department of Agriculture, Trade, and Consumer Protection
And
(Insert LPO Name here)**

THIS CONTRACT is made and entered into by and between the Wisconsin Department of Agriculture, Trade and Consumer Protection, hereinafter "the Department," and (Insert LPO Name here), hereinafter "the Contractor."

WHEREAS, the Department deems it advisable to engage the professional services of the Contractor to carry out Departmental responsibility pursuant to Wis. Stat. s. 168.25 and Wis. Admin. Code s. ATCP 93.110 as an agent of the Department and, it appears that such services can be performed more economically and efficiently under a Contract, to accomplish the requirements of the Department;

WHEREAS, the Contractor has advised the Department of its willingness and professional capability to provide professional service to the Department;

NOW, THEREFORE, in consideration of their mutual and dependent promises, the parties hereto, agree as set forth in the following pages 3 through 9.

This Contract is effective on the date signed by the Interim Secretary of the Department.

AUTHORITY TO SIGN DOCUMENT. If this Contract is being entered into by a legal entity, such as a corporation, limited liability company, or municipality, the person(s) signing this Contract for the Contractor certify and attest that the Contractor's respective Articles of Incorporation, Articles of Organization, Charter, Corporate By Laws, Corporate or other Resolutions and/or other related documents give full and complete authority to bind the Contractor, on whose behalf they are executing this document.

By: _____

Print Name & Title of Individual with Authority to
Contract on Behalf of Legal Entity

Date: _____

**Wisconsin Department of Agriculture, Trade
and Consumer Protection**

By: _____
Randy Romanski, Interim Secretary

Date: _____

Address for LPO Payments Under Contract

Name: _____

Street: _____

City/ZIP: _____

Tax ID Number: (FEIN#) _____

I. GENERAL

- A. Services Standards. The Contractor will provide the services hereinafter set forth in accordance with the best professional standards. During the term of this Contract the Contractor (including individual officers, directors or employees) shall not engage in any business regulated by the Wis. Admin. Code ch. ATPC 93 including, but not limited to: installation, closure, tightness testing, cathodic protection testing, or repair of Underground Storage Tank (UST) or Above Ground Storage Tank (AST) systems.
- B. Subletting or Assignment of Contract. The Contractor may not sublet, sub-contract or assign to others any part of the work under this Contract. The Department may authorize in writing a temporary sub-contract or assignment at the request of the Contractor.
- C. Employment. The Contractor may assign duties to be performed under this Contract to any employees employed by the Contractor, provided the employee is certified by the Department and has experience and knowledge of the subject and capability to adequately perform the services required under this Contract.
- D. Term of the Contract. The contract period will be from July 1, 2020 through June 30, 2022.

NOTE: Performance of Service – although the contract may be awarded after the beginning of the state fiscal year (FY), the Contractor is obligated and agrees to conduct all assigned UST and AST inspections required within the fiscal year period.

H. Legal Relations.

- (1) The Contractor will at all times comply with and observe all federal and state laws, local laws, ordinances, and regulations which are in effect during the period of this Contract and which in any manner affect the work or its conduct.
- (2) The Department will be responsible for the enforcement of compliance orders beyond the administrative stage. The Contractor shall conduct inspections, issue correction notices and compliance orders, affix red tags, and take any other appropriate administrative steps to obtain compliance within time frames acceptable to the Department. When compliance has not occurred at the conclusion of these administrative steps, the Contractor shall immediately notify the Department and furnish any documents requested by the Department to enable it to pursue enforcement. The Contractor agrees to make its employees and records available to the Department, a district attorney or the Attorney General's Office in connection with any actions to enforce a Department order.
- (3) The Contractor shall immediately notify the Department of any claim or lawsuit filed against the Contractor that relates to its activities under this Contract. In performing this Contract, the Contractor shall be regarded as an authorized agent of the Department under Wis. Admin. Code s. ATPC 93.050(10). The Contractor is not an employee of the Department and no employee – employer relationship exists in any form whatsoever.
- (4) If the Contractor is not a unit of government, a fire department organized under Ch. 181, Stats., or a fire department organized under Ch. 213, Stats., the Contractor must obtain errors and omissions insurance for the term of this Contract, in the amount of

at least \$250,000, and furnish a certificate of insurance to the Department within thirty (30) days of the effective date of this contract.

- I. Contract Administration. Liaison with the Department will be through the Chief of the Storage Tank Regulation Section or their authorized designee.
- J. Liaison. The Contractor will supply the name of at least one person to act as liaison to the Department. This person(s) shall have sole authority for the Contractor in regards to the program. All correspondence and coordination will be done through the liaison(s).
- K. Termination of Contract. The Department may terminate this Contract at any time at its sole discretion with or without cause by delivering written notice to the Contractor. The Contract will be terminated 30 days after written notice of intent to terminate the Contract is sent to the Contractor.

The Contractor may terminate this Contract at any time at its sole discretion with or without cause by delivering written notice to the Department. The Contract will be terminated no later than 30 days after written notice of intent to terminate is sent to the Department.

- L. Department's Rights if Contractor Fails to Perform. If the Department determines that the Contractor is not meeting performance obligations, or has used funds for purposes other than the activities specifically authorized in the Contract, the Contractor shall repay any unearned or misused funds, as determined by the Department, to the Department within thirty (30) calendar days after notice of such determination, and request for repayment, together with related administrative costs, interest at the annual rate of current prime, court costs and attorneys' fees required by the Department to retrieve said funds.

This Contract is subject to the availability of funds to the Department and may be terminated upon written notice that funds are not available. Termination will occur 30 days after notification is sent. Termination will require written notice to be sent to the Contractor by the Department.

If the Contractor fails to perform any of its obligations hereunder, the Department may intervene and protect its rights and interests. Upon the Department's request, the Contractor shall execute and deliver an assignment and any other legal documents that may be required by the Department to facilitate its pursuit or intervention in such negotiations or litigation.

The Contractor may terminate the Contract by refusal to accept proposed modifications to the Contract (see paragraph R) or an election not to continue to perform the services, with 30 days written notice. The Contractor must deliver all records to the Department within 60 days of notification or termination.

- M. Liability upon Termination. Upon the termination of this Contract, the Department's liability to the Contractor shall be limited to the total of: (1) payments due for inspections on DATCP assigned tanks; and (2) payments due for installation and closure inspections performed for tank systems; (3) less any unearned or misused funds or consequential damages caused by the Contractor's errors or omissions for which the Department is or may become liable.
- N. Proprietorship. The materials and information developed under this Contract shall be the property of the Department. All information, files, records and documents in the possession of the Contractor necessary to carryout obligations of this Contract (included but not limited to: inspection checklists, plan review applications and approval letters, non-compliance

orders, etc.) are the property of the Department. Upon termination of the contract by either party, all property of the Department shall be returned within 60 days.

- O. Examination of Records. The Contractor agrees that the Department of Agriculture, Trade, and Consumer Protection will have access to and the right to examine, audit, excerpt and transcribe any directly pertinent books, documents, papers and records of the Contractor, involving transactions relating to this Contract. Such material will be retained for three years by the Contractor following completion of the Contract.
- P. Continuance of Contract. Continuance of this Contract beyond the limits of funds available shall be contingent upon appropriation of the necessary funds, and the termination of the Contract for lack of appropriations shall be without penalty.
- Q. Confidentiality. To the extent permitted by law, the Contractor warrants that it will retain all information belonging to the Department in strictest confidence and will neither use it nor disclose it to anyone without the express written consent of the Department. The Contractor also agrees to hold the Department harmless for the Contractor's disclosure of confidential information.
- R. Contract Modifications. This Contract may be modified in whole or in part by the Department at any time upon not less than 15 working days written notice to the Contractor. In the event of such modification by the Department, the Contractor must accept or reject the modifications during the thirty- (30) day following the date of the written notice. In the event of rejection of modifications, either party may exercise its rights to terminate the Contract.
- S. Inspection Contracts with Other Fire Districts. If a Contractor wishes to provide new LPO inspection services for another fire district municipality, a copy of an agreement signed by the chief elected municipal officer for that fire district as required by ATCP 93.110 shall be provided to the department.
- T. Standard Terms and Conditions. To the extent permitted by law, the Standard Terms and Conditions, are attached to and made part of this contract in Attachment 1. In the event of a conflict between any provision contained in Attachment 1 and any other provision of this contract, such other provision shall prevail of the conflicting provision in Attachment 1.

II. SCOPE OF SERVICE

- A. The Contractor will perform, as specified by the Department, the environmental protection and fire/property/human safety provisions of Wis. Admin. Code Ch. ATCP 93 Flammable, Combustible, and Hazardous Liquids. As its primary duties in implementing the environmental and fire safety provisions of Wis. Admin. Code Ch. ATCP 93 the contractor shall:
 - 1. Perform plan review and approval for tank systems under the scope of Wis. Admin. Code s. ATCP 93.100 for facilities with all regulated tanks of less than 5,000 gallons. Approve/disapprove the plans, which are submitted, based upon the criteria established in Wis. Admin. Code Ch. ATCP 93.
 - 2. Perform AST and UST installation inspections for tank systems whose plans have been reviewed at the Department or LPO level, submitting the proper documentation, and providing the Department retail program notification.

- a) Submit a copy of the completed pre-construction and installation checklist to the Department within 10 business days.
- b) Notify the respective Bureau of Weights and Measures Field Operations inspector, or the DATCP LPO Coordinator, when final inspection has been conducted on installation or upgrade at retail sites.

Note: UST systems have a minimum of three on-site inspection points: 1) Pre-installation scope and planning, 2) Tank and pipe pressure test, and 3) Pre-operational installation verification.

3. Perform the annual inspection of underground tanks for compliance with leak detection, release prevention, functional operation and maintenance established in Wis. Admin. Code Ch. ATCP 93 as directed by the Department for:
 - ♦ “In Use” and “Temporarily-Out-of-Service” federally regulated tank systems,
 - ♦ “In Use” heating oil USTs with capacity greater than 4,000 gallons,
 - ♦ designated regulated “In Use” aboveground tank systems for compliance with leak detection, release prevention, operation and maintenance established in ATCP 93 as directed by the Department for:
 - ♦ Non-residential/non-retail aboveground storage tanks used for vehicle fueling,
 - ♦ Agricultural, non-retail aboveground storage tanks used for vehicle fueling, with capacities of 5,000 gallons or more.
 - ♦ Non-vehicle fueling aboveground storage tanks of occupancy types: “utility, industrial, mercantile/commercial, government, school, agricultural, and other,
 - ♦ Contents include: Diesel, Leaded Gasoline, Unleaded Gasoline, Kerosene, Fuel Oil, Aviation Fuel, Gasohol, Premix, Unknown, Bio Diesel, E85, Empty, Waste/Used Motor Oil (in aboveground storage tanks with capacities of 5,000 gallons or more), Other, and Chemical (CERCLA List liquids in ASTs 5,000 gallon capacity and larger) registered tank systems.
4. Conduct site inspections when necessary to verify the status or existence of “Abandoned” tanks in the process to bring tank closure or to assist the Department in resolving database and permit related issues.
5. Provide technical advice and information to tank system owners and operators.
6. Conduct necessary program administration, including filing and reporting.
7. Conduct activities with local contractors and operators during hours that provide an efficient and effective program response.
8. Conduct UST and AST closure inspections of ATCP 93 regulated tank systems.

NOTE: For additional information regarding installation and closure inspections refer to Attachment 2, UST/AST Installation / Closure Inspection Requirements.

B. In carrying out the duties of the Contract, the Contractor shall:

1. Have a sufficient number of certified inspector(s) who have successfully completed the Department's required training and certification in order to carry out the assigned program duties under this Contract.
2. Perform installation and closure inspections in accordance with Attachment 2.
3. Maintain program records to document inspections and provide data to the Department's tank database.
 - a) Submit completed installation inspection checklists to the Department for record inspections and to trigger payment for installation inspections.

- b) Maintain inspection records and data on violations identified, orders written and orders satisfied via the state inspection software program.
 - c) Ensure that registration forms are submitted to the Department by the owner for new installations, closures or changes in ownership identified during inspections.
 - d) Provide program support for correction of database errors, information deficiencies, etc.
4. Provide accurate program and technical information to local residents, tank system owners and other interested parties. Represent the Department with professionalism and courtesy in all communications and actions.
 5. Have a combustible gas indicator for monitoring for flammable vapors during inspections and closures.
 6. Consult with Department staff on questions of program interpretation. Follow Department program direction and interpretation. Any disagreement regarding program interpretation shall be resolved by the Department, whose interpretation is final and conclusive.
 7. Provide the Department with performance information or statistics as deemed necessary by the Department.
 8. Provide the Department with monthly site inspection reports by the 5th of the following month at a minimum via the state inspection software program.

NOTE: Contractor is not required to perform annual or maintenance inspections of tank systems at facilities which are visited by staff of the Bureau of Weights and Measures Field Operations. These tank systems will be inspected as part of the petroleum inspection effort.

9. Issue initial orders and follow-up actions for tank system closures required by Wis. Admin. Code Ch. ATCP 93 unless it is mutually agreed that the order should be written by one of the Department's staff members. Maintain documentation of all inspections and orders, including re-inspections, to determine compliance with orders.
 10. Receive original contractor closure notices. Perform inspections at the closure of underground and aboveground tank systems or as directed by the Department or local municipal ordinance or policy.
 11. Issue enforcement orders and perform follow-up actions or investigations on violations of Wis. Admin. Code Ch. ATCP 93's groundwater protection and fire safety provisions, which are identified through: inspections, the plan review process, permit and registration processing, public inquiry or notice, etc. Maintain documentation of all inspections and orders, including, re-inspections to determine compliance with orders.
 12. Assure compliance with all applicable statutes and codes relating to workplace safety for Contractor's employees. The Department PROHIBITS CONFINED SPACE ENTRY WHEN PERFORMING ANY WORK UNDER THE REQUIREMENTS OF THIS CONTRACT.
- C. For the limited purposes of carrying out the inspection, enforcement and technical assistance functions in this section, the Contractor's authority shall be strictly limited to the duties described in this section, and the Contractor is not authorized to act as an agent of the Department for any other purposes. The Contractor is an independent contractor, and nothing in this Contract with the Department is intended to create an employment relationship

with the Department with either the Contractor or any of its employees. The Contractor is solely responsible for its actions and those of its employees in carrying out the functions specified under this Contract. The Department has sole authority to interpret the provisions of state and federal statutes and rules relating to petroleum storage tanks and may require the Contractor to rescind and/or re-issue any action, order, or technical advice that conflicts with the Department's interpretation.

III. TIME, COST AND ADMINISTRATION

- A. The Contractor may not charge fees for services provided under this Contract, except from the sources indicated.
- B. Total cost for the Contract shall not exceed the moneys provided through:
 - 1. Calculations for the respective state fiscal year payment based upon the dollar amounts specified in Section III, E. and the Department's tank database population on June 30th of the preceding year.
 - 2. The Contractor's share of installation inspection fees.
 - 3. Contractor's locally generated plan review fees.
 - 4. Any other funds generated at the local level through local permits, ordinance, etc.
 - 5. The Department will not be responsible for any payments in excess of the source amounts referred to in subsection A. Any request for an increase in payment in excess of the source amounts referred to in subsection A shall be made pursuant to Section I General, (S) Contract Modifications.
- C. Payments to the Contractor will be made monthly for installation and closure inspections reported to the Department and supported by a completed installation checklist. Payments to the Contractor for annual inspections will be made on approximately the 15th of the month following the month the inspection was submitted to the department.
- D. The Contractor is responsible for establishing and controlling expenditures within its budget to assure all services provided under the bid and subsequent contract are completed.
- E. The Department will pay the Contractor for the performance of services under this Contract as follows:

For State Fiscal Years 2021-2022

- 1. Annual Inspections of Underground Tank Systems. A Contractor with a voluntary services Contract shall be paid for its service area, corresponding to one or more fire jurisdictions, based upon annual recorded inspections and installation and closure inspection documentation submitted:
 - a) \$96 for each registered "federally regulated" UST system in use (Type 1),
 - b) \$65 for each registered "federally regulated" Temporarily-Out-of-Service UST (Type 2),
 - c) \$96 for each registered "heating fuel" UST greater than 4,000 gallons (Type 3),
- 2. Periodic Inspections of Aboveground Tank Systems. The amount the Contractor will be paid for each assigned "In use" aboveground tank system as identified in Section II. A. 3. of this Contract:
 - a) \$96 for each Vehicle fuel ASTs (Type 6)

- b) \$96 for each Non vehicle fuel ASTs (Type 7)
- 3. Installation. \$185 for the site UST Pre-installation scope and planning meeting. Plus the Contractor's share of ATCP 93 installation inspection fees. For installation inspections of plans reviewed at the state level, 100% of the ATCP 93 installation inspection fee charged.
- 4. Closure. \$96 for the site UST closure inspection. \$50 for UST piping closure inspection only. \$40 for the site AST closure inspection.
- 5. Performance Fee. In non-audit years, a fee equal to 7.5% of the annual inspection payment will be paid to the Contractor, at the end of the current fiscal year, if the Department determined that the Contractor had met all contract expectations, in regards to completion of assignments, for the current fiscal year. In fiscal years when an audit is conducted of the previous fiscal years' performance, the audit will be used to determine if the Contractor met all contract expectations for the year being audited. If the audit concludes that the Contractor did not meet all contract expectations for the fiscal year under review, and the performance fee was already paid for that fiscal year, all or a portion of the performance fee for the current fiscal year may be forfeited.
- F. In addition to the funding provided by the Department, the Contractor may have available the funds generated through the local plan review process and any permit fees established by ordinance on a local level. The Contractor must charge according to the plan review and inspection fees established in Wis. Admin. Code Ch. ATCP 93.
- G. The Department retains the sole authority to determine the amount of monies payable to the Contractor for services provided by the Contractor under this Contract.

Standard Terms and Conditions (Request for Bids / Proposals)

- 1.0 SPECIFICATIONS:** The specifications in this request are the minimum acceptable. When specific manufacturer and model numbers are used, they are to establish a design, type of construction, quality, functional capability and/or performance level desired. When alternates are bid/proposed, they must be identified by manufacturer, stock number, and such other information necessary to establish equivalency. The State of Wisconsin shall be the sole judge of equivalency. Bidders/proposers are cautioned to avoid bidding alternates to the specifications which may result in rejection of their bid/proposal.
- 2.0 DEVIATIONS AND EXCEPTIONS:** Deviations and exceptions from original text, terms, conditions, or specifications shall be described fully, on the bidder's/proposer's letter- head, signed, and attached to the request. In the absence of such statement, the bid/proposal shall be accepted as in strict compliance with all terms, conditions, and specifications and the bidders/proposers shall be held liable.
- 3.0 QUALITY:** Unless otherwise indicated in the request, all material shall be first quality. Items which are used, demonstrators, obsolete, seconds, or which have been discontinued are unacceptable without prior written approval by the State of Wisconsin.
- 4.0 QUANTITIES:** The quantities shown on this request are based on estimated needs. The state reserves the right to increase or decrease quantities to meet actual needs.
- 5.0 DELIVERY:** Deliveries shall be F.O.B. destination freight prepaid and included unless otherwise specified.
- 6.0 PRICING AND DISCOUNT:** The State of Wisconsin qualifies for governmental discounts and its educational institutions also qualify for educational discounts. Unit prices shall reflect these discounts.
- 6.1** Unit prices shown on the bid/proposal or contract shall be the price per unit of sale (e.g., gal., cs., doz., ea.) as stated on the request or contract. For any given item, the quantity multiplied by the unit price shall establish the extended price, the unit price shall govern in the bid/proposal evaluation and contract administration.
- 6.2** Prices established in continuing agreements and term contracts may be lowered due to general market conditions, but prices shall not be subject to increase for ninety (90) calendar days from the date of award. Any increase proposed shall be submitted to the contracting agency thirty (30) calendar days before the proposed effective date of the price increase and shall be limited to fully documented cost increases to the contractor which are demonstrated to be industrywide. The conditions under which price increases may be granted shall be expressed in bid/proposal documents and contracts or agreements.
- 6.3** In determination of award, discounts for early payment will only be considered when all other conditions are equal and when payment terms allow at least fifteen (15) days, providing the discount terms are deemed favorable. All payment terms must allow the option of net thirty (30).
- 7.0 UNFAIR SALES ACT:** Prices quoted to the State of Wisconsin are not governed by the Unfair Sales Act.
- 8.0 ACCEPTANCE-REJECTION:** The State of Wisconsin reserves the right to accept or reject any or all bids/proposals, to waive any technicality in any bid/proposal submitted, and to accept any part of a bid/proposal as deemed to be in the best interests of the State of Wisconsin.
- Bids/proposals MUST be date and time stamped by the soliciting purchasing office on or before the date and time that the bid/proposal is due. Bids/proposals date and time stamped in another office will be rejected. Receipt of a bid/proposal by the mail system does not constitute receipt of a bid/proposal by the purchasing office.
- 9.0 METHOD OF AWARD:** Award shall be made to the lowest responsible, responsive bidder unless otherwise specified.
- 10.0 ORDERING:** Purchase orders or releases via purchasing cards shall be placed directly to the contractor by an authorized agency. No other purchase orders are authorized.
- 11.0 PAYMENT TERMS AND INVOICING:** The State of Wisconsin normally will pay properly submitted vendor invoices within thirty (30) days of receipt providing goods and/or services have been delivered, installed (if required), and accepted as specified.
- Invoices presented for payment must be submitted in accordance with instructions contained on the purchase order including reference to purchase order number and submittal to the correct address for processing.
- A good faith dispute creates an exception to prompt payment.
- 12.0 TAXES:** The State of Wisconsin and its agencies are exempt from payment of all federal tax and Wisconsin state and local taxes on its purchases except Wisconsin excise taxes as described below.
- The State of Wisconsin, including all its agencies, is required to pay the Wisconsin excise or occupation tax on its purchase of beer, liquor, wine, cigarettes, tobacco products, motor vehicle fuel and general aviation fuel. However, it is exempt from payment of Wisconsin sales or use tax on its purchases. The State of Wisconsin may be subject to other states' taxes on its purchases in that state depending on the laws of that state. Contractors performing construction activities are required to pay state use tax on the cost of materials.
- 13.0 GUARANTEED DELIVERY:** Failure of the contractor to adhere to delivery schedules as specified or to promptly replace rejected materials shall render the contractor liable for all costs in excess of the contract price when alternate procurement is necessary. Excess costs shall include the administrative costs.
- 14.0 ENTIRE AGREEMENT:** These Standard Terms and Conditions shall apply to any contract or order awarded as a result of this request except where special requirements

are stated elsewhere in the request; in such cases, the special requirements shall apply. Further, the written contract and/or order with referenced parts and attachments shall constitute the entire agreement and no other terms and conditions in any document, acceptance, or acknowledgment shall be effective or binding unless expressly agreed to in writing by the contracting authority.

15.0 APPLICABLE LAW AND COMPLIANCE: This contract shall be governed under the laws of the State of Wisconsin. The contractor shall at all times comply with and observe all federal and state laws, local laws, ordinances, and regulations which are in effect during the period of this contract and which in any manner affect the work or its conduct. The State of Wisconsin reserves the right to cancel this contract if the contractor fails to follow the requirements of s. 77.66, Wis. Stats., and related statutes regarding certification for collection of sales and use tax. The State of Wisconsin also reserves the right to cancel this contract with any federally debarred contractor or a contractor that is presently identified on the list of parties excluded from federal procurement and non-procurement contracts.

16.0 ANTITRUST ASSIGNMENT: The contractor and the State of Wisconsin recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the State of Wisconsin (purchaser). Therefore, the contractor hereby assigns to the State of Wisconsin any and all claims for such overcharges as to goods, materials or services purchased in connection with this contract.

17.0 ASSIGNMENT: No right or duty in whole or in part of the contractor under this contract may be assigned or delegated without the prior written consent of the State of Wisconsin.

18.0 WORK CENTER CRITERIA: A work center must be certified under s. 16.752, Wis. Stats., and must ensure that when engaged in the production of materials, supplies or equipment or the performance of contractual services, not less than seventy-five percent (75%) of the total hours of direct labor are performed by severely handicapped individuals.

19.0 NONDISCRIMINATION / AFFIRMATIVE ACTION: In connection with the performance of work under this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01(5), Wis. Stats., sexual orientation as defined in s. 111.32(13m), Wis. Stats., or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Except with respect to sexual orientation, the contractor further agrees to take affirmative action to ensure equal employment opportunities.

19.1 Contracts estimated to be over fifty thousand dollars (\$50,000) require the submission of a written affirmative action plan by the contractor. An exemption occurs from this requirement if the contractor has a workforce of less than fifty (50) employees. Within fifteen (15) working days after the contract is awarded, the contractor must submit the plan to the contracting state agency for approval. Instructions

on preparing the plan and technical assistance regarding this clause are available from the contracting state agency.

19.2 The contractor agrees to post in conspicuous places, available for employees and applicants for employment, a notice to be provided by the contracting state agency that sets forth the provisions of the State of Wisconsin's nondiscrimination law.

19.3 Failure to comply with the conditions of this clause may result in the contractor's becoming declared an "ineligible" contractor, termination of the contract, or withholding of payment.

19.4 Pursuant to s. 16.75(10p), Wis. Stats., contractor agrees it is not, and will not for the duration of the contract, engage in a prohibited boycott of the State of Israel as defined in s. 20.931(1)(b). State agencies and authorities may not execute a contract and reserve the right to terminate an existing contract with a company that is not compliant with this provision. This provision applies to contracts valued \$100,000 or over.

19.5 Pursuant to 2019 Wisconsin Executive Order 1, contractor agrees it will hire only on the basis of merit and will not discriminate against any persons performing a contract, subcontract or grant because of military or veteran status, gender identity or expression, marital or familial status, genetic information or political affiliation.

20.0 PATENT INFRINGEMENT: The contractor selling to the State of Wisconsin the articles described herein guarantees the articles were manufactured or produced in accordance with applicable federal labor laws. Further, that the sale or use of the articles described herein will not infringe any United States patent. The contractor covenants that it will at its own expense defend every suit which shall be brought against the State of Wisconsin (provided that such contractor is promptly notified of such suit, and all papers therein are delivered to it) for any alleged infringement of any patent by reason of the sale or use of such articles, and agrees that it will pay all costs, damages, and profits recoverable in any such suit.

21.0 SAFETY REQUIREMENTS: All materials, equipment, and supplies provided to the State of Wisconsin must comply fully with all safety requirements as set forth by the Wisconsin Administrative Code and all applicable OSHA Standards.

22.0 WARRANTY: Unless otherwise specifically stated by the bidder/proposer, equipment purchased as a result of this request shall be warranted against defects by the bidder/proposer for one (1) year from date of receipt. The equipment manufacturer's standard warranty shall apply as a minimum and must be honored by the contractor.

23.0 INSURANCE RESPONSIBILITY: The contractor performing services for the State of Wisconsin shall:

23.1 Maintain worker's compensation insurance as required by Wisconsin Statutes, for all employees engaged in the work.

23.2 Maintain commercial liability, bodily injury and property damage insurance against any claim(s) which might occur in carrying out this agreement/contract.

Minimum coverage shall be one million dollars (\$1,000,000) liability for bodily injury and property damage including products liability and completed operations. Provide motor vehicle insurance for all owned, non-owned and hired vehicles that are used in carrying out this contract. Minimum coverage shall be one million dollars (\$1,000,000) per occurrence combined single limit for automobile liability and property damage.

23.3 The state reserves the right to require higher or lower limits where warranted.

24.0 CANCELLATION: The State of Wisconsin reserves the right to cancel any contract in whole or in part without penalty due to non-appropriation of funds or for failure of the contractor to comply with terms, conditions, and specifications of this contract.

25.0 VENDOR TAX DELINQUENCY: Vendors who have a delinquent Wisconsin tax liability may have their payments offset by the State of Wisconsin.

26.0 PUBLIC RECORDS ACCESS: It is the intention of the state to maintain an open and public process in the solicitation, submission, review, and approval of procurement activities. Bid/proposal openings are public unless otherwise specified. Records may not be available for public inspection prior to issuance of the notice of intent to award or the award of the contract. Pursuant to §19.36 (3), Wis. Stats., all records of the contractor that are produced or collected under this contract are subject to disclosure pursuant to a public records request. Upon receipt of notice from the State of Wisconsin of a public records request for records produced or collected under this contract, the contractor shall provide the requested records to the contracting agency. The contractor, following final payment, shall retain all records produced or collected under this contract for six (6) years.

27.0 PROPRIETARY INFORMATION: Any restrictions on the use of data contained within a request, must be clearly stated in the bid/proposal itself. Proprietary information submitted in response to a request will be handled in accordance with applicable State of Wisconsin procurement regulations and the Wisconsin public records law. Proprietary restrictions normally are not accepted. However, when accepted, it is the vendor's responsibility to defend the determination in the event of an appeal or litigation.

27.1 Data contained in a bid/proposal, all documentation provided therein, and innovations developed as a result of the contracted commodities or services cannot be copyrighted or patented. All data, documentation, and innovations become the property of the State of Wisconsin.

27.2 Any material submitted by the vendor in response to this request that the vendor considers confidential and proprietary information, and which qualifies as a trade secret, as provided in s. 19.36(5), Wis. Stats., or material which can be kept confidential under the Wisconsin public records law, must be identified on a Designation of Confidential and Proprietary Information form (DOA-3027). Bidders/proposers may request the form if it is not part of the Request for Bid/Request for Proposal package. Bid/proposal prices cannot be held confidential.

28.0 DISCLOSURE: If a state public official (s. 19.42, Wis. Stats.), a member of a state public official's immediate family, or any organization in which a state public official or a member of the official's immediate family owns or controls a ten percent (10%) interest, is a party to this agreement, and if this agreement involves payment of more than three thousand dollars (\$3,000) within a twelve (12) month period, this contract is voidable by the state unless appropriate disclosure is made according to s. 19.45(6), Wis. Stats., before signing the contract. Disclosure must be made to the State of Wisconsin Ethics Board, 44 East Mifflin Street, Suite 601, Madison, Wisconsin 53703 (Telephone 608-266-8123).

State classified and former employees and certain University of Wisconsin faculty/staff are subject to separate disclosure requirements, s. 16.417, Wis. Stats.

29.0 RECYCLED MATERIALS: The State of Wisconsin is required to purchase products incorporating recycled materials whenever technically and economically feasible. Bidders are encouraged to bid products with recycled content which meet specifications.

30.0 MATERIAL SAFETY DATA SHEET: If any item(s) on an order(s) resulting from this award(s) is a hazardous chemical, as defined under 29CFR 1910.1200, provide one (1) copy of a Material Safety Data Sheet for each item with the shipped container(s) and one (1) copy with the invoice(s).

31.0 PROMOTIONAL ADVERTISING / NEWS RELEASES: Reference to or use of the State of Wisconsin, any of its departments, agencies or other subunits, or any state official or employee for commercial promotion is prohibited. News releases pertaining to this procurement shall not be made without prior approval of the State of Wisconsin. Release of broadcast e-mails pertaining to this procurement shall not be made without prior written authorization of the contracting agency.

32.0 HOLD HARMLESS: The contractor will indemnify and save harmless the State of Wisconsin and all of its officers, agents and employees from all suits, actions, or claims of any character brought for or on account of any injuries or damages received by any persons or property resulting from the operations of the contractor, or of any of its contractors, in prosecuting work under this agreement.

33.0 FOREIGN CORPORATION: A foreign corporation (any corporation other than a Wisconsin corporation) which becomes a party to this Agreement is required to conform to all the requirements of Chapter 180, Wis. Stats., relating to a foreign corporation and must possess a certificate of authority from the Wisconsin Department of Financial Institutions, unless the corporation is transacting business in interstate commerce or is otherwise exempt from the requirement of obtaining a certificate of authority. Any foreign corporation which desires to apply for a certificate of authority should contact the Department of Financial Institutions, Division of Corporation, P. O. Box 7846, Madison, WI 53707-7846; telephone (608) 261-7577.

34.0 WORK CENTER PROGRAM: The successful bidder/proposer shall agree to implement processes that allow the State agencies, including the University of Wisconsin System, to satisfy the State's obligation to purchase goods and services produced by work centers certified under the State Use Law, s.16.752, Wis. Stat. This shall result in requiring the successful bidder/proposer to include products provided by work centers in its catalog

for State agencies and campuses or to block the sale of comparable items to State agencies and campuses.

35.0 FORCE MAJEURE: Neither party shall be in default by reason of any failure in performance of this Agreement in accordance with reasonable control and without fault or negligence on their part. Such causes may include, but are not restricted to, acts of nature or the public enemy, acts of the government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather, but in every case the failure to perform such must be beyond the reasonable control and without the fault or negligence of the party.



Supplemental Standard Terms and Conditions for Procurements for Services

1.0 ACCEPTANCE OF BID/PROPOSAL CONTENT: The contents of the bid/proposal of the successful contractor will become contractual obligations if procurement action ensues.

2.0 CERTIFICATION OF INDEPENDENT PRICE DETERMINATION: By signing this bid/proposal, the bidder/proposer certifies, and in the case of a joint bid/proposal, each party thereto certifies as to its own organization, that in connection with this procurement:

- 2.1** The prices in this bid/proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder/proposer or with any competitor;
- 2.2** Unless otherwise required by law, the prices which have been quoted in this bid/proposal have not been knowingly disclosed by the bidder/proposer and will not knowingly be disclosed by the bidder/proposer prior to opening in the case of an advertised procurement or prior to award in the case of a negotiated procurement, directly or indirectly to any other bidder/proposer or to any competitor; and
- 2.3** No attempt has been made or will be made by the bidder/proposer to induce any other person or firm to submit or not to submit a bid/proposal for the purpose of restricting competition.
- 2.4** Each person signing this bid/proposal certifies that: He/she is the person in the bidder's/proposer's organization responsible within that organization for the decision as to the prices being offered herein and that he/she has not participated, and will not participate, in any action contrary to 2.1 through 2.3 above; (or)

He/she is not the person in the bidder's/proposer's organization responsible within that organization for the decision as to the prices being offered herein, but that he/she has been authorized in writing to act as agent for the persons responsible for such decisions in certifying that such persons have not participated, and will not participate in any action contrary to 2.1 through 2.3 above, and as their agent does hereby so certify; and he/she has not participated, and will not participate, in any action contrary to 2.1 through 2.3 above.

3.0 DISCLOSURE OF INDEPENDENCE AND RELATIONSHIP:

- 3.1** Prior to award of any contract, a potential contractor shall certify in writing to the procuring agency that no relationship exists between the potential contractor and the procuring or contracting agency that interferes with fair competition or is a conflict of interest, and no relationship exists between the contractor and another person or organization that constitutes a conflict of interest with respect to a state contract. The Department of Administration may waive this provision,

in writing, if those activities of the potential contractor will not be adverse to the interests of the state.

- 3.2** Contractors shall agree as part of the contract for services that during performance of the contract, the contractor will neither provide contractual services nor enter into any agreement to provide services to a person or organization that is regulated or funded by the contracting agency or has interests that are adverse to the contracting agency. The Department of Administration may waive this provision, in writing, if those activities of the contractor will not be adverse to the interests of the state.

4.0 DUAL EMPLOYMENT: Section 16.417, Wis. Stats., prohibits an individual who is a State of Wisconsin employee or who is retained as a contractor full-time by a State of Wisconsin agency from being retained as a contractor by the same or another State of Wisconsin agency where the individual receives more than \$12,000 as compensation for the individual's services during the same year. This prohibition does not apply to individuals who have full-time appointments for less than twelve (12) months during any period of time that is not included in the appointment. It does not include corporations or partnerships.

5.0 EMPLOYMENT: The contractor will not engage the services of any person or persons now employed by the State of Wisconsin, including any department, commission or board thereof, to provide services relating to this agreement without the written consent of the employing agency of such person or persons and of the contracting agency.

6.0 CONFLICT OF INTEREST: Private and non-profit corporations are bound by ss. 180.0831, 180.1911(1), and 181.0831 Wis. Stats., regarding conflicts of interests by directors in the conduct of state contracts.

7.0 RECORDKEEPING AND RECORD RETENTION: The contractor shall establish and maintain adequate records of all expenditures incurred under the contract. All records must be kept in accordance with generally accepted accounting procedures. All procedures must be in accordance with federal, state and local ordinances.

The contracting agency shall have the right to audit, review, examine, copy, and transcribe any pertinent records or documents relating to any contract resulting from this bid/proposal held by the contractor.

It is the intention of the state to maintain an open and public process in the solicitation, submission, review, and approval of procurement activities. Bid/proposal openings are public unless otherwise specified. Records may not be available for public inspection prior to issuance of the notice of intent to award or the award of the contract. Pursuant to §19.36 (3), Wis. Stats., all records of the contractor that are produced or collected under this contract are subject to disclosure pursuant to a public records request. Upon receipt of notice from the State of Wisconsin of a public records request for records produced or collected under this contract, the contractor shall provide the requested records to the contracting agency. The

contractor, following final payment, shall retain all records produced or collected under this contract for six (6) years.

8.0 INDEPENDENT CAPACITY OF CONTRACTOR: The parties hereto agree that the contractor, its officers, agents, and employees, in the performance of this agreement shall act in the capacity of an independent contractor and not as an officer, employee, or agent of the state. The contractor agrees to take such steps as may be necessary to ensure that each subcontractor of the contractor will be deemed to be an independent contractor and will not be considered or permitted to be an agent, servant, joint venture, or partner of the state.

UST/AST Installation / Closure Inspection Requirements

The purpose of the installation inspection is to maintain regulatory oversight of systems that have a potential to pose significant risk to fire safety and environmental contamination if not properly installed. The inspector functions as a liaison for the state regulatory and enforcement program and as a monitor to protect the interests of the owner.

The concept behind the installation inspection requirements and Departmental requirements is a pre-installation visit to establish expectations in administrative and operational aspects throughout the installation process, and to monitor at least two milestones as the installation progresses. The pre-installation scope and planning meeting is intended to develop a strategy for communications between the inspection agency and the contractor. This strategy to assure that adequate notification is made to accommodate, in a timely manner, the inspection points throughout the installation process and what must be in place, operationally and administratively, for the inspector to sign-off prior to placing the system into operation. The optimum time for the pre-installation scope and planning meeting is during the air test of the tanks after they have been unloaded, prior to being placed in the excavation.

The department has established two inspection oversight milestones as the installation progresses. However, two inspections may not be adequate to maintain proper regulatory oversight during the installation process, depending upon the magnitude or scheduling of the installation. Regulatory inspection oversight may be maintained at some AST installations through one inspection just prior to placing the system in operation.

The first inspection milestone is after the major excavation work has been completed and the primary components of the system are in place. The piping will be exposed and the line pressure test will be taking place prior to connection to the dispenser and the tank.

The final inspection milestone will be conducted prior to placing the system into operation. This inspection is intended to confirm the previous work, verify the integrity of the system and the leak detection methodology in place, and bring the administrative process to closure.

The Department has taken the position that if the Contractor gives adequate notice to the LPO for a pending installation inspection, conflicts with the LPO's schedule should not hold-up the Contractor's progress. This does not mean that the inspector's inspection obligations or the regulatory oversight are diminished. The inspector may authorize the Contractor to continue, but the Contractor must allow provisions for verification of specific inspection points. Examples are burial depth, slope, flex connectors, anodes, isolation bushings, etc. The inspector has the authority to require that the Contractor provide specific accommodations to facilitate inspection. Restricting the amount of trench backfilled and/or providing photographs are just two means an inspector may use to maintain verification oversight.

The final inspection is extremely important. The inspector conducting the final inspection is signing the form confirming that the final and all prior inspections have been thorough, all components are in place, and that no changes have occurred that are not documented. It is the Department's expectation that the final inspection will involve a walk-through visual inspection of the entire system from the storage tank to the dispenser. The inspector will have access covers and dispenser doors opened to accommodate a visual verification.

The following Installation Inspection Requirements is designed to serve as an internal check for the inspector; enabling the inspector to gauge his/her thoroughness and consistency when conducting installation inspections. This guide can be used in many ways, individually or by the agency when multiple inspectors are involved with a site through the duration of the installation.

Pre-installation Scope and Planning Meeting Expectations

- ◆ Discuss administrative aspects and how contractor will verify and document integrity and diagnostic tests, e.g., sump containment tightness, system leak detection, corrosion protection, overfill alarm, etc.
- ◆ Verify that system is being installed within the restrictions of the respective Material Approval or Petition For Variance.
- ◆ Verify tank, dispenser and emergency control locations and setbacks as reflected on the plan.
- ◆ Discuss potential plan revision items.
- ◆ Discuss areas of the installation that are not under the responsibility of the tank system equipment contractor, e.g., electrical.
- ◆ Confirm methods of leak detection, corrosion protection, and overfill prevention.
- ◆ Agree on notification / inspection time perimeters, flexibility, etc.
- ◆ Discuss other key inspection or contractor employees that may be working on this site, signing inspection forms, and serve as contact for status inquiries.
- ◆ Discuss third-party contractors that may be involved, e.g., fencing contractor, tightness tester, etc.
- ◆ Discuss who will be attending final inspection, what must be accessible and available, and verify the credentials of the person in attendance.

Installation Inspection Expectations:

Installation inspections commence when the installation, retro-fit, upgrade or remodeling is underway. The inspector is expected to assess that the installation is being conducted in accordance with the respective national standards, Petition For Variance, Material Approvals and ATCP 93 and conforms to the system installation plan or revision. The Department does not expect the LPO inspector to attend the duration of component integrity or diagnostic testing. It is the expectation of the Department that the inspector visit the site at some point in time during or immediately after a component test, such as the initial pipe tightness test or the pre-operational tank system tightness test, is conducted. The department expects that the inspector will review test procedure and component test results to confirm that the test procedure and results are documented.

UST Closure Inspections

The inspector shall visit the site preferably during the excavation activity, but prior to backfill to assess the following:

- ◆ That soil sampling was performed for federally regulated and heating fuel tanks larger than 4,000 gallon capacity and for other USTs where contamination is suspected.
- ◆ Individual performing the soil sampling is a current Certified Site Assessor.
- ◆ For sites with contamination, the inspector should discuss with the closure contractor the suspected source of the contamination (tank leak, pipe leak, spill and overfill source, etc.) and document that on the closure checklist.
- ◆ Confirm who is making DNR notification.

Major Site Inspection Components

These guidelines should be used in conjunction with the installation checklists.

A. Administrative

Plan review verification.

- Approved plans on site.
- Installation Inspection Checklist started.
- Tank capacity and number corresponds with submittal.
- Tank setbacks within restrictions. (Property line, buildings, LP tanks, etc.)
- Dispenser setback. (Building, retail/nonretail, kerosene dispensing, etc.)
- Access manways installed corresponding with submittal.
- Overfill devices.
- Spill containment.
- If changes have been made is there a plan revision on site.
- Tank soap test documentation on site or proof of factory vacuum integrity throughout installation process.
- Material Approval (if applicable) for pipe, leak detection, tank, flex connectors, dike liners.
- Installation according to Plan Review, Material Approval, or Petition For Variance.
- Certified person on site.

B. Piping

Precision Test.

- Primary piping been completed and test information documented by technician.
- Secondary piping been completed and test information documented by technician.

Peripherals.

- Slope or configuration of piping/pipe run is code complying.
- Piping has mechanical listed flex connectors at tank and dispenser (except for flexible piping with material approval).
- Emergency shut-off valve with fusible link is positioned according to manufacturer's specifications.
- Vent pipes for class 1 products minimum 12' above grade and 5 feet from building openings.
- Vent pipes for class II products minimum 4' above grade or highest snow height.

C. Cathodic Protection Systems

- Anodes placed as approved.
- Impressed current CP - conductor buried at least 24" below finished grade.
- Test stations installed.
- Test conducted for effectiveness, if so is copy of test results on site.
- Verification of CP designer, installer, etc. NACE qualifications/certification.

D. Release Detection

- Precision test has been conducted on tank and lines prior to placing the system into operation.
- All leak detection methodology has Material Approval.
- Leak detection methodology applies to the system in place.
 - Capacity of tank and piping.
 - Manifolded tanks.

Automatic Tank Gauging.

- Diagnostic and calibration test conducted on ATG system.
- Setup print-outs submitted to DATCP with installation checklist.

Interstitial Monitoring.

- All Interstitial monitoring systems whether mechanical or electrical, require precise installation, and testing.
- Recordkeeping system established.

Statistical Inventory Reconciliation.

- Recordkeeping system established.

Electronic Line Leak Detector

- Verification that electronic line leak detector was checked to trip at 3 GPH @ 10 psi equivalent (max.) flow rate.
- If used for startup test and/or annual precision test of piping a diagnostic check and documentation of a passed tightness test (to specifications on Material Approval) of pipe.

Mechanical Flow Restrictor

- Verification that mechanical flow restrictor was checked to trip at 3 GPH@ 10 psi equivalent (max.) flow rate.

E. Site Overview Inspection

- Fill pipe caps and manhole covers color-coded appropriate for product.
- An emergency breakaway on each Class I and II liquid hose.
- Are fuel oil and kerosene dispensers at least 20 feet away from dispensing equipment for class I and II motor fuel liquids?
- Operating instructions and emergency instructions for unattended self-service stations.
- Stop motor and no smoking signs posted.
- Are dispensers mounted and bolted down properly.
- Emergency shut off installed inside building and working.
- Push-to-stop button on dispensers (if required).
- Unattended fueling - Emergency electrical disconnect device installed and visible.

F. Documentation and Training

- Site address, installation specifications and data on installation plans, installation inspection checklist, and inventory forms match.
- Components installed correspond with components on plan submittal.
- Copy of startup test(s) included with submittal of Installation Checklist.
- Owner/operator been trained in the use of the leak detection and monitoring system *before* the system has been place into service.
- Owner has been provided with all installation, operating instructions, and Material Approval documents for all components of the tank system.
- Owner/operator has all documents available for inspection, as required.

G. Post Inspection Notification to Bureau of Weights and Measures Field Operations

For *retail sites*, send Fax or E-mail notification to the respective Weights and Measures Field Operations office that the installation inspection has been completed.

If all the respective requirements of this guideline cannot be met, the system should not be allowed to be put into service.

End of Contract



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Presentation and discussion by Dane County Executive Joe Parisi regarding County's response to the COVID-19 Pandemic.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

Dane County Executive Joe Parisi will be attending the meeting on Tuesday through Zoom. He wants to address the Village Board on County initiatives they have been undertaking in response to the pandemic.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

No action required, presentation/discussion only.

ATTACHMENTS:

1. Meeting appearance

From: [Adrian, Scott](#)
To: [Brad Czebotar](#); [Matt Schuenke](#)
Subject: Meeting appearance
Date: Tuesday, April 28, 2020 7:53:40 PM

President Czebotar,

I hope you are doing well and staying safe. I am reaching out to you now that the election is over and your new board members have been seated.

As you know, County Executive Joe Parisi has been talking with elected officials and leaders all throughout the county during this pandemic. As we continue in our response to this public health crisis, he would appreciate an opportunity to address your village board at an upcoming meeting by Zoom.

Joe would welcome the chance to discuss what is taking place in our community and the county's continued work. Joe has been doing more and more "virtual gatherings" and I believe becoming pretty good at Zoom, as most everyone is right now.

We are willing to work with you to find something that is workable for both of our calendars. Thank you for your assistance, we look forward to hearing from you.

Stay safe!

Scott Adrian
Dane County Executive's Office
(608) 266-2444



PUBLIC SAFETY COMMITTEE SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer, Craig Sherven, Police Chief, Chris Dennis, Fire/Rescue Chief, Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action on the request for expansion of the premise and associated site plan for the Class "B" Beer and "Class B" intoxicating Liquors License to add an additional 504 square feet to the outdoor patio for Angelo's McFarland, 4706 Farwell St.

PREVIOUS ACTION:

ISSUE SUMMARY:

Angelo's Restaurant desires to expand the existing front yard outdoor dining and consumption area at 4706 Farwell Street. This request is due in part to planned adjustments to operations to provide more spacing of tables/customers once the Covid-19 Safer at Home Order is amended or repealed to allow in-person dining. The proposed patio addition would be 504 square feet and extend along the front of the building and projecting out the same distance from the building as the current patio (refer to the street view sketch in the packet). The packet includes a representative image of the proposed four-foot high fence. The owners would also replace the existing front patio fence with the proposed design in the packet, while leaving the western side of the existing patio fence unchanged. Reducing the front fence height from 6' to 4' should aid in both maintaining visibility of the front facade, while also still meeting the minimum requirements for fence height for outdoor consumption areas. The ground within the proposed new outdoor dining area is already covered by asphalt so the only site improvement is the installation of the fence. No additional lighting other than a few more chrome tiki lights will be added to the outdoor area. Note, there is existing temporary string lighting and under mounted facade lighting already in place.

See attached memo and recommendations.

FINANCIAL/BUDGET IMPACT:

No financial impact.

VILLAGE PLAN REFERENCE:

Property is identified as Mixed Use/Flex Commercial in the Village's Comprehensive Plan. One of the goals of the plan is to increase and ease opportunities for businesses to grow in McFarland and expand dining. Improving business retention and expanding commercial development are also two of the strategies identified in the Village's 2020-2030 Strategic Plan. In addition, evaluation of ways to become more business



friendly and flexible for economic growth is included as in objective of the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:

Sec. 8-369, Fence Standards
Sec. 11-64(n), Outdoor Consumption
Sec. 62-71, Commercial District Permitted Use
Sec. 62-172(j), Parking Spaces Required
Sec. 62-310, Site/Design Review

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

The Plan Commission unanimously recommended approval of the site plan for the outdoor seating area for Angelo's LLC, 4706 Farwell St.

The Public Safety Committee unanimously recommended approval of the expansion of premise for Angelo's LLC, 4706 Farwell St, for the period ending June 30, 2020 to increase the size of its outdoor seating area by 504 square feet with the condition that a second emergency exit be incorporated into the new fence pursuant to the specifications outlined from the Fire Inspector in his letter dated May 6, 2020.

ATTACHMENTS:

1. Review and Recommendation - Angelo's
2. Chief Sherven Review - Angelo
3. Fire Inspector Review - Angelo's
4. Expansion of Premise Application
5. 4706 Farwell St - Angelos - Proposed Patio_05.08.2020

MEMORANDUM

To: Public Safety Committee and Village Board
From: Cassandra Suettinger, Village Clerk/Treasurer
Date: May 8, 2020
RE: Expansion of Premise of Angelo's, 4706 Farwell St.

Background: The current licensed premise for Angelo's is the bar and restaurant and a 270 square foot outdoor patio.

Proposal: Angelo's is proposing to expand the size of their outdoor area from the current 270 square foot patio to add an additional 504 square feet. The major impetus for the change is being able to accommodate social distancing requirements when they are able to allow dining in the restaurant again.

Review: Village Ordinance 11-64n outlines the conditions and requirements for outdoor consumption areas within the Village. Below is a review of the proposal and its compliance with the required conditions.

Any application for a new license, the renewal of an existing license or a change in the description of licensed premises which seeks to include an outdoor area within the licensed premises' description shall require notice to each person owning property within 500 feet of the proposed licensed premises. The applicant shall prepay the cost of sending such notice before the notices are sent. The notice shall include a copy of the application and the date, time and location of any public hearings or other public meetings at which the application is scheduled to be considered.

On April 24, 2020, a notice was sent to all property owners within 500 feet of the propose licensed premise notifying them of the dates and times of the Public Safety and Village Board meetings along with a copy of the proposed site plan.

The application shall be accompanied by detailed plans or drawings demonstrating the size, location, surface and building materials, and use of the outdoor area, including fencing and signage, and any other information necessary to determine compliance with this Subsection. The outdoor consumption application, along with associated plans and drawings, shall be reviewed for a recommendation by the Public Safety Committee and a final decision made by the Village Board.

Attached are the detailed plans outlining all the required items for the review and recommendation of the Public Safety Committee.

In addition to any specific conditions imposed under Subsections (2) and (3), the following shall be minimum conditions of all licenses with respect to outdoor areas unless the Village Board makes a specific finding that the condition is not necessary to protect the public health, safety or welfare:

a. Outdoor areas are prohibited within 50 feet of the lot line of a parcel zoned, or lawfully used for residential purposes. This prohibition shall not apply to prohibit an outdoor area where an accessory apartment exists on the same parcel as the licensed premises.

Compliant.

b. The hours during which alcohol consumption may be permitted within the outdoor area is restricted to 11:00 a.m. to 10:00 p.m. Sunday through Thursday; and 11:00 a.m. to 11:00 p.m. on Friday and Saturday.

Compliant.

c. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic, or metal and erected and maintained in accordance with all applicable Village ordinances. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes.

Complaint with condition provided from Fire Inspector. See attached memo.

d. Amplified music, speakers, microphones, televisions or other audio or video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and Section 11-69(f) if applicable.

Compliant. Applicant is aware of requirement.

e. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

Compliant. See additional comments on this provision contained within Chief Sherven's review.

f. The size of the outdoor area may not be larger than 50 percent of the gross floor area of the licensed premises within a permanent building. Interior building capacity shall not be increased as a result of the addition of the outdoor area. The playing area of any outdoor sports area

permitted under Section 11-69 shall not be included for purposes of determining compliance with this subparagraph so long as the playing area is not permitted to be occupied by persons not participating in the sporting activity for which the playing area is designed.

Compliant. The one story indoor licensed premise is listed in the assessment records as 2,108 square feet. The proposed addition to the outdoor seating area would take the size of the patio to 774 square feet. This is well within the 50% threshold provided in the ordinance.

g. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point."

Compliant. Applicant is aware of requirement and current outdoor patio order includes the posted sign.

h. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area.

Compliant. Applicant is aware of requirement.

i Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations.

Compliant. Applicant is aware of requirement.

j. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility.

Compliant. Both the Fire Inspector and Building Inspector reviewed the proposed plan and provided approval with the condition noted regarding the second exit.

k. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area.

Compliant, applicant is aware of requirement.

l. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older.

Not applicable. No sports activities proposed.

Recommendation: Staff is recommending approval of the expansion of premise for Angelo's LLC, 4706 Farwell St, to increase the size of its outdoor seating area by 504 square feet with the

condition that a second emergency exit be incorporated into the new fence pursuant to the specifications outlined from the Fire Inspector in his letter dated May 6, 2020.

Additionally, staff would remind the Committee and Board that 11-64(3) provides:

The Village Board may impose conditions specific to any outdoor areas of the licensed premises as deemed necessary to prevent undue adverse impacts on neighboring property, the character of the surrounding neighborhood, traffic conditions, parking or any other matter to protect the public health, safety, welfare or convenience, including, but not limited to:

- a. Restricting the hours during which alcohol consumption may be permitted within the outdoor area;
- b. Requiring additional parking beyond the minimum required by the Zoning Code;
- c. Regulation of lighting and screening;
- d. Any conditions recommended by the Public Safety Committee;
- e. Any conditions imposed by the Plan Commission as part of its required site plan review under Section 62-310 of this Code.

Cassandra Suettinger

From: Craig Sherven
Sent: Sunday, May 3, 2020 3:03 PM
To: Cassandra Suettinger
Subject: Comments Regarding Angelo's Outdoor Expansion

Having reviewed the proposed outdoor expansion, I am generally fine with it, with the below comments and a few cautions relating to the proposed use of outdoor amplification. I'm aware that they are probably already using that, but along with a larger outdoor area could come the temptation to play music louder rather than add additional speakers, or perhaps even begin to utilize it for other types of purposes that may require the use of loudspeakers, etc.

- Regarding section 11-64 (N) of Village Ordinances:
 - **(4)(C) – The fencing proposed appears to be of sufficient height and composition so as to prevent the passage of alcoholic beverages to individuals on the outside. If applicant should vary in any way from that proposed structure, I would want to review it before it is approved.**
 - **(4)(D) – Applicant should be aware that Village ordinance restricts and/or prohibits sound or noise as follows:**
 - *“tending to unreasonably disturb the peace and quiet of persons in the vicinity thereof unless the making and continuing of the same cannot be prevented and is necessary for the protection or preservation of property or of the health, safety, life, or limb of some person”*
 - *“The using, operating or permitting to be played, used or operated of any radio receiving set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device for the producing or reproducing of sound, which is cast upon the public streets for the purpose of commercial advertising or attracting attention of the public to any building or structure. Announcements over loudspeakers can only be made by the announcer in person and without the aid of any mechanical device.”*
 - It's important to understand that tolerance levels of other individuals vary greatly. What is reasonable to one may be completely unreasonable to another, thus it would be prudent to utilize any outdoor amplification cautiously and with prudence.
 - **(4)(E) – As an additional caution relating to restrictions on noise and general character of the business, this section provides “The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience”.**



Craig J. Sherven

Chief of Police

McFarland Police Department
5915 Milwaukee Street
McFarland WI 53558
608-838-2352



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

May 6, 2020

To: Public Safety Committee

From: Mitchell Sutter, Fire Inspector/Public Education Specialist

RE: Site Plan Review for Angelo's McFarland

I have reviewed the proposed change in the outdoor fenced area requested by Angelo's McFarland. The combined occupancy load of the current fenced-in area and the proposed addition, based on the square footage provided, would have a 51 person seating arrangement assuming adjustable seating.

It is the recommendation of the McFarland Fire & Rescue Department that the application be approved based on a second emergency exit be incorporated into the new fence, per the 2015 IBC:1006.2.1 **Egress based on occupant load and common path of egress travel distance.**

If you have any questions regarding the above, please contact me via phone at 608-838-3278 or via email at mitchell.sutter@mcfarland.wi.us

Sincerely,

Mitchell Sutter

Fire Inspector/Public Education Specialist

Cc: Chris Dennis, Fire & EMS Chief (McFarland Fire & Rescue Department)



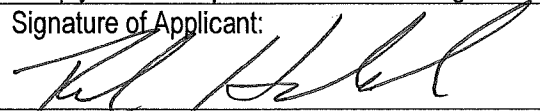
Application for an Outdoor Consumption Area
Pursuant to Village Ordinance Chapter 11

*Any physical change to a licensed premise requires Village board approval.

No Fee

1. Applicant Information	
Name of Individual, Partnership, LLC, or Corporation that holds the current Alcohol Beverage License: ARUBA0204 LLC	
DBA: Angelo's McFarland	
Address of establishment: 4706 Farwell st	City, State and Zip Code: McFarland, WI. 53558
Contact Name:: Rick Hubanks	Contact Telephone Number: 608 577-0453

2. Premise information	
Gross floor area of the indoor licensed premise within a permanent building: 1938 sq. Ft. - see Attached	
Proposed Square Footage of Outdoor Area: * 860 sq Ft see Attached	
<i>*Outdoor area may not be larger than 50% of the gross floor area of the licensed premise within a permanent building without a variance granted by the Village Board. To request a variance, please see section 8 of the application.</i>	
3. Outdoor Consumption Section	
Is the proposed outdoor consumption area within 50 feet of the lot line of a parcel zoned, or used for residential purposes?*	
☒ - No ☐ - Yes, see section 8 of application to request a variance	
<i>*This prohibition shall not apply to an outdoor area where an accessory apartment exists on the same parcel as the licensed premise.</i>	
Will the outdoor area have amplified sound including but not limited to live music, loud speakers, call systems, etc.?	
☐ - No ☒ - Yes.	
Hours of operation for an outdoor consumption area shall be limited to Sunday through Thursday 11:00 a.m. to 10:00 p.m., and Friday and Saturday 11:00 a.m. to 11:00 p.m. Will the proposed outdoor consumption area meet this standard?	
☒ - Yes ☐ - No, ☐ - Yes, see section 8 of application to request a variance	
Is the proposed outdoor area directly connected to the indoor licensed premise?	
☒ - Yes ☐ - No	
<i>If no, please attach a security plan that explains how alcohol will be served, and how alcohol consumption will be monitored. Provide specific details on how you intend to prevent consumption outside of the licensed premise and how you will prevent underage alcohol consumption.</i>	
4. Outdoor Sporting Activity Section	
Will the proposed expansion involve an outdoor sporting activity area?	
☐ - Yes ☒ - No	
<i>If yes, you will need an outdoor sporting activity application in addition to this application.</i>	

5. Attachments/Requirements	
The following must be submitted with your application: ☒ - Site Plan or drawings demonstrating the size, location, surface, and building materials, fencing (not less than 4 ft in height), signage including proposed use of the outdoor area.	
6. Certification	
I certify that the information contained in this application is true and accurate to the best of my knowledge and belief. I agree to comply with all requirements of the Village Code of Ordinances and State Law.	
Signature of Applicant: 	Date: 4-23-20

7. Standards for Outdoor Consumption Area
a. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic or metal and erected and maintained in accordance with all applicable Village Ordinance. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes. b. Hours of outdoor consumption are restricted to 11:00 a.m. to 10 p.m. Sunday through Thursday, and 11:00 a.m. to 11:00 p.m. on Friday and Saturday. c. Amplified music, speakers, microphones, televisions and other audio video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and section 11-69(f) if applicable. Commercial zoned shall be limited to 70 db at all times. Noise is measured at the property line. Outdoor amplification of noise is not allowed after 10 p.m. d. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point." e. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area. f. Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations. g. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility. h. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area. i. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older. j. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

Angelo's McFarland
4706 Farwell St
McFarland, WI 53558

061003254201

061003254701

CSM 08529
Lot 2
0.907 ac

4712

CSM 01801
Lot 1
1.12 ac

4700

40.14'

105.44'

65.30'

12.39'

31.26'

103.71'

139.64'

CSM 02949
Lot 1
0.359 ac

061003254014

Existing Building
1995 52 Fr.

4706

124.79'

137.18'

CSM 08529
Lot 1
0.445 ac

061003254452

4710

MC FARLAND, VILLAGE OF ASSESSOR

Existing
Patio
15'x18'

270 sq ft

125.66'

Proposed
Patio Addition
28'x18'
504 sq ft

154.36'

FARWELL STREET

222.93'

110.00'

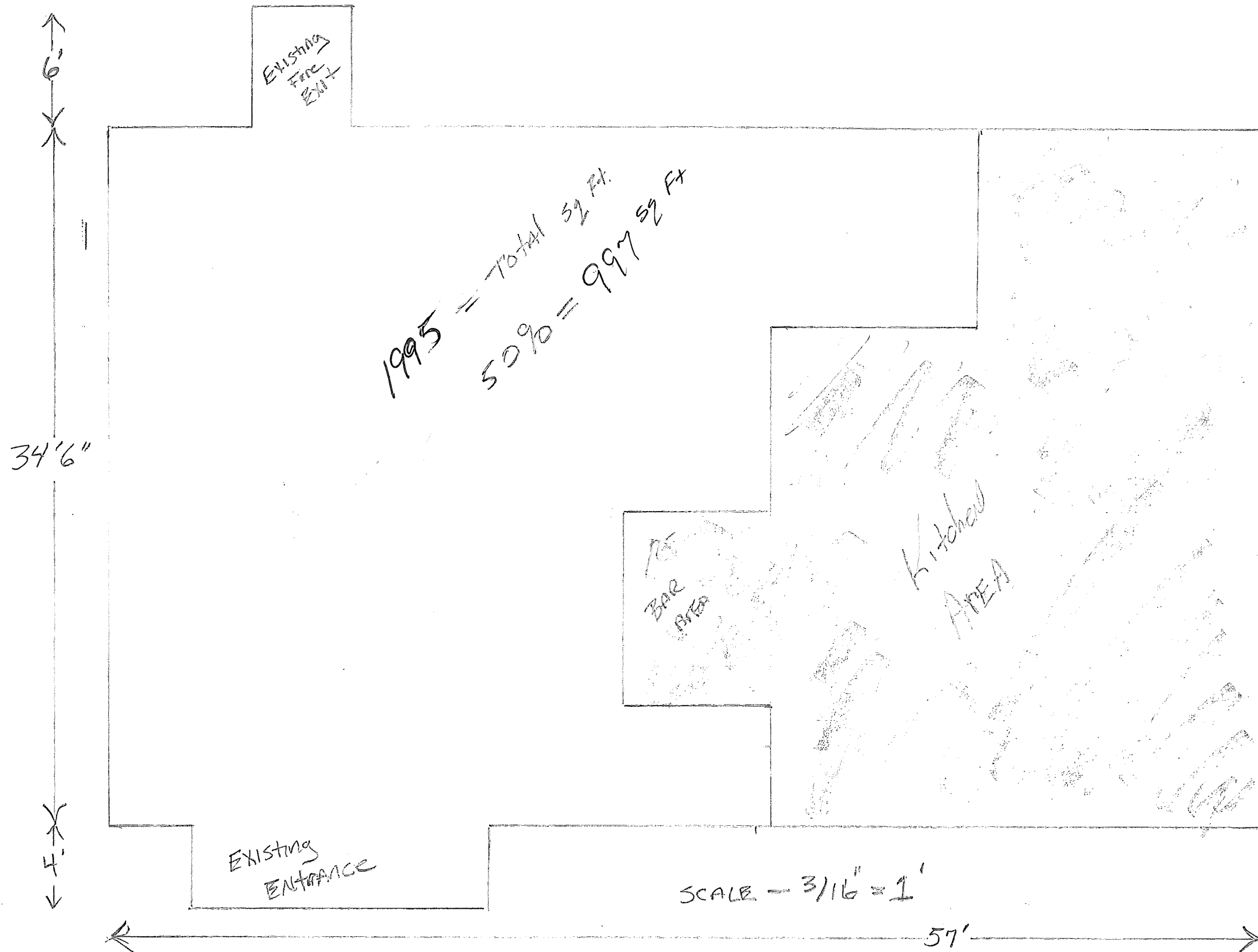
061003253271

CSM 13439

CSM 04120

ANGEL'S MCFARLAND

4706 FARWELL ST



**Village of McFarland
Community Development Department**

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	Angelo's McFarland	Applicant's Agent	
	Rick Hubanks	Name	
Address	4706 Farwell St	Address	
Email	angelosmcfarland@yahoo.com	Email	
Phone #	608-577-0453	Phone #	
Fax #		Fax #	

Parcel No(s). _____ **Type of Proposal – Please check boxes below that apply**

Requires Public Hearing (Class One)	FEES	Requires Public Hearing (Class Two)	FEES	Public Hearing Not required	FEES
☐ Preliminary Plat	\$500+AF	☐ Conditional Use	\$370+F	☐ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☐ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☐ Final Plat	\$500 +CF
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ Final Plat (reapplication)	\$400 +DF
☐ Comprehensive Plan Amendment	\$500+F			☒ Site/Design Review	\$400 + F

+ = Plus publication and notification charges

A = Plus \$50.00 per lot

B = Any preliminary plat which has previously been reviewed/revised within the last 36 months

C = Plus \$50.00 for each lot within the final plat

D = Any final plat which has been previously reviewed or/ revised within the last 36 months

E = Plus \$40.00 for each unit shown

F = Plus actual legal, engineering and financial consulting costs incurred by the Village

G = Plus \$25.00 per lot for two or more lots.

Escrow Deposits
(covers costs for outside consultants;
e.g., engineers, attorneys, etc.)

☐ R-E, R-3 & PD (up to 50 acres) \$5,000

☐ R-E, R-3 & PD (greater than 50 acres) \$10,000

☐ Commercial Site/Design Review (5,000 sq. ft. or more) \$2,000

☐ All Plats including condominiums \$5,000

Nature of the development proposal: Must provide address of proposed development, legal description, current zoning and description of proposal. (Attach additional paper if needed)

Expansion of the outdoor dining and consumption area for Angelo's McFarland, 4706 Farwell st McFarland, WI

What action is the applicant requesting of the Plan Commission?

Has this specific proposal been previously discussed or acted upon by the Plan Commission?

☐ YES ☒ NO (If "yes" state the nature and the date(s) of the previous application.)

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Village of McFarland Plan Commission 2020 Schedule

Angelo's McFarland
4706 Farwell St
McFarland, WI 53558

061003254201

061003254701

CSM 08529
Lot 2
0.907 ac

4712

CSM 01801
Lot 1
1.12 ac

4700

40.14'

105.44'

65.30'

12.39'

31.26'

103.71'

139.64'

CSM 02949
Lot 1
0.359 ac

061003254014

Existing Building
1995 52 Fr.

4706

124.79'

137.18'

CSM 08529
Lot 1
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061003254452

4710

MC FARLAND, VILLAGE OF ASSESSOR

Existing
Patio
15'x18'

270 sq ft

125.66'

Proposed
Patio Addition
28'x18'
504 sq ft

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FARWELL STREET

222.93'

110.00'

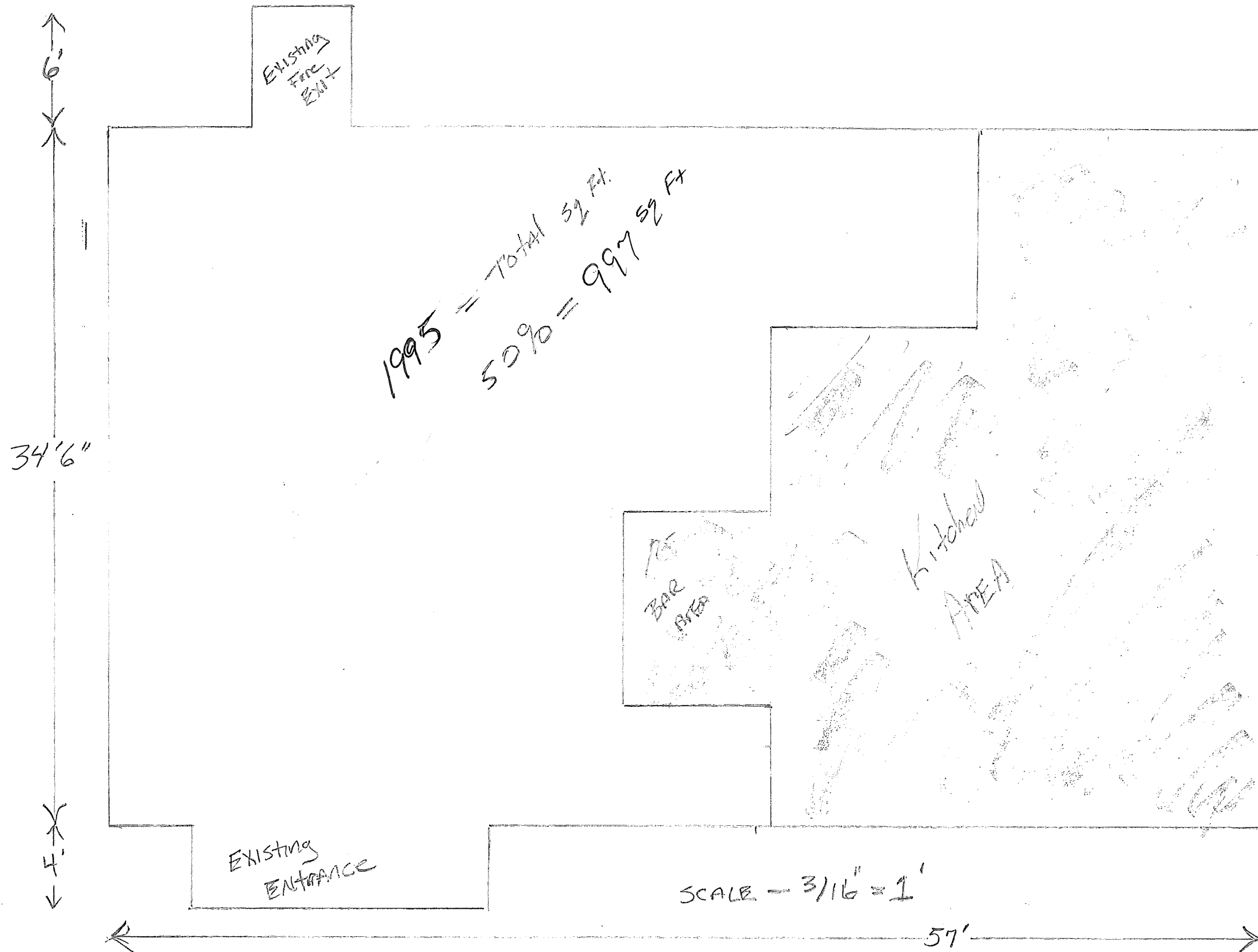
061003253271

CSM 13439

CSM 04120

ANGELLO'S MCFARLAND

4706 FARWELL ST







4' Tall

Angelo's McFarland
4706 Farwell St
McFarland, WI 53558



PUBLIC SAFETY COMMITTEE SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Cassandra Suettinger, Village Clerk/Treasurer, Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action on the request for expansion of the premise, associated site plan, and Limited License Agreement for the Class "B" Beer and "Class B" intoxicating Liquors License to add an outdoor seating area in the front of the McFarland House Cafe, located at 5923 Exchange St. for the license period ending June 30, 2020.

PREVIOUS ACTION:

May 20, 2020. Public Safety recommends Outdoor Consumption Area application.

May 18, 2020. Landmarks Commission approved Certificate of Appropriateness.

May 18, 2020. Plan Commission recommends Site Plan & Limited License Agreement.

ISSUE SUMMARY:

The McFarland House Cafe has applied to expand the licensed premise for their Class "B" Beer and "Class B" intoxicating Liquors License to include an outdoor consumption area in front of the restaurant. Attached is the memo outlining the request, and recommendations from Village Departments.

The proposed consumption area is 651 square feet. This request is due in part to the owners anticipation of losing existing indoor seating capacity due to what will be either recommended or required conditions under State order for the reopening of restaurants during the Covid-19 pandemic. As part of the Badger Bounce Back Plan, the WEDC and Wisconsin Department of Health Services released a Guidance on Preparing Restaurant Workplaces for COVID-19. The guidelines include, limiting dining room tables to six guests and spacing tables a minimum of six feet apart; and in bar areas leaving two bar stools empty between customers not in the same party with the same rule applied to outdoor patio areas.

The property is zoned Central Commercial (C-C) and is a local and state designated historic property. Because of the unique nature of the property a number of committee's have a role in reviewing this request, including Public Safety, Landmarks Commission, Plan Commission, and the Village Board.

Section 11-64(n) of the Municipal Code requires a 4-foot high fence for outdoor consumption areas, constructed of wood, plastic, or metal. The applicant is proposing a four foot-high white, wood, picket fence. In addition, the applicant proposes the inclusion of exterior overhead string lighting. The lighting component is



a non-permanent site improvement. The lighting would be connected to the existing freestanding signs which includes a photovoltaic sensor. Hours of operation will be Tuesday through Sunday up to 9 pm.

While the proposed fence will not alter the historic structure, Sec. 62-395(b)(2) provides, in part, that no person in charge of a historic site shall reconstruct or alter any part of the exterior of such structure or construct any improvement upon such designated historic site upon such property unless a certificate of appropriateness has been granted by the Landmarks Commission. Historic site is defined in the Zoning Code to include a parcel on which is situated a historic structure. The Landmarks Commission met on May 18th and approved the Certificate of Appropriateness.

In staff's opinion, the proposed accessory fence and exterior lighting are compatible with the design of the existing building and unobtrusive. The proposed four foot high white, wood, picket fence is architecturally and historically compatible with the existing primary building materials. The proposed improvements would not destroy or detrimentally change the existing historic structure or fail to harmonize with the external appearance of other neighboring improvements on the site.

Two additional points of interest related to this request:

1. **Parking.** The parking requirements of Sec. 62-172(j) are advisory only in the C-C District. Without social distancing requirements, the owner anticipates the patio area may accommodate up to 50 people. The requirement is for parking spaces equal to 30% of the dining capacity, or 15 in this case. On May 18th, the Plan Commission met and recommended no additional off-street parking need to be provided due to the fact that the property location offers greater access to on-street parking opportunities, there is a public parking lot adjacent to the property, the request to expand the outdoor patio is in correlation with likely decreased indoor seating capacity due to COVID-19 safe distancing guidelines/requirements, use of the outdoor area is seasonal and weather dependent, and many customers travel to the restaurant by bike given the locations proximity to the Lower Yahara River Trail.
2. **Limited License Agreement.** The existing front yard freestanding dual post sign is within the right-of-way on Exchange Street. The proposed fence would also be within the proposed ROW. The Village Attorney has drafted a Limited License Agreement for approval by the Village Board with the Outdoor Consumption Application that permits the owner to install these features and use the ROW for outdoor dining. The Agreement protects Village interests in the event there is a need to use the ROW or temporarily remove the sign or fence for public street or utility projects.

The Public Safety Committee will met on May 20 to review the Outdoor Consumption Area application. The Village Board will met on May 26 to review the same along with the Limited License Agreement.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:



Property is identified as Downtown use in the Village's Comprehensive Plan. One of the goals of the plan is to increase and ease opportunities for businesses to grow in McFarland and expand dining. Improving business retention and enhancing commercial uses in the downtown area are also two of the strategies identified in the Village's 2020-2030 Strategic Plan. In addition, evaluation of ways to become more business friendly and flexible for economic growth is included as in objective of the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:

Sec. 8-369, Fence Standards
Sec. 11-64(n), Outdoor Consumption
Sec. 62-71, Commercial District Permitted Use
Sec. 62-172(j), Parking Spaces Required
Sec. 62-310, Site/Design Review
Chapter 62, Division 6 - Historic Preservation

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

The Public Safety Committee unanimously recommends approval of the expansion of licensed premise for McFarland House Café Inc to include an approximately 651 square foot outdoor consumption area in front of the McFarland House Café with the condition that the applicant be required to install adequate lighting. The Landmarks Commission unanimously approved a Certificate of Appropriateness for the proposed fence and lighting. The Plan Commission unanimously recommended approval of the site plan and Limited License Agreement.

ATTACHMENTS:

1. Review and Recommendation - McFarland House Cafe - 05.12.2020 - FINAL
2. Police Chief Recommendations - McFarland House Cafe
3. Building Inspector Recommendations - McFarland House Cafe
4. Fire Inspector Recommendations - Expansion of Premise
5. Expansion of Premise Application - McFarland House Cafe
6. 5923 Exchange Street Site Plan Application_05.08.20
7. 5923 Exchange Street McFarland House License Agreement

MEMORANDUM

To: Public Safety Committee and Village Board

From: Cassandra Suettinger, Village Clerk/Treasurer

Date: May 12, 2020

RE: Expansion of Premise for McFarland House Café, 5923 Exchange St

Background: The current licensed premise for the McFarland House Café is the 1st floor and Basement of the main building.

In 2019, the McFarland House Café had brought previous proposals to expand their licensed premise for the 2nd and 3rd floor of the McFarland House Café, the Greenhouse and Basement, as well as a 1,300 square foot area. That approval will sunset on June 30, 2020, and the McFarland House Café is not interested in pursuing this expansion at this time. They will potentially bring back a proposal for phase 2 of their expansion to include the green house and an outdoor consumption area in the back at a later time.

Proposal: The McFarland House Café is proposing to expand their licensed premise to include an approximately 651 square foot outdoor consumption area in front of the Café. Attached are the site plans showed the proposed site plan.

Review: Village Ordinance 11-64n outlines the conditions and requirements for outdoor consumption areas within the Village. Below is a review of the proposal and its compliance with the required conditions.

Any application for a new license, the renewal of an existing license or a change in the description of licensed premises which seeks to include an outdoor area within the licensed premises' description shall require notice to each person owning property within 500 feet of the proposed licensed premises. The applicant shall prepay the cost of sending such notice before the notices are sent. The notice shall include a copy of the application and the date, time and location of any public hearings or other public meetings at which the application is scheduled to be considered.

On May 7, 2020, a notice was sent to all property owners within 500 feet of the propose licensed premise notifying them of the dates and times of the Public Safety and Village Board meetings along with a copy of the proposed site plan.

2) The application shall be accompanied by detailed plans or drawings demonstrating the size, location, surface and building materials, and use of the outdoor area, including fencing and signage, and any other information necessary to determine compliance with this Subsection. The outdoor consumption application, along with associated plans and drawings, shall be

reviewed for a recommendation by the Public Safety Committee and a final decision made by the Village Board.

Attached are the detailed plans outlining all the required items for the review and recommendation of the Public Safety Committee.

3) The Village Board may impose conditions specific to any outdoor areas of the licensed premises as deemed necessary to prevent undue adverse impacts on neighboring property, the character of the surrounding neighborhood, traffic conditions, parking or any other matter to protect the public health, safety, welfare or convenience, including, but not limited to:

a. Restricting the hours during which alcohol consumption may be permitted within the outdoor area;

No restriction recommendations identified by staff

b. Requiring additional parking beyond the minimum required by the Zoning Code;

* Community Development Director Andrew Bremer has reviewed the parking and provided the following report and recommendation:

The parking requirements of Sec. 62-172(j) are advisory only in the C-C District. Without social distancing requirements, the owner anticipates the patio area may accommodate up to 50 people. The requirement is for parking spaces equal to 30% of the dining capacity, or 15 in this case. Staff recommends waiving the requirement for additional off-street parking due to the fact that the property location offers greater access to on-street parking opportunities, there is a public parking lot adjacent to the property, the request to expand the outdoor patio is in correlation with likely decreased indoor seating capacity due to COVID-19 safe distancing guidelines/requirements, use of the outdoor area is seasonal and weather dependent, and many customers travel to the restaurant by bike given the locations proximity to the Lower Yahara River Trail.

c. Regulation of lighting and screening;

In Chief Sherven's letter, he recommends adequate lighting for the outdoor consumption area. Mr. O'Hearn has provided the lighting that will be used in the outdoor area, which Chief Sherven has approved to be adequate. An example of the lighting is attached within the packet.

d. Any conditions recommended by the Public Safety Committee;

To determined by the Committee if applicable.

e. Any conditions imposed by the Plan Commission as part of its required site plan review under Section 62-310 of this Code.

Plan Commission will review the site plan on May 18th and provide recommendation to the Village Board.

In addition to any specific conditions imposed under Subsections (2) and (3), the following shall be minimum conditions of all licenses with respect to outdoor areas unless the Village Board makes a specific finding that the condition is not necessary to protect the public health, safety or welfare:

a. Outdoor areas are prohibited within 50 feet of the lot line of a parcel zoned, or lawfully used for residential purposes. This prohibition shall not apply to prohibit an outdoor area where an accessory apartment exists on the same parcel as the licensed premises.

Compliant. The McFarland Tavern has a living space above it within 50 feet of the lot line; however, the McFarland Tavern is not zoned residential.

b. The hours during which alcohol consumption may be permitted within the outdoor area is restricted to 11:00 a.m. to 10:00 p.m. Sunday through Thursday; and 11:00 a.m. to 11:00 p.m. on Friday and Saturday.

Compliant.

c. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic, or metal and erected and maintained in accordance with all applicable Village ordinances. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes.

Proposed fence is compliant. However, see additional comments in Chief Sherven's letter regarding the fence.

d. Amplified music, speakers, microphones, televisions or other audio or video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and Section 11-69(f) if applicable.

Compliant. See additional information in Chief Sherven's letter.

e. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

Compliant. See additional comments on this provision contained within Chief Sherven's review.

f. The size of the outdoor area may not be larger than 50 percent of the gross floor area of the licensed premises within a permanent building. Interior building capacity shall not be increased as a result of the addition of the outdoor area. The playing area of any outdoor sports area permitted under Section 11-69 shall not be included for purposes of determining compliance with this subparagraph so long as the playing area is not permitted to be occupied by persons not participating in the sporting activity for which the playing area is designed.

Compliant. The applicant has only listed the square foot of the Café. The calculation allows the gross floor area of both the main floor and the basement as they are both part of this premise. This takes the gross square footage of the indoor licensed premise to be approximately 2721.60 square feet allowing the outdoor consumption area to be up to 1360 square feet. The proposed outdoor consumption area is 651 square feet.

g. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point."

Compliant. Applicant is aware of requirement.

h. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area.

Complaint. Applicant is aware of requirement.

i Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations.

Compliant. Applicant is aware of requirement.

j. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility.

Compliant. Both the Fire Inspector and Building Inspector reviewed the proposed plan and provided recommendation for approval.

k. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area.

Compliant, applicant is aware of requirement.

I. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older.

Not applicable. No sports activities proposed.

Recommendation: Staff recommends approval of the expansion of licensed premise for McFarland House Café Inc to include an approximately 651 square foot outdoor consumption area in front of the McFarland House Café with the condition that the applicant be required to install adequate lighting for the period ending June 30, 2020.

Cassandra Suettinger

From: Craig Sherven
Sent: Tuesday, May 5, 2020 11:55 AM
To: Cassandra Suettinger
Subject: Comments - McFarland House Cafe' Expansion

Having reviewed the proposed outdoor expansion, I am generally fine with it, with the below comments and a few cautions relating to the proposed use of outdoor amplification and fencing requirements. My comments are reflective only of those related to law enforcement related security, and not of fire safety, zoning, construction, lot line requirements, etc. Other staff will comment from those standpoints.

- **Regarding section 11-64 (N) of Village Ordinances:**

- o **(4)(C)** – Note that while the fencing proposed appears to be in technical compliance with ordinance requirements in terms of physical construction requirements related to height and material, it is in my opinion of questionable sufficiency to prevent the passage of alcoholic beverages to individuals on the outside due to its limited height, open construction and proximity to a public walkway. Applicant should be aware that this type of fencing will increase the ability to pass beverages to individuals outside the area, and increased visual supervision of the area would be prudent and highly recommended.
- o **(4)(D)** – Applicant should be aware that Village ordinance restricts and/or prohibits sound or noise as follows:
 - ② “tending to unreasonably disturb the peace and quiet of persons in the vicinity thereof unless the making and continuing of the same cannot be prevented and is necessary for the protection or preservation of property or of the health, safety, life, or limb of some person”
 - ② “The using, operating or permitting to be played, used or operated of any radio receiving set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device for the producing or reproducing of sound, which is cast upon the public streets for the purpose of commercial advertising or attracting attention of the public to any building or structure. Announcements over loudspeakers can only be made by the announcer in person and without the aid of any mechanical device.”
 - ② It’s important to understand that tolerance levels of other individuals vary greatly. What is reasonable to one may be completely unreasonable to another, thus it would be prudent to utilize any outdoor amplification cautiously and prudently.
- o **(4)(E)** – As an additional caution relating to relating to restrictions on noise and general character of the business, this section provides “The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience”.
- o **(3)(C) Lighting** – Applicant should be required to install adequate lighting so as to clearly monitor the area for compliance with statute and ordinance.



Craig J. Sherven

Chief of Police

McFarland Police Department

5915 Milwaukee Street

McFarland WI 53558

608-838-2352

Cassandra Suettinger

From: Building Inspector
Sent: Tuesday, May 5, 2020 7:57 AM
To: Cassandra Suettinger
Subject: RE: McFarland House Cafe - Expansion of Premise

Cassandra,

I looked over his proposal and saw nothing of concern building wise. I was questioning 4' high fence in front, but it looks like this is allowable in a commercial district.

Jim T

-----Original Message-----

From: Cassandra Suettinger <Cassandra.Suettinger@mcfarland.wi.us>
Sent: Tuesday, May 5, 2020 6:10 AM
To: Craig Sherven <Craig.Sherven@mcfarland.wi.us>; Chris Dennis <Chris.Dennis@mcfarland.wi.us>; Building Inspector <Buildinginspector@mcfarland.wi.us>
Cc: Mitchell Sutter <Mitchell.Sutter@mcfarland.wi.us>; Karen Knoll <Karen.Knoll@mcfarland.wi.us>; Matt Schuenke <Matt.Schuenke@mcfarland.wi.us>; Tanya O'Malley <tanya.omalley@mcfarland.wi.us>
Subject: McFarland House Cafe - Expansion of Premise

Good Morning,

Attached is the expansion of premise for the McFarland House Café. As I had indicated yesterday, this did not make it in time to be on the May 13th Public Safety Agenda. We are also working through an issue with this request as Shaun would need permission to occupy the road right-of-way for what is proposed. That can likely be deal with this week.

Please review the attached plans and provide your feedback by Friday May 15th at noon. If the timeline for this does not work, please let me know. We are looking to potentially have a special Public Safety Committee meeting the week of May 18th. While we would not normally do something like this, because of COVID19, I think making them wait another month may be a substantial hardship. This would line up approval for May 26th potentially which would coincident with the lifting of the stay at home orders.

Please let me know if you have questions or concerns.

Cassandra Suettinger, WCMC
Village Clerk/Treasurer
Village of McFarland
608-838-3153



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

Date: May 6, 2020

To: Public Safety Committee

From: Mitchell Sutter, Fire Inspector/Public Education Specialist

RE: McFarland House Cafe - Expansion of Premise

I have reviewed the proposal in the Expansion of Premise requested by McFarland House Café. At this time, McFarland Fire & Rescue do not observe any occupancy or fire hazards with the expansion and recommend approval of the application.

If you have any questions regarding the above, please contact me via phone at 608-838-3278 or via email at mitchell.sutter@mcfarland.wi.us

Sincerely,

A handwritten signature in black ink that reads "Mitchell Sutter".

Mitchell Sutter

Fire Inspector/Public Education Specialist

Cc: Chris Dennis, Fire & EMS Chief (McFarland Fire & Rescue Department)



Application for an Outdoor Consumption Area
Pursuant to Village Ordinance Chapter 11

***Any physical change to a licensed premise requires Village board approval.**

No Fee

1. Applicant Information

Name of Individual, Partnership, LLC, or Corporation that holds the current Alcohol Beverage License:

McFarland House Cafe Inc.

DBA:

McFarland House Cafe

Address of establishment:

5923 Exchange St

City, State and Zip Code:

McFarland WI 53558

Contact Name::

Shawn O'Hearn

Contact Telephone Number:

608 217 6356

2. Premise information

Gross floor area of the indoor licensed premise within a permanent building:

1568

Proposed Square Footage of Outdoor Area:*

651

**Outdoor area may not be larger than 50% of the gross floor area of the licensed premise within a permanent building without a variance granted by the Village Board. To request a variance, please see section 8 of the application.*

3. Outdoor Consumption Section

Is the proposed outdoor consumption area within 50 feet of the lot line of a parcel zoned, or used for residential purposes?*

☒ - No ☐ - Yes, see section 8 of application to request a variance

**This prohibition shall not apply to an outdoor area where an accessory apartment exists on the same parcel as the licensed premise.*

Will the outdoor area have amplified sound including but not limited to live music, loud speakers, call systems, etc.?

☐ - No ☒ - Yes.

Hours of operation for an outdoor consumption area shall be limited to Sunday through Thursday 11:00 a.m. to 10:00 p.m., and Friday and Saturday 11:00 a.m. to 11:00 p.m. Will the proposed outdoor consumption area meet this standard?

☒ - Yes ☐ - No, ☐ - Yes, see section 8 of application to request a variance

Is the proposed outdoor area directly connected to the indoor licensed premise?

☒ - Yes ☐ - No

If no, please attach a security plan that explains how alcohol will be served, and how alcohol consumption will be monitored. Provide specific details on how you intend to prevent consumption outside of the licensed premise and how you will prevent underage alcohol consumption.

4. Outdoor Sporting Activity Section

Will the proposed expansion involve an outdoor sporting activity area:?

☐ - Yes ☒ - No

If yes, you will need an outdoor sporting activity application in addition to this application.

5. Attachments/Requirements

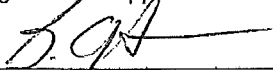
The following must be submitted with your application:

☒ - Site Plan or drawings demonstrating the size, location, surface, and building materials, fencing (not less than 4 ft in height), signage including proposed use of the outdoor area.

6. Certification

I certify that the information contained in this application is true and accurate to the best of my knowledge and belief. I agree to comply with all requirements of the Village Code of Ordinances and State Law.

Signature of Applicant:



Date:

4/30/2020

7. Standards for Outdoor Consumption Area

a. The perimeter of any outdoor portion of a licensed premises shall be enclosed by a permanent, secure fence not less than four feet in height. Such fence shall be constructed of wood, plastic or metal and erected and maintained in accordance with all applicable Village Ordinance. If the outdoor portion of a licensed premises is an outdoor sports area, the enclosure may instead be made by temporary netting not less than ten feet high during the applicable sports season. Such netting shall not be installed sooner than 14 days prior to, and shall be removed no later than 14 days after, the season or the period established under Section 11-69(f)(6)c., whichever is shorter. The outdoor area shall comply with all applicable building code requirements including the provision of readily distinguishable means of egress for fire and emergency purposes.

b. Hours of outdoor consumption are restricted to 11:00 a.m. to 10 p.m. Sunday through Thursday, and 11:00 a.m. to 11:00 p.m. on Friday and Saturday.

c. Amplified music, speakers, microphones, televisions and other audio video devices shall be subject to Chapter 20, Article III of the Village Code of Ordinances regarding Noise and section 11-69(f) if applicable. Commercial zoned shall be limited to 70 db at all times. Noise is measured at the property line. Outdoor amplification of noise is not allowed after 10 p.m.

d. A conspicuous notice shall be posted at each fire exit stating: "No Beer, Liquor or Wine May Be Carried in an Open Container Beyond this Point."

e. No bar/counter service shall be permitted in outdoor areas, however, wait staff may serve in the outdoor area.

f. Except for outdoor sports activities permitted under Section 11-69, the outdoor area shall not be used for any activities other than service and consumption of food and/or drink. Smoking may be permitted in accordance with applicable State and local regulations.

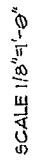
g. The outdoor area shall be accessible to the disabled, and the license holder shall at all times comply with all applicable federal, state and village laws, ordinances and regulation concerning accessibility.

h. Containers for refuse disposal and regular cleanup shall be placed inside of the outdoor area.

i. If the outdoor area is used for outdoor sports activities as permitted under Section 11-69 and persons under the age of 21 are allowed to be present on the licensed premises, all persons 21 years of age or older who intend to consume alcohol beverages in the outdoor area, shall be issued a wristband that is bright in color which shall be issued only upon showing valid identification proving the person is 21 years of age or older.

j. The outdoor area shall not have an undue adverse impact upon nearby property, the character of the neighborhood, traffic conditions, parking or other matter affecting the public health, safety, welfare, or convenience.

2 0 1 9 - 0 0 7



Existing covered store parking
Proposed outdoor parking area = 6514.2
Footprint for site interior = 15684.7
Outdoor percentage = 11.5%



HOMESTEAD

5.9.2019

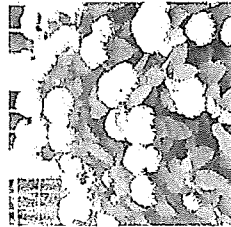
McFarland House
Cafe

McFarland WI

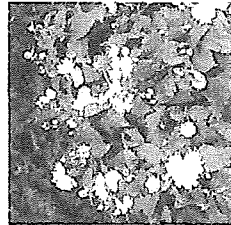
FRONT ACCESSORY AND PLANTING PLAN

VEGETATION KEY:

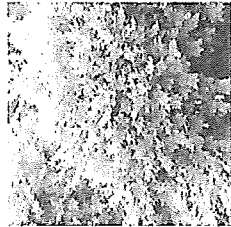
QTY	COMMON NAME
4	Hydrangea 'Annabelle'
8	Boxwood 'Green Velvet'
15	Mockorange 'Miniature Snowflake'
13	Cranesbill Geranium 'Rozanne'
31	Daylily 'Stella de Oro'



Annabelle Hydrangea
- Summer Bloom



Miniature Snowflake Mockorange
- Early Spring Bloom



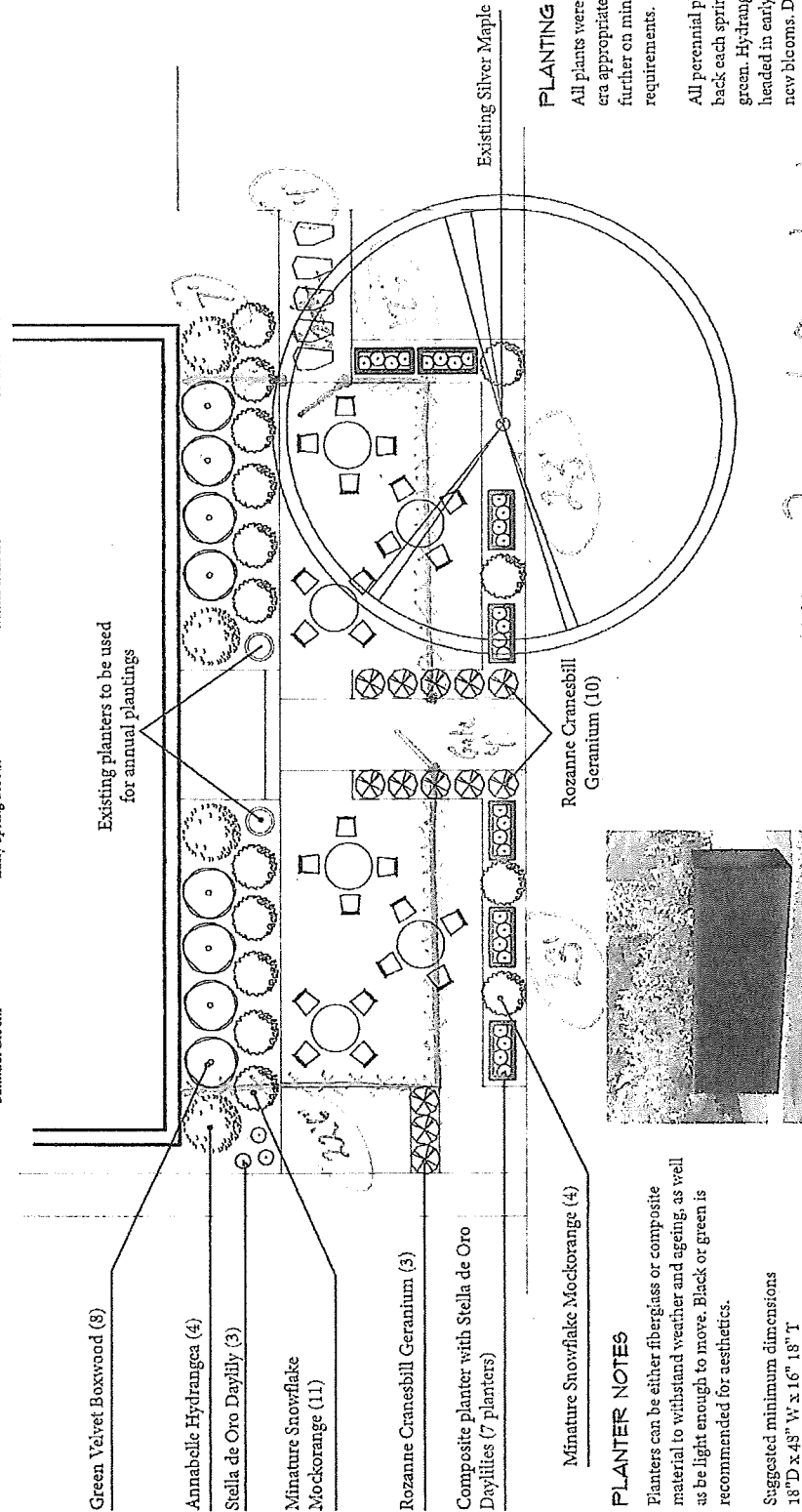
Green Velvet Boxwood
- Winter Interest



Rozanne Cranesbill Geranium
- Summer Bloom



Stella de Oro Daylily
- Summer and Fall Bloom

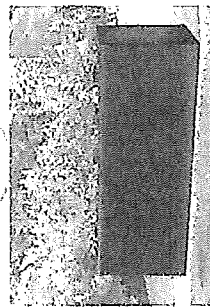


PLANTING NOTES

All plants were selected to be era appropriate and were chosen further on minimal maintenance requirements.

All perennial plants should be cut back each spring before they begin to green. Hydrangeas should be dead-headed in early spring to allow for new blooms. Do not cut hydrangea back to ground.

SCALE 1/8"=1'-0"



PLANTER NOTES

Planters can be either fiberglass or composite material to withstand weather and ageing, as well as be light enough to move. Black or green is recommended for aesthetics.

Suggested minimum dimensions
18" D x 48" W x 16" H

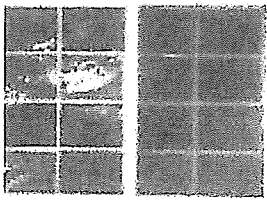
2019-007



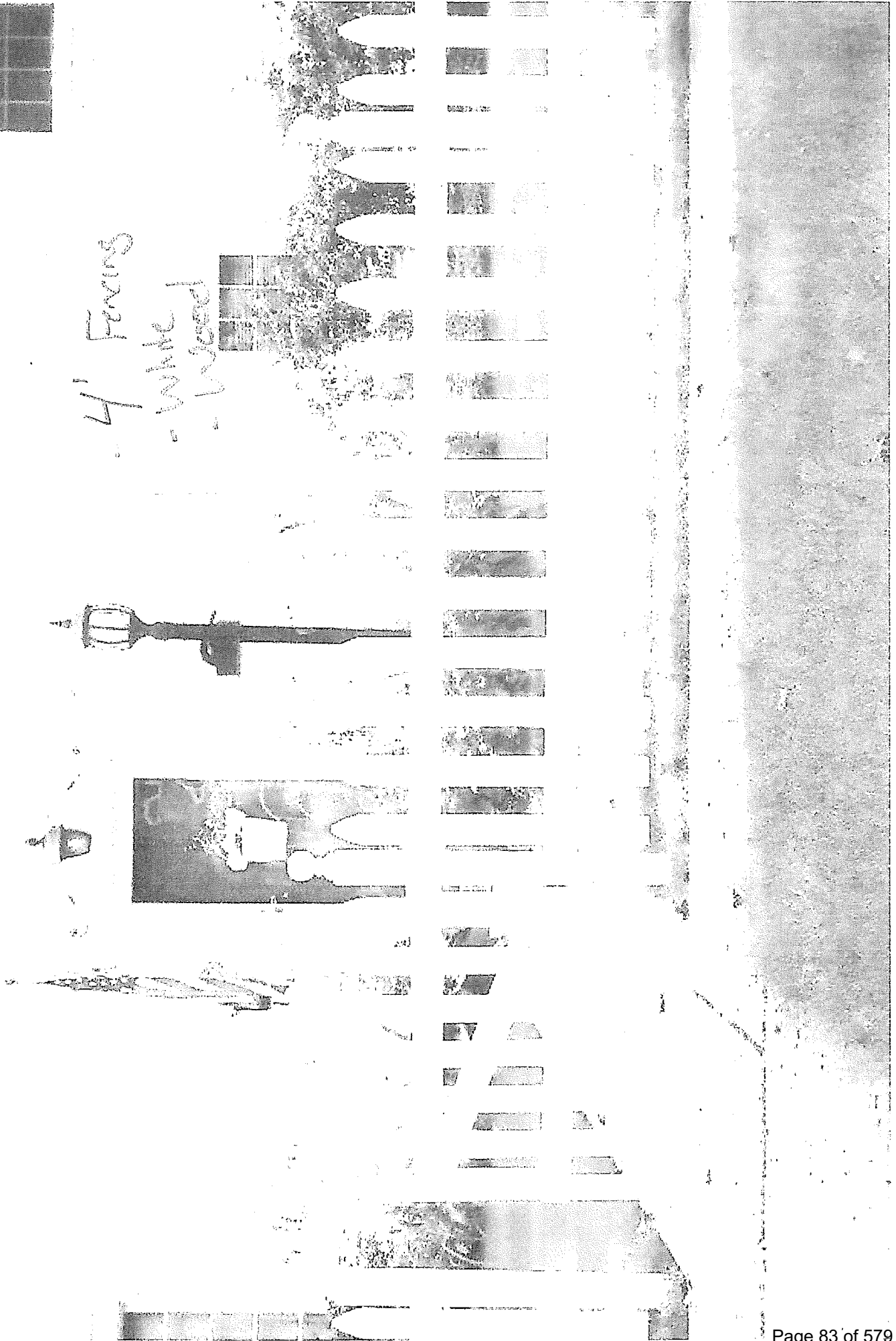
5.9.2019

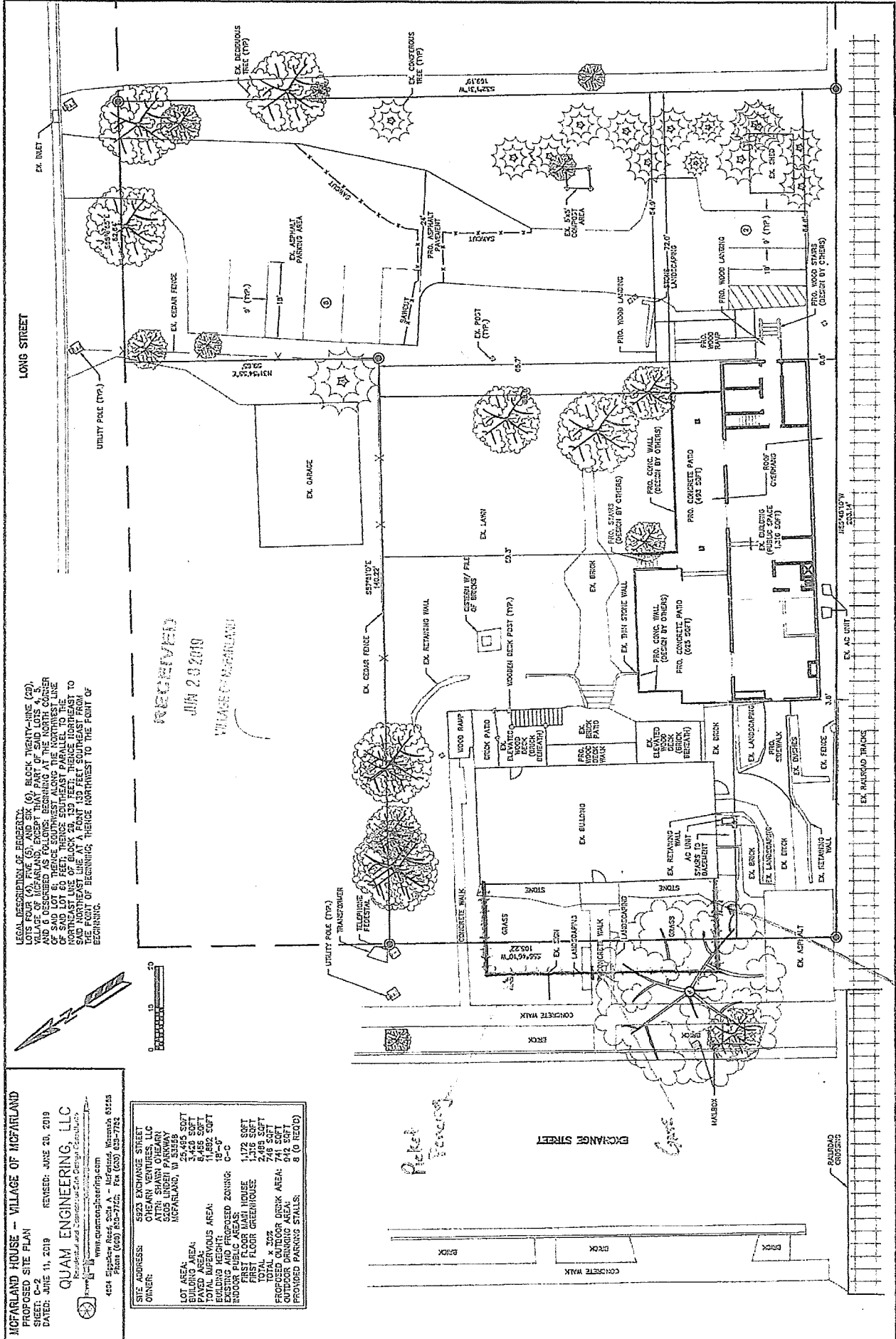
McFarland House
Cafe

McFarland WI



4' Fencing
- White
- Wood





McFARLAND HOUSE - VILLAGE OF McFARLAND
 PROPOSED SITE PLAN
 SHEET: C-2
 DATE: JUNE 11, 2019
 REVISION: JUNE 20, 2019

QUAM ENGINEERING, LLC
 Residential and Commercial Design Consultants
 4504 Siggekow Road, Suite A - McFarland, WI 53558
 (608) 838-7750
 www.quamengineering.com

SITE ADDRESS:	5923 EXCHANGE STREET
OWNER:	CHERRY VENTURES, LLC ATTN: SHAWN O'HEARN 5205 LINCOLN PARKWAY McFARLAND, WI 53558
LOT AREA:	3,440 SQFT
BUILDING AREA:	3,440 SQFT
PAVED AREA:	8,400 SQFT
LANDSCAPING AREA:	18'-0"
EXISTING AND PROPOSED ZONING:	C-C
INDOOR PUBLIC AREAS:	HOUSE
FIRST FLOOR GREENHOUSE:	1,172 SQFT
TOTAL x 20%	2,344 SQFT
SEWERED OUTSIDE DRAINAGE AREA:	748 SQFT
OUTSIDE DRAINAGE AREA:	912 SQFT
PROMISED PARKING STALLS:	8 (0 REQ'D)

**Village of McFarland
Community Development Department**

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	O'Hearn Ventures LLC	Applicant's Agent	Shaun O'Hearn
		Name	
Address	5923 Exchange St	Address	5205 Linden Parkway
Email	mcFarlandcafe@gmail.com	Email	mcFarlandcafe@gmail.com
Phone #	608 217 6356	Phone #	608 217 6356
Fax #		Fax #	

Parcel No(s). _____ **Type of Proposal – Please check boxes below that apply**

Requires Public Hearing (Class One)	FEES	Requires Public Hearing (Class Two)	FEES	Public Hearing Not required	FEES
☐ Preliminary Plat	\$500+AF	☐ Conditional Use	\$370+F	☐ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☐ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☐ Final Plat	\$500 +CF
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ Final Plat (reapplication)	\$400 +DF
☐ Comprehensive Plan Amendment	\$500+F			☒ Site/Design Review	\$400 + F

+ = Plus publication and notification charges

A = Plus \$50.00 per lot

B = Any preliminary plat which has previously been reviewed/revised within the last 36 months

C = Plus \$50.00 for each lot within the final plat

D = Any final plat which has been previously reviewed or/ revised within the last 36 months

E = Plus \$40.00 for each unit shown

F = Plus actual legal, engineering and financial consulting costs incurred by the Village

G = Plus \$25.00 per lot for two or more lots.

Escrow Deposits
(covers costs for outside consultants;
e.g., engineers, attorneys, etc.)

☐ R-E, R-3 & PD (up to 50 acres)	\$5,000
☐ R-E, R-3 & PD (greater than 50 acres)	\$10,000
☐ Commercial Site/Design Review (5,000 sq. ft. or more)	\$2,000
☐ All Plats including condominiums	\$5,000

Nature of the development proposal: Must provide address of proposed development, legal description, current zoning and description of proposal. (Attach additional paper if needed)

5923 Exchange Street, see attached for legal description
CC Zoning

What action is the applicant requesting of the Plan Commission?

To correct a fence on the west side of the McFarland House

Has this specific proposal been previously discussed or acted upon by the Plan Commission?

☐ YES ☒ NO (If "yes" state the nature and the date(s) of the previous application.)

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Schedule: The Village of McFarland Plan Commission conducts meetings on the third Monday of each month at 7:00 p.m. at the McFarland Municipal Center in the Community Room. To ensure adequate time for staff review, and publication of legal notices; all potential agenda item materials -are required to be submitted per the schedule listed below. Six (6) Copies of all materials, one (1) copy must be 8 ½ x 11, five (5) copies to be 11 x 17 and one (1) electronic copy (only one copy of application, completed in full, is necessary) shall be submitted to the Community Development Department (608-838-3154), with fees paid by ***NOON of the deadline day**, according to the following schedule:

Village of McFarland Plan Commission 2020 Schedule

***Submittal Deadline Noon on:** **For Scheduled 2020 Meeting date of:**
 December 12 (2019) -----January Tuesday Jan. 21

January 7-----February 17

February 11-----March 16

March 10-----April 20

April 7-----May 18

May 12-----June 15

June 9 -----July 20

July 7 -----August 17

August 11 -----September 21

September 8 -----October 19

October 6 -----November 16

November 3 -----December 21 (Pending)

December 8----- (Pending) Tuesday, Jan. 19, 2021

*** Submittal deadline: No exceptions are given for above deadlines**

- I understand failure to provide required materials/information/fees by the submittal deadline can result in this application being withdrawn for consideration by the Plan Commission. Materials submitted for review after the submittal deadline date, or incomplete submittals, will be held over until the next scheduled meeting.
- I understand any fees not paid for (i.e. legal notices, mailings, etc.) will require any permits to be withheld until all payments are made in full. In addition, all application fees are non-refundable.

X 

 Signature of Applicant/Agent

5/8/2020

 Date

USER ACCESS & USE PLAN

2019-007

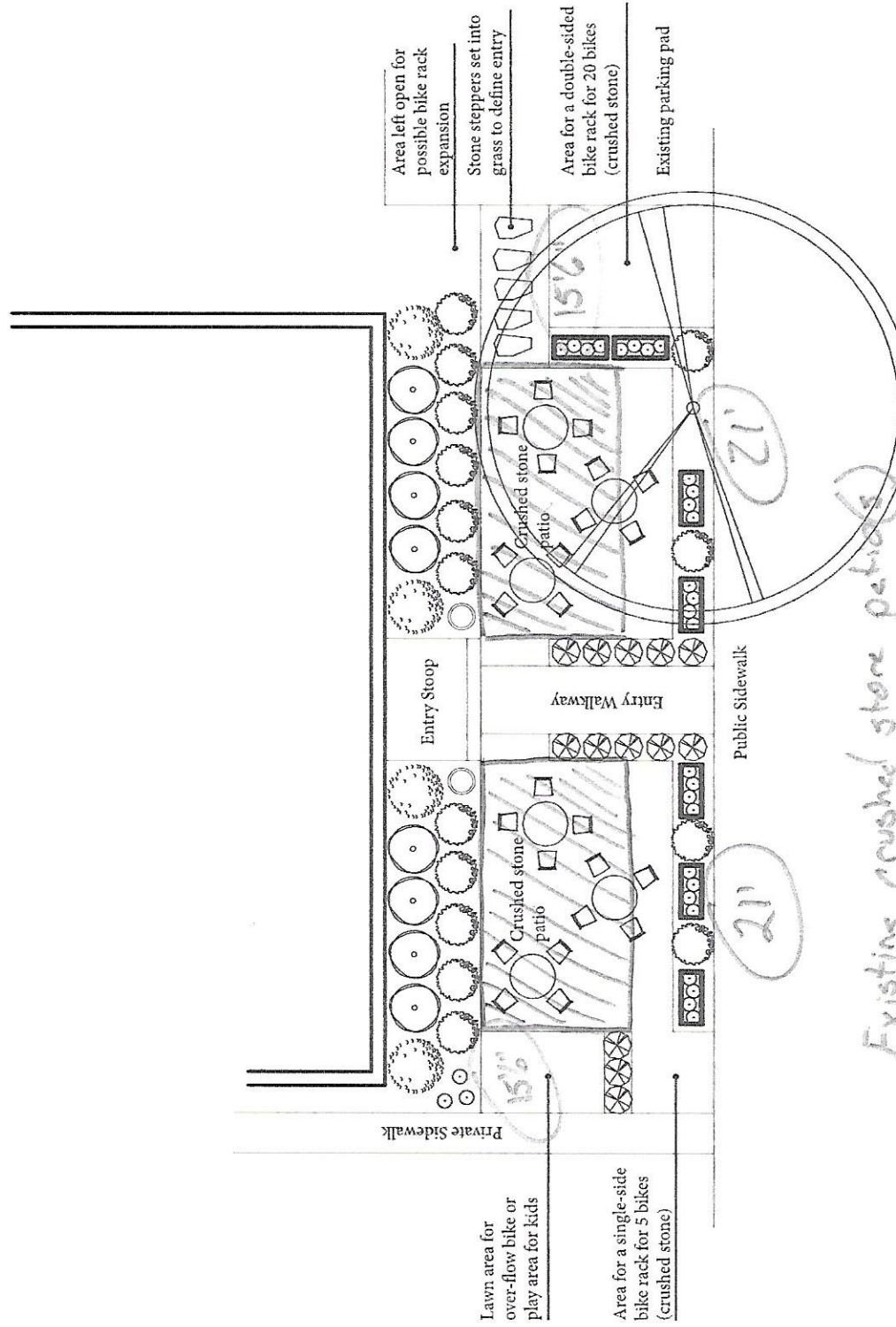


5.9.2019

McFarland House
Cafe

McFarland WI

SCALE 1/8"=1'-0"



Existing crushed stone patio(s)
Proposed outdoor drinking area = 651 ft²
Footprint for cafe interior = 1568 ft²
Outdoor percentage = 41.5%

McFARLAND HOUSE - VILLAGE OF McFARLAND
PROPOSED SITE PLAN
SHEET: C-2
DATE: JUNE 11, 2019
REVISED: JUNE 20, 2019

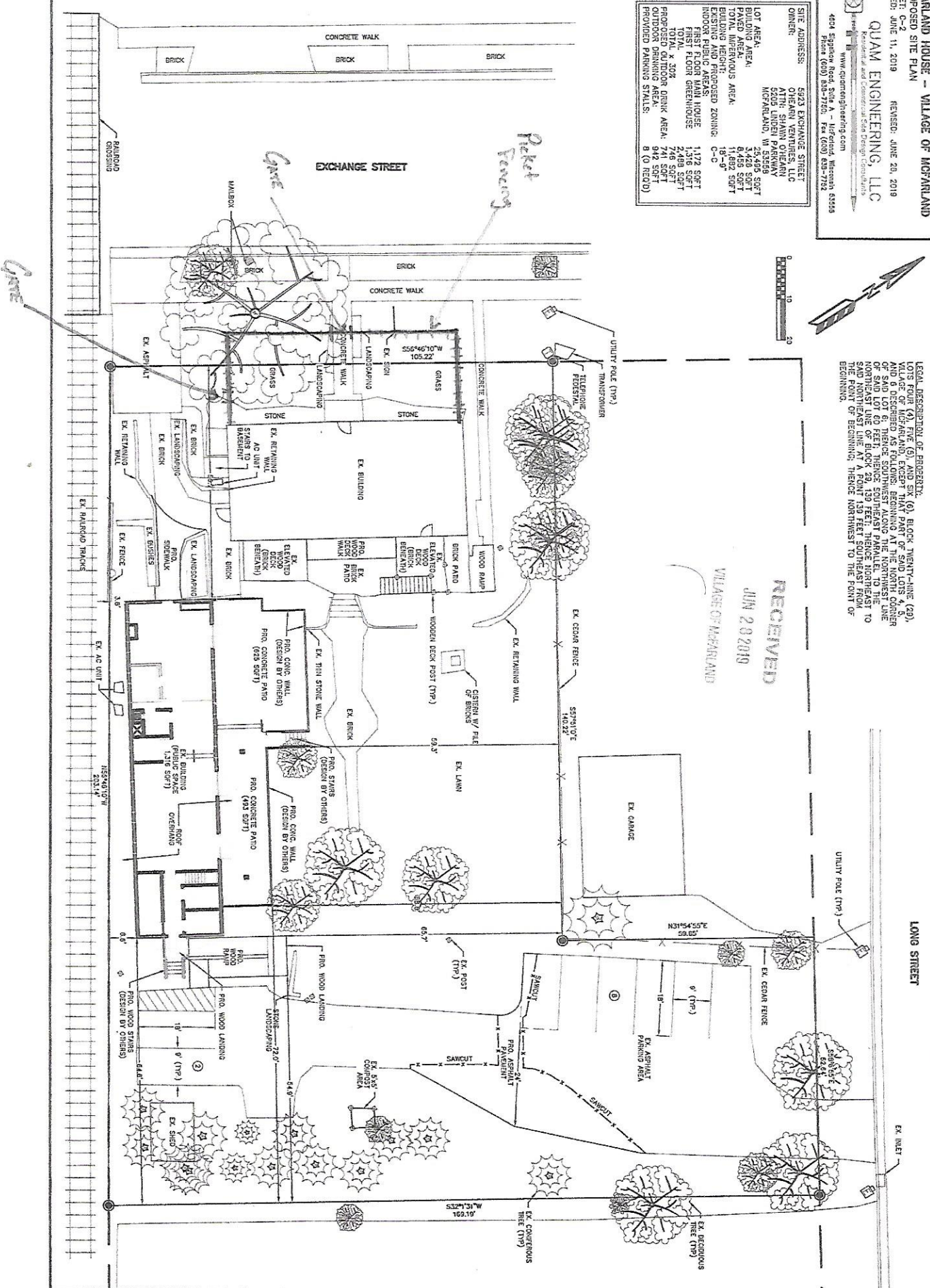
QUAM ENGINEERING, LLC
www.quamengineering.com
4604 Siggelkow Road, Suite A - McFarland, Wisconsin 53558
Phone (608) 838-7750, Fax (608) 838-7722

SITE ADDRESS:	5923 EXCHANGE STREET
OWNER:	O'HEARN VENTURES, LLC
ATTY:	SHAWN O'HEARN
5205 LINCOLN PARKWAY	
McFARLAND, WI 53558	
LOT AREA:	1.172 ACRES
BUILDING AREA:	3,428 SQFT
PAVED AREA:	8,482 SQFT
TOTAL IMPROVED AREA:	11,910 SQFT
EXISTING AND PROPOSED ZONING:	C-2
INDOOR PUBLIC AREAS:	1,172 SQFT
FIRST FLOOR MAIN HOUSE:	1,172 SQFT
TOTAL:	2,488 SQFT
PROPOSED OUTDOOR DECK AREA:	746 SQFT
OUTDOOR DECK AREA:	842 SQFT
PROVIDED PARKING STALLS:	8 (0 REQUIRED)

LEGAL DESCRIPTION OF PROPERTY:
LOTS FOUR (4), FIVE (5), AND SIX (6), BLOCK TWENTY-NINE (29), VILLAGE OF McFARLAND, EXCEPT THAT PART OF SAID LOTS 4, 5, AND 6 DESCRIBED AS FOLLOWS, BEGINNING AT THE NORTH CORNER OF SAID LOT 4, THENCE SOUTHEAST ALONG THE LINE OF SAID LOT 4 TO 60 FEET, THENCE SOUTHEAST PARALLEL TO THE NORTHWEST LINE OF BLOCK 29, 139 FEET, THENCE NORTHEAST TO SAID NORTHEAST LINE AT A POINT 139 FEET SOUTHEAST FROM THE POINT OF BEGINNING, THENCE NORTHWEST TO THE POINT OF BEGINNING.

RECEIVED
JUN 20 2019
VILLAGE OF McFARLAND

LONG STREET









LIMITED LICENSE AGREEMENT

Between the Village of McFarland and O'Hearn Ventures LLC

This Agreement is entered into effective as of the last date of signature below, by and between the Village of McFarland, Wisconsin, a municipal corporation, (hereafter referred to as "the Village") and OHEARN VENTURES LLC, a Wisconsin limited liability company (hereafter referred to as "O'Hearn").

WHEREAS, O'Hearn owns and operates a tavern/restaurant facility located at 5923 Exchange Street in the Village; and

WHEREAS, O'Hearn installed and continues to maintain a business sign in front of its property in the public right-of-way of Exchange Street; and

WHEREAS, O'Hearn has requested approval from the Village of an expansion of its outdoor seating area between its building and Exchange Street, including an area within the public right-of-way; and

WHEREAS, the Village is willing to grant O'Hearn a limited license to use a portion of the Exchange Street right-of-way for such purposes, and to allow for construction of a fence to enclose the seating area on the terms and conditions contained herein.

NOW, THEREFORE, in consideration of one dollar, the mutual promises and obligations contained herein, and other valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, the parties agree as follows:

1. Grant of License. The Village hereby grants to O'Hearn a limited license to occupy and use that portion of the public right-of-way of Exchange Street northwest of the front of its building at 5923 Exchange Street as depicted in Exhibit A and labeled as "Licensed Area A" for the purpose of constructing, operating, maintaining, repairing, and replacing a seating and service area for customers of its business at that location, including the right to enclose Licensed Area A with a fence (hereinafter referred to as "the Improvements") as provided herein. The design, style and methods of construction of any fence shall be subject to approval by the Village. Any other fixtures or other construction within Licensed Area A must be first approved by the Village.

The Village further grants to O'Hearn a limited license to maintain an existing business sign, or any replacement thereof approved by the Village, in the portion of the public right-of-way of Exchange Street in front of said building in the area depicted in Exhibit A and labeled "Licensed Area B." Licensed Area A and Licensed Area B are referred to herein collectively as the "Licensed Areas."

2. Compliance with Laws. The use of the Licensed Areas, and the construction, installation and use of all Improvements therein, shall conform to all Village ordinances and regulations, the site plan attached hereto as Exhibit A, all conditions imposed on the approval of

said plan and all conditions imposed as conditions to any alcohol beverage license issued by the Village. O'Hearn shall assure that any contractors performing any excavation within the Leased Areas have obtained the permits required by Village Ordinances and carry worker's compensation insurance to the extent required by law.

3. Cost of Improvements. All construction or installation of any Improvements shall be at the sole expense of O'Hearn. O'Hearn shall ensure that the Licensed Areas are not impaired by any contractor's or other liens as a result of work performed on behalf of O'Hearn, and shall provide lien waivers or other documents acceptable to the Village confirming that all contractors have been fully paid.

4. Maintenance of Improvements. O'Hearn shall be solely responsible for all necessary maintenance and repair of the Improvements, and shall keep the Improvements in a neat and attractive condition at all times.

5. Indemnification. O'Hearn shall indemnify and hold the Village harmless from and against any and all liability and damages arising from O'Hearn's use of the Licensed Areas as authorized by this Agreement. The term "liability" shall include all claims, suits, actions, costs, penalties, fines, forfeitures, remedial action or abatement expenses, attorney fees, litigation expenses, damages, judgments or decrees.

6. No Vested Rights. O'Hearn acknowledges that this Agreement does not grant it any rights to, or interest in, the Licensed Areas other than a limited license to install and maintain the Improvements and use the Licensed Areas in the manner provided herein. The Village makes no warranty or representation that the Licensed Areas are suitable for the purposes authorized hereby.

7. No Village Liability. O'Hearn shall be solely responsible for the conduct of its operations and the protection of its Improvements within the Licensed Areas and the Village shall have no liability therefor. O'Hearn acknowledges and agrees that it is solely responsible for determining and maintaining the safety and suitability of the Licensed Areas for use in its operations. O'Hearn shall maintain at all times while using the Licensed Areas one or more policies of commercial general liability insurance written on an occurrence basis with limits of liability for bodily injury and property damage of not less than \$1,000,000 per occurrence, naming the Village as an additional insured. Said insurance shall be primary and noncontributory and include a waiver of subrogation in favor of the Village. O'Hearn shall provide the Village with a certificate of insurance evidencing the required coverage prior to constructing any new Improvements in the Licensed Areas, and upon each renewal. The certificate shall be accompanied by a copy of the policy provisions or endorsement providing the additional insured coverage for the Village.

8. Assignment. The license granted by this Agreement is personal to O'Hearn and none of the rights granted hereby may be assigned to any other person or entity without the prior written consent of the Village.

9. Removal of Improvements. The rights granted to O'Hearn by this Agreement are subject and subordinate to the rights of the Village in the use of the public right-of-way of Exchange Street. In the event the Village undertakes any public work within such right-of-way, O'Hearn shall, on 10 days' notice from the Village, temporarily or permanently remove its Improvements to facilitate such work at its sole expense. In the event O'Hearn fails to do so within the time allowed by the Village, O'Hearn waives any and all claims it may have resulting from damage to, or destruction of, any such Improvements and agrees to reimburse the Village for any costs incurred for its removal of the Improvements or additional construction or other project costs resulting from the failure to remove them.

10. Termination. O'Hearn acknowledges and agrees that, pursuant to §66.0425, Wis. Stats., the rights granted by this Agreement may be terminated on 10 days' notice from the Village. O'Hearn further waives any and all right it may have to contest in any manner the validity of §66.0425, Wis. Stats. on any basis whatsoever.

11. Neutral Construction. The parties acknowledge that this Agreement is the product of negotiations between the parties and that, prior to the execution hereof, each party has had full and adequate opportunity to have this Agreement reviewed by, and to obtain the advice of, its own legal counsel with respect hereto. Nothing in this Agreement shall be construed more strictly for or against either party because that party's attorney drafted this Agreement or any part hereof.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the last date of signature below.

VILLAGE OF McFARLAND

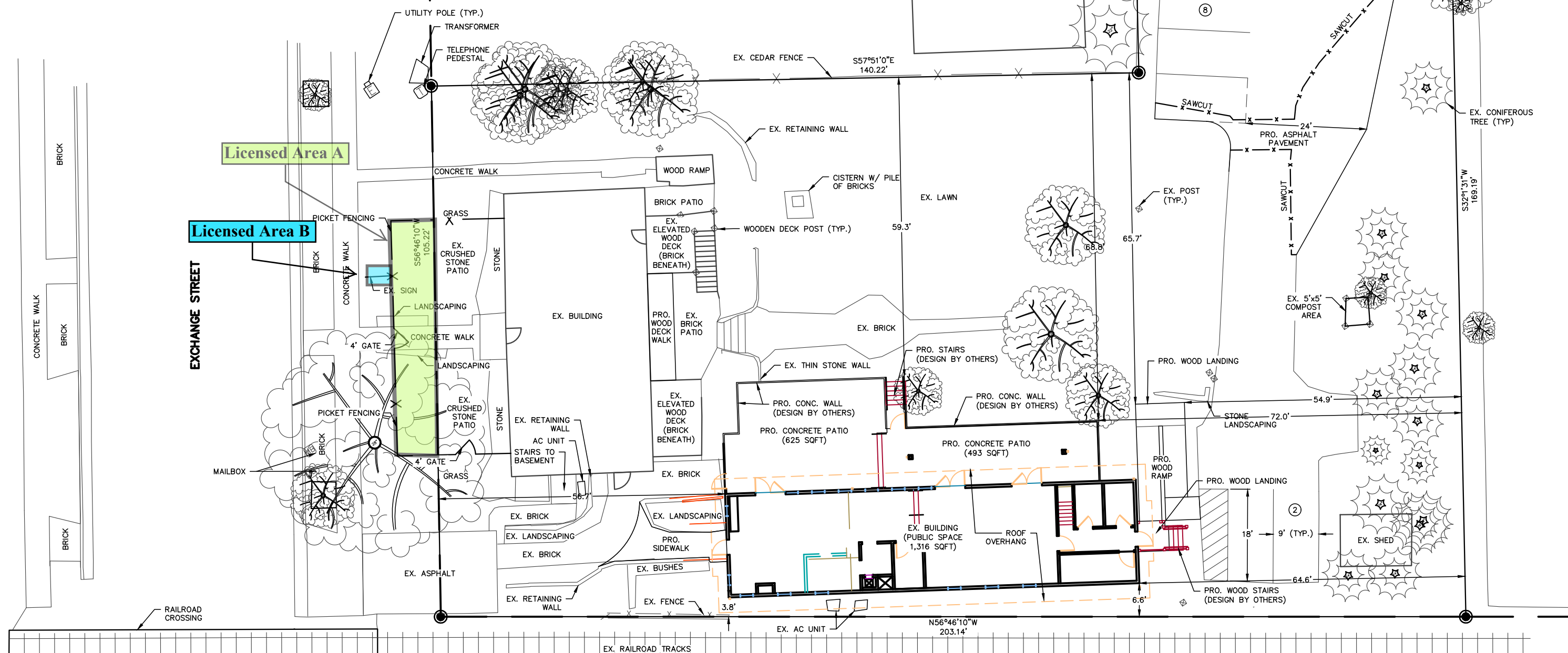
OHEARN VENTURES LLC

By: _____
Brad Czebotar (date)
Village President

By: SCA 5/8/2020
Shaun T. O'Hearn, Member (date)

Attest: _____
Cassandra Suettinger (date)
Village Clerk/Treasurer

EXHIBIT A





PLAN COMMISSION SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding Ordinance #2020-15: an ordinance to annex lands from the Town Dunn to the Village of McFarland.

PREVIOUS ACTION:

May 18th, 2020. Plan Commission unanimously recommended approval of Ordinance 2020-15, including temporarily zoning the lands in the annexation petition to the A-1 Agriculture Transition District.

ISSUE SUMMARY:

Utterback Limited Partnership and the WisDOT have submitted a petition (#14299) for direct annexation by unanimous approval. The request includes two parcels owned by Utterback Limited Partnership totaling 53.47 acres lying west of CTH AB on the east side of the Village in the Town of Dunn. The petition also includes lands owned by the WisDOT as part of the Wisconsin & Southern Railroad corridor from Elvehjem Road to the existing Village boundary near Tuscobia Trail. The population of the territory to be annexed is zero. The petition has been signed by Wayne Utterback, Manager of Utterback Limited Partnership and Lisa Stern Chief of Railroads and Harbors, WisDOT. The petition includes a legal description and scale map. Within the packet is a review letter provided by the Wisconsin Department of Administration in which they have provided an opinion that the proposed annexation is in the public interest.

The Utterback properties (parcel # 0610-024-8070-0 & 0610-024-9501-0) are undeveloped consisting of agricultural and open spaces areas. The existing zoning of the properties are FP-35 Farmland Preservation under the Dane County Zoning Code. Utterback desires to annex these properties into the Village, and then divide the properties for sale to three separate entities. Veridian Homes intends to purchase 36.3 acres of land lying north of the railroad, and southwest of the existing natural gas line on the property, to develop the proposed Rosewood Fields subdivision. Urso Bros intends to purchase the portion of the property south of the railroad (15.72 acres) to develop small multi-family residential housing on a portion of the property suitable for such uses adjacent to CTH AB. Nancy Utterback (3029 CTH AB) intends to purchase the remaining 1.96 acres lying on the northeast side of the existing natural gas line adjacent to her existing residence (3029 CTH AB), for the purpose of continued open space and agricultural uses. Note, Nancy has expressed interest to Village Staff in the possibility of eventually detaching her ownership interest back to the Town of Dunn to enable her to consolidate her existing and future properties (4 parcels) as one parcel. This request will be considered at a later date, after consideration of the annexation petition and land division applications, and upon receipt of a written request.

Ordinance 2020-15 recommends temporarily zoning the lands in the annexation petition to the Village's A-1



Agriculture Transition District. The purpose of the Agriculture-Transition District is to "preserve in agricultural and related open space uses those lands generally located in proximity to developed areas within the Village where urban expansion is likely and in keeping with long-term plans for development. It is intended that urban development be deferred in such areas until the appropriate authorities determine that it is economically and financially feasible to provide public services and facilities. It is also intended that the status of all areas in this district be reviewed by the appropriate authorities periodically in order to determine whether, in light of current land development trends, there should be a transfer of all or any part of those areas to some other appropriate use district. Any such review will consider local and regional land use plans. Existing homes are grandfathered as are existing house lots. No new house lots can be created without rezoning." Parcel 0610-024-9501-0 will be non-conforming in lot size to the minimum requirements of the A-1 District; however, the temporary zoning designation is consistent with the purpose of the A-1 District, the existing uses of the property, and development intentions.

FINANCIAL/BUDGET IMPACT:

The unimproved Utterback properties have an assessment value of \$11,800. The portion of annual property taxes paid to the Town of Dunn total \$36.10. Per state statute, the Village will provide the Town with a payment equal to 5 years of the property taxes, or \$180.50. This cost will be recouped through the property taxes collected by the Village from the future development of the properties.

VILLAGE PLAN REFERENCE:

The Village's Comprehensive Plan, Future Land Use Map, designates the future land uses of these properties as future Neighborhood. The comp plan references the Village's separate East Side Neighborhood Growth Area Plan for further conceptual guidance. The Utterback property is identified for Traditional Residential with associated Parks and Open Space. According to the plan, Traditional Neighborhood Areas are predominantly owner-occupied and intended to contain a combination of single-family, two-family, and 3-4 unit structures at a minimum density of four units per acre.

The majority of the annexation area also lies within the Village and Town of Dunn Boundary Agreement from 2005. Exhibit C of the Agreement includes the Village's Proposed East Side Growth Boundary. The portion of the annexation petition that lies outside the East Side Growth Boundary includes about half of the Wisconsin & Southern Railroad ROW from CTH AB to Elvehjem Road. This ROW is adjacent to property within the Village and the WisDOT desires to include all of their ROW that is adjacent to the Village's existing boundary within this petition. Section 2 of the Agreement restricts the Town from purchasing conservation easements and opposing annexations within the Proposed East Side Growth Boundary. The Agreement does not restrict or prevent the Village from annexing territory outside of the Proposed East Side Growth Boundary except as identified in Exhibit B of the Agreement (Map of No Annexation Buffer Area), which is not applicable to this annexation.

In addition, pursuing annexation requests to diversify land uses is included as an action step as part of the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:

Sec. 62-68 A-1 Agriculture Transition Statement of Purpose.



BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend Village Board approval of Ordinance 2020-15.

ATTACHMENTS:

1. 2020-15 Annexing Lands from the Town of Dunn
2. 13 - Utterback Plan Commission Application 2020.04.07
3. Utterback Revised Petition Of Annexation (Executed 5.1.2020)
4. 14299 Questionnaire - McFarland Response_04.16.20
5. 14299_WDOA Review Letter_05.04.2020

ORDINANCE NO. 2020-15
AN ORDINANCE ANNEXING LANDS FROM THE
TOWN OF DUNN TO THE VILLAGE OF
MCFARLAND

The Village Board of the Village of McFarland do ordain as follows:

WHEREAS, a proper petition having been presented seeking direct annexation, pursuant to Wis. Stats. §66.0217(2), of the property legally described on Exhibit "A," attached hereto, to the Village of McFarland, Wisconsin; and

WHEREAS, the signatories on the petition constitute the qualified electors, and the owners of the real property in assessed value within the territory legally described in Exhibit "A;" and

WHEREAS, a scale map of the land proposed for annexation is attached hereto as Exhibit "B;" and

WHEREAS, the current population of the annexed property is 0; and

WHEREAS, pursuant to Wis. Stats. §66.0217(14)(a)1. the Village shall pay to the Town of Dunn for the property legal described in Exhibit "A," annually for 5 years, an amount equal to the property taxes that the Town of Dunn would levy on the annexed territory identified in Exhibit "A" and as graphically depicted in Exhibit "B;" and

WHEREAS, the Department of Administration has reviewed the proposed annexation under Wis. Stats. §66.0217(6)(a) and has found that the annexation is in the public interest; and

WHEREAS, upon recommendation of the McFarland Plan Commission, the territory annexed to the Village of McFarland by this ordinance is temporarily zoned A-1 Agriculture-Transition District, pursuant to Wis. Stats. 66.0217(8)(a).

NOW, THEREFORE, the above-described property is hereby annexed from the Town of Dunn and is hereby located in Ward 4 of the Village of McFarland, and in the School District of McFarland, County Supervisory District 34, Assembly District 47 and Senate District 16.

This Ordinance shall take effect upon its passage.

[signature page follows]

Cassandra Suettinger
Village of McFarland
P.O. Box 110
McFarland, WI 53558-0110

Tax Parcel No. 028/0610-024-8070-0
Tax Parcel No. 028/0610-024-9501-0

Adopted on roll call at a regular meeting of the Village Board of the Village of McFarland held on the 26th day of May, 2020.

APPROVED:

Brad Czebotar, Village President

ATTEST:

Cassandra Suettinger, Clerk

ORDINANCE 2020-15	
MOTION	SECOND
ACTION	
DATE	
Adopted	
Referred	
Tabled	
Withdrawn	
Defeated	
Published	
INDIVIDUAL	
VOTING RECORD	
Brassington -	Kryzenske -
Clow -	Rupert -
Czebotar -	Utter -
Flaherty -	
VOTING	
RESULTS	
Motion Carried:	
Motion Defeated:	

**Village of McFarland
Community Development Department**

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	Utterback Ltd. Partnership	Applicant's Agent	D'Onofrio Kottke and Associates, Inc.
	c/o Wayne Utterback	Name	c/o Dan Day
Address	4627 Prairie Fire Ct., DeForest, WI	Address	7530 Westward Way, Madison, WI
Email	wayneutterback@icloud.com	Email	dday@donofrio.cc
Phone #	608-999-1999	Phone #	608-833-7530
Fax #		Fax #	

Parcel No(s). 0610-024-9501-0 & 0610-024-8070-0 **Type of Proposal – Please check boxes below that apply**

Requires Public Hearing (Class One)	FEES	Requires Public Hearing (Class Two)	FEES	Public Hearing Not required	FEES
☐ Preliminary Plat	\$500+AF	☐ Conditional Use	\$370+F	☒ Annexation	At cost
☐ Preliminary Plat (reapplication)	\$500+BF	☐ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F
☒ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☐ Final Plat	\$500 +CF
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ Final Plat (reapplication)	\$400 +DF
☐ Comprehensive Plan Amendment	\$500+F			☐ Site/Design Review	\$400 + F
+ = Plus publication and notification charges Fee = \$300.00 + \$75.00(3) = \$450.00 A = Plus \$50.00 per lot B = Any preliminary plat which has previously been reviewed/revised within the last 36 months C = Plus \$50.00 for each lot within the final plat D = Any final plat which has been previously reviewed or/ revised within the last 36 months E = Plus \$40.00 for each unit shown F = Plus actual legal, engineering and financial consulting costs incurred by the Village G = Plus \$25.00 per lot for two or more lots.				Escrow Deposits (covers costs for outside consultants; e.g., engineers, attorneys, etc.) ☐ R-E, R-3 & PD (up to 50 acres) \$5,000 ☐ R-E, R-3 & PD (greater than 50 acres) \$10,000 ☐ Commercial Site/Design Review (5,000 sq. ft. or more) \$2,000 ☐ All Plats including condominiums \$5,000	

Nature of the development proposal: Must provide address of proposed development, legal description, current zoning and description of proposal. (Attach additional paper if needed)

Annexation and CSM to facilitate development of parcel

What action is the applicant requesting of the Plan Commission?

Adoption of Annexation Petition and approval of CSM

Has this specific proposal been previously discussed or acted upon by the Plan Commission?

☐ YES ☒ NO (If “yes” state the nature and the date(s) of the previous application.)

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Village of McFarland Plan Commission 2020 Schedule

REVISED PETITION FOR DIRECT ANNEXATION
BY UNANIMOUS CONSENT
(Wis. Stats. § 66.0217(2))

TO:	Village of McFarland	Town of Dunn
	Attn: Village Clerk	Attn: Town Clerk
	5915 Milwaukee Street	4156 County Road B
	P.O. Box 110	McFarland, WI 53558
	McFarland, WI 53558-0110	

The undersigned, being all of the electors residing in and owners of all of the real property in the Territory do hereby unanimously petition the Village of McFarland for the purpose of annexing the Territory from the Town of Dunn to the Village of McFarland.

The “Territory” proposed for annexation from the Town of Dunn to the Village of McFarland is more particularly described on the attached Exhibit A, and is shown on the scale map attached as Exhibit B. The Territory is located in Dane County, Wisconsin.

The undersigned do hereby request that this annexation be approved and take effect in the manner provided for by law.

There are no electors residing in the Territory. The population of the Territory is zero.

This Petition for Annexation is filed pursuant to Wis. Stats. § 66.0217(2).

[SIGNATURES ON FOLLOWING PAGES]

cc: Wisconsin Department of Administration

SIGNATURE PAGE
REVISED PETITION FOR DIRECT ANNEXATION BY UNANIMOUS CONSENT
Of
UTTERBACK LIMITED PARTNERSHIP

UTTERBACK LIMITED PARTNERSHIP

By: Utterback Farm LLC, General Partner


Wayne Q. Utterback, Manager

Date: 4/30/2020

SIGNATURE PAGE
REVISED PETITION FOR DIRECT ANNEXATION BY UNANIMOUS CONSENT
Of
WISCONSIN DEPARTMENT OF TRANSPORTATION

WISCONSIN DEPARTMENT OF TRANSPORTATION

By:  Date: 4-29-2020
Name: LISA A. STERN
Title: CHIEF RAILROADS AND HARBORS

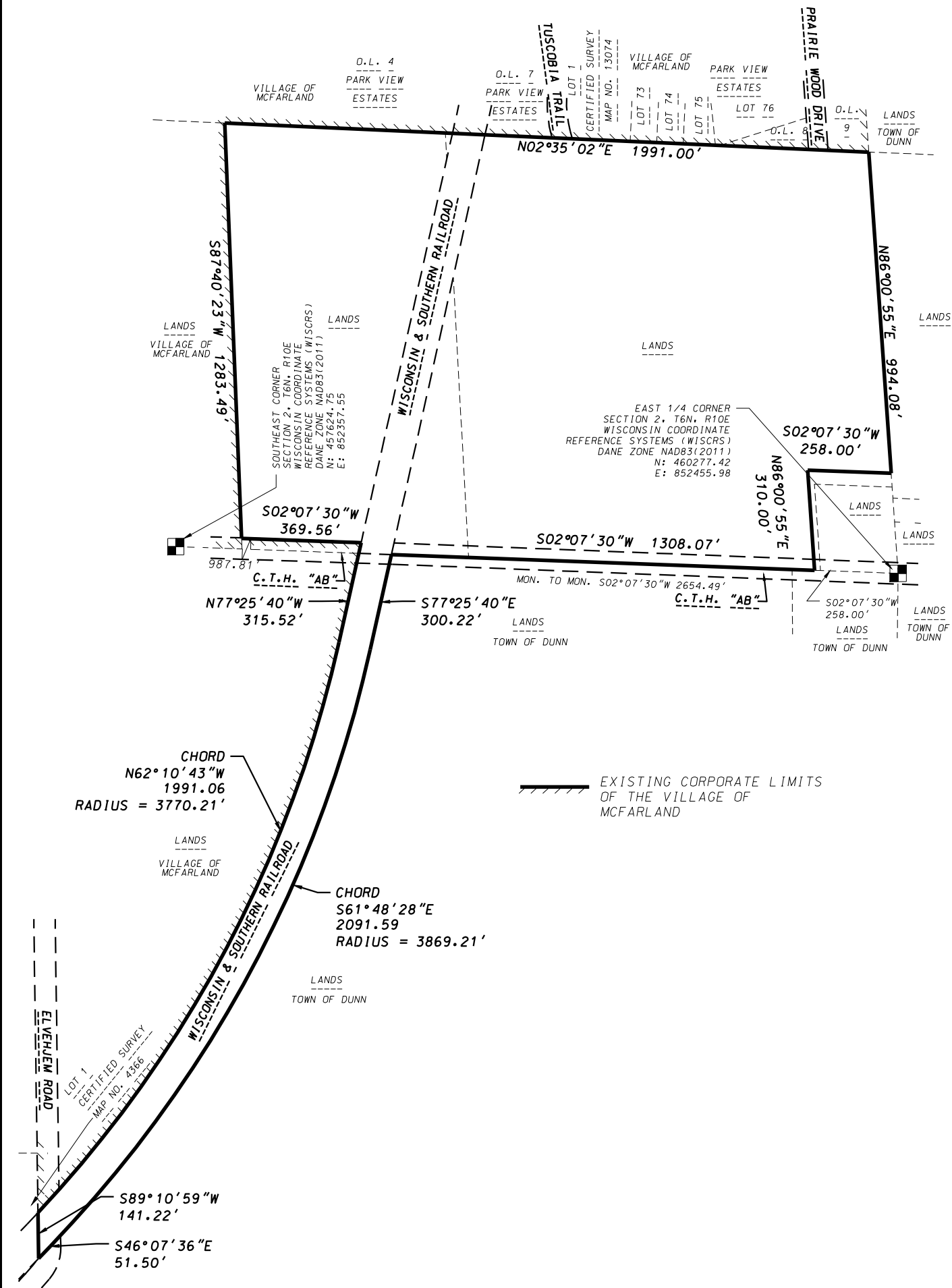
EXHIBIT A

ANNEXATION LEGAL DESCRIPTION

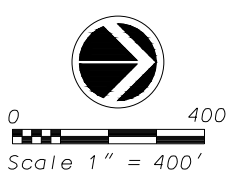
Part of the Northeast 1/4 of the Southeast 1/4 and part of the Southeast 1/4 of the Southeast 1/4 of Section 2; part of the Southwest 1/4 of the Southwest 1/4 and part of the Southeast 1/4 of the Southwest 1/4 of Section 1 and part of the Northeast 1/4 of the Northwest 1/4 of Section 12, all in Township 6 North, Range 10 East, Town of Dunn, Dane County, Wisconsin to-wit: Commencing at the East 1/4 corner of said Section 2; thence S02°07'30"W, 258.00 feet along the East line of said Southeast 1/4, to the point of beginning; thence continuing S02°07'30"W, 1308.07 feet along said East line, to a point on the Northerly right-of-way line of the Wisconsin & Southern Railroad; thence S77°25'40"E, 300.22 feet along said Northerly right-of-way line to a point of curve; thence Southeasterly along said Northerly right-of-way line on a curve to the right which has a radius of 3869.21 feet and a chord which bears S61°48'28"E, 2091.57 feet; thence S46°07'36"E, 51.50 feet along said Northerly right-of-way line; thence S89°10'59"W, 141.22 feet to a point on the South right-of-way line of Elvehjem Road and a point of curve on the Southerly right-of-way line of the Wisconsin & Southern Railroad, also being on the existing corporate boundary of the Village of McFarland; thence along said existing corporate boundary, Northwesterly along the Southerly right-of-way line of the Wisconsin & Southern Railroad on a curve to the left which has a radius of 3770.21 feet and a chord which bears N62°10'43"W, 1991.06 feet; thence N77°25'40"W, 315.52 feet along said existing corporate boundary; thence S02°07'30"W, 369.52 feet, along said corporate boundary; thence S87°40'23"W, 1283.49 feet, along said corporate boundary, to a point on the East line of Outlot 4, Park View Estates; thence N02°35'02"E, 1991.00 feet along the East lines of Outlots 4 and Outlots 7 through 9, Lots 73 through 76, Park View Estates, the East line of Lot 1, Certified Survey Map No. 13074, East right-of-way lines of Tuscobia Trail and Prairie Wood Drive, all being on said corporate boundary, to a point on the North line of said Southeast 1/4; thence N86°00'55"E, 994.08 feet along said North line; thence S02°07'30"W, 258.00 feet; thence N86°00'55"E, 310.00 feet to the point of beginning.

Containing 2,764,679 square feet or 63.468 acres.

EXHIBIT B



D'ONOFRIO KOTKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT



DATE: April 22, 2020
F.N.: 19-07-114

Annexation Review Questionnaire

Wisconsin Department of Administration

WI Dept. of Administration
Municipal Boundary Review
PO Box 1645
Madison WI 53701
608-264-6102 Fax: 608-264-6104
wimunicipalboundaryreview@wi.gov
<http://doa.wi.gov/municipalboundaryreview>

Petitioner: **Utterback Limited Partnership**

Petition Number: **14299**

1. Territory to be annexed: From **TOWN OF DUNN** To **VILLAGE OF MCFARLAND**

2. Area (Acres): **55.03**

3. Pick one: ☒ Property Tax Payments

OR ☐ Boundary Agreement

a. Annual town property tax on territory to be annexed:

\$ **\$36.10**

a. Title of boundary agreement _____

b. Year adopted _____

b. Total that will be paid to Town

(annual tax multiplied by 5 years): **\$180.50**

c. Participating jurisdictions _____

d. Statutory authority (pick one)

c. Paid by: ☐ Petitioner ☐ City ☒ Village

☐ s.66.0307 ☐ s.66.0225 ☐ s.66.0301

☐ Other: _____

4. Resident Population: Electors: **0** Total: **0**

5. Approximate **present land use** of territory:

Residential: _____ % Recreational: _____ % Commercial: _____ % Industrial: _____ %

Undeveloped: **100** %

6. If territory is undeveloped, what is the **anticipated use**?

Residential: **60** % Recreational: **6** % Commercial: _____ % Industrial: _____ %

Other: **34** % **Stormwater management areas & wetlands**

Comments: _____

7. Has a ☒ preliminary or ☐ final plat been submitted to the Plan Commission: ☒ Yes ☐ No

Plat Name: **Rosewood Fields (portion of the property north of rail road)**

8. What is the **nature of land use adjacent** to this territory in the city or village?

Single family residential (Park View Estates Subdivision)

In the town?: **Agricultural, open spaces and scattered single-family residential**

9. What are the **basic service needs** that precipitated the request for annexation?

☒ Sanitary sewer ☒ Water supply ☒ Storm sewers

☒ Police/Fire protection ☒ EMS ☒ Zoning

Other _____

Police service in the Town is provided by Dane County and Fire/EMS is provided by the Village of McFarland. Annexation would greatly improve response times for current and future residents for police service due to closer proximity. The Village is also capable of offering full public utility to the area including water, sewer, and storm sewer. The Village also has full jurisdictional control of its zoning. The ability to provide public utilities and full jurisdictional control of zoning offers greater density and more flexibility with land uses than within the Town.

10. Is the city/village or town capable of providing needed utility services?

City/Village ☒ Yes ☐ No Town ☐ Yes ☒ No

If yes, approximate timetable for providing service:

Sanitary Sewers immediately
or, write in number of years.

City/Village ☒ Yes ☐ No
1-2

Water Supply immediately
or, write in number of years.

☒ Yes ☐ No
1-2

Will provision of sanitary sewers and/or water supply to the territory proposed for annexation require capital expenditures (i.e. treatment plant expansion, new lift stations, interceptor sewers, wells, water storage facilities)?

☒ Yes ☐ No

The Village is designing an interceptor sewer on lands through and adjacent to the petition area to serve future development in this area. The petition area would tie into the planned interceptor. Total cost of interceptor estimated at \$500,000. Water main will be added along available right of way and supplied by existing municipal wells and storage tanks.

If yes, identify the nature of the anticipated improvements and their probable costs: _____

11. Planning & Zoning:

a. Do you have a comprehensive plan for the City/Village/Town? ☒ Yes ☐ No

Is this annexation consistent with your comprehensive plan? ☒ Yes ☐ No

b. How is the annexation territory now zoned? FP-35 Farmland Preservation

c. How will the land be zoned and used if annexed? Planned Unit Development, single and multi-family residential

12. Elections: ☐ New ward or ☒ Existing ward? Will the annexation create a new ward or join an existing ward? For more information, please contact the Wisconsin Election Commission at (608) 266-8005, elections@wi.gov or see their annexation checklist here: <http://elections.wi.gov/forms/el-100>

13. Other relevant information and comments bearing upon the public interest in the annexation:

Property is included within the Intermunicipal Cooperation Agreement between the Town of Dunn and Village of McFarland, dated February 28th, 2005. Property is within the Village's Proposed East Side Growth Boundary (Exhibit C). Per Section 4 of agreement, Town not to oppose annexation.

Prepared by: ☐ Town ☐ City ☒ Village

Name: Andrew Bremer, AICP

Email: andrew.bremer@mcfarland.wi.us

Phone: 608-838-3154

Date: 04.16.2020

(March 2018)

Please **RETURN PROMPTLY** to:

wimunicipalboundaryreview@wi.gov

Municipal Boundary Review

PO Box 1645, Madison WI 53701

Fax: (608) 264-6104



TONY EVERS

GOVERNOR

JOEL BRENNAN

SECRETARY

Municipal Boundary Review

PO Box 1645, Madison WI 53701

Voice (608) 264-6102 Fax (608) 264-6104

Email: wimunicipalboundaryreview@wi.gov

Web: <http://doa.wi.gov/municipalboundaryreview>

May 01, 2020

PETITION FILE NO. 14299

CASSANDRA SUETTINGER, CLERK
VILLAGE OF MCFARLAND
5915 MILWAUKEE ST
MC FARLAND, WI 53558-8962

CATHY HASSLINGER, CLERK
TOWN OF DUNN
4156 COUNTY RD B
MC FARLAND, WI 53558-9754

Subject: UTTERBACK LIMITED PARTNERSHIP ANNEXATION

The proposed annexation submitted to our office on April 10, 2020 and as revised on May 1, 2020, has been reviewed and found to be in the public interest. In determining whether an annexation is in the public interest, s. 66.0217 (6), Wis. Stats. requires the Department to examine "[t]he shape of the proposed annexation and the homogeneity of the territory with the annexing village or city...." so as, to ensure the resulting boundaries are rational and compact. The statute also requires the Department to consider whether the annexing city or village can provide needed municipal services to the territory. The subject petition is for territory that is reasonably shaped and contiguous to the **VILLAGE OF MCFARLAND**, which is able to provide needed municipal services.

The Department reminds clerks of annexing municipalities of the requirements of s. 66.0217 (9)(a), Wis. Stats., which states:

"The clerk of a city or village which has annexed shall file immediately with the secretary of administration a certified copy of the ordinance, certificate and plat, and shall send one copy to each company that provides any utility service in the area that is annexed. The clerk shall record the ordinance with the register of deeds and file a signed copy of the ordinance with the clerk of any affected school district..."

State and federal aids based on population and equalized value may be significantly affected through failure to file with the Department of Administration. Please file a copy of your annexing ordinance, including a statement certifying the population of the annexed territory. **Please include your MBR number 14299 with your ordinance.** Ordinance filing checklist available at <http://mds.wi.gov/>, click on "Help on How to Submit Municipal Records". Email scanned copy of required materials (color scan maps with color) to mds@wi.gov or mail to: Wisconsin Department of Administration, Municipal Boundary Review, PO Box 1645, Madison WI 53701-1645.

The petition file is available for viewing at: <http://mds.wi.gov/View/Petition?ID=2373>
Please call me at (608) 264-6102, should you have any questions concerning this annexation review.

Sincerely,

Erich Schmidtke, Municipal Boundary Review

cc: petitioner



PLAN COMMISSION SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding Ordinance #2020-16: an ordinance rezoning lands recently annexed west of CTH AB and north of the Wisconsin & Southern Railroad from from A-1 (Agricultural Transition District) to PDD-GP (Planned Development District - General Plan Approved) and PDD-DP (Planned Development District - Detailed Plan Approved) as requested by Veridian Homes Rosewood Fields LLC.

PREVIOUS ACTION:

May 18th, 2020. Plan Commission met and unanimously recommended approval Ordinance 2020-16 with those conditions as enumerated under Board, Commission or Committee Recommendation.

ISSUE SUMMARY:

Background and Meeting Purpose

Veridian Homes (VH Rosewood Fields LLC) has petitioned the Village for approval of a rezoning of the lands identified in the preliminary plat (Rosewood Fields) to the Planned Development District. The packet includes a copy of their Planned Development General and Detailed Plan, along with Ordinance 2020-16. Concurrent with rezone petition, Veridian is also seeking approval of the preliminary plat.

Summary of Proposed Development

The proposed development consists of 117 residential lots, of which 107 will be for single family units and 10 will be for twin units (two attached dwellings separated by zero lot line). Twenty four (24) of the single family lots would have their driveways accessed by a private alley (Outlot 2) to be maintained by the Rosewood Fields Homeowners Association. The proposed development includes 138,198 square feet (3.2 acres) of land dedicated as public park space (Outlot 3). There is an additional 7.6 acres of wetland, stormwater, and passive open space in Outlots 1, 4 & 5. A proposed off-road trail would run through Outlots 1, 3, and 4, from Prairie Wood Drive to the railroad crossing at CTH AB. Future development of lands south of the railroad would provide continued off-road connections to the Lower Yahara River Trail. The proposed neighborhood park and trail will be developed as part of Phase 1 of the subdivision development. Build-out of all lots is anticipated to occur over a 5-6 year period based on market conditions.

Consistency with the Village Comprehensive Plan of 2017

The Village's Future Land Use Map identifies the subject property in the "Neighborhood" category. Figure 4.1 of the Comp Plan provides additional details regarding development policies for this future land use category. The general description of land uses includes mostly single-family residential development with components of two family and townhouse residential, multi-family and institutional, and recreational land uses. The



Development Policies in Figure 4.1 further explain the desire to accommodate a mixture of housing types, costs, and densities while maintaining at least 65% single family housing (development provides 91% single family). Typical implementing zoning districts include R-1 and PD, as proposed by Veridian, but can also include R-2, R-3, and R-E. The 10 proposed twin lots are consistent with uses allowed in the R-2 District. The comp plan references the Village's separate East Side Neighborhood Growth Area Plan for further conceptual guidance.

Consistency with the East Side Neighborhood Growth Area Plan of 2008

Included in the Rosewood Fields Zoning Submittal.pdf is a copy of the Village's East Side Neighborhood Growth Area Concept Development Plan, marked Exhibit C. This plan was adopted in 2008 and incorporated into the Village's 2017 Comprehensive Plan. The area of the preliminary plat is outlined on the map. The subject property is identified for Traditional Residential development. According to the plan, Traditional Neighborhood Areas are predominantly owner-occupied and intended to contain a combination of single-family, two-family, and 3-4 unit structures at a minimum density of four units per acre. The plan stipulates that density recommendations are inclusive of land area dedicated to public rights-of-way and utilities, but not dedicated parks and open space (including stormwater management facilities). Proposed net density is 4.7 units per acre. The neighborhood plan further identified the continuation of Tuscobia Trail to CTH AB, connectivity of new local streets to connect to undeveloped adjacent lands to the north, and the provision of park and stormwater management areas along the south side of Tuscobia Trail and on the west side of the property adjacent to the existing Park View Estates subdivision.

The PDD General & Detailed Plan is generally consistent with the Village's land use plans in terms of land uses, land use locations, unit mix, and street layout. Veridian has proposed rezoning to the PD District in order to reduce certain bulk standards found either within the Village's Subdivision, existing residential zoning districts, and Dimensional Criteria for Traditional Neighborhood Land Uses identified on page 32 of the East Side Neighborhood Growth Area Plan. Specifically the following provisions:

1. District I (Carriage Lane Lots). Proposed minimum lot widths of 37 feet. Sec. 56-142(e) of the Subdivision Code requires a minimum of 40 feet, while the ESNGAP recommends 50 feet. Veridian is proposing the use of 37 feet on 11 of the 24 lots, with all but two lots less than 50 feet. Proposed minimum lot depths of 100 feet. Sec. 56-142(l) of the Subdivision Code requires a minimum of 100 feet. Proposed minimum lot size of 3,500 square feet, minimum front yard setback of 15 feet, minimum side yard setback of 5 feet, and minimum open space per dwelling unit of 500 square feet. The dimensional guidelines from the ESNGAP recommended 5,000 square feet, 20 feet, 6 feet, and 1,000 square feet respectfully. It should be noted that it is unclear if the dimensional guidelines in the ESNGAP for Traditional Neighborhoods were drafted to reflect alley development. Veridian is specifically proposing the carriage lane lots in order to increase the net density of the subdivision to meet the minimum density requirements of the ESNGAP, while also providing a diversity of housing style and purchase prices consistent with other goals and objectives of the Village and ESNGAP.
2. District II (Traditional Lots). Minimum front yard setback of 20 feet, 18 proposed. Minimum side yard setback of 6 feet, 5 feet proposed. Minimum sum of side yards of 12 feet, 10 feet proposed. Minimum corner lot side yard setback of 12 feet, 10 proposed.
3. District III (Twin Lots). Minimum lot size of 10,000 square feet (5,000 per unit), 9,100 square feet



(4,550 per unit) proposed. Minimum front yard setback of 20 feet, 15 feet proposed. Minimum side yard setback of 6 feet, 5 feet proposed. Minimum sum of side yards of 12 feet, 10 feet proposed.

Included within the packet is a review letter provided by the Village Fire and Rescue Department. To accommodate the reduced building setback, the McFarland Fire & Rescue recommends all homes have fire sprinkler systems installed according to the National Fire Protection Association (NFPA) 13D-Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

FINANCIAL/BUDGET IMPACT:

Assuming at least an average assessment value of \$325,000 for each lot would yield approximately \$250K in annual property tax payments to the Village upon full build-out. Additional revenue from park impact fees, library impact fees, and public water impact fees would be payable to the Village as well. The Developer will also be responsible for paying for utility, street, trail, and park improvements within the development. Specific requirements will be addressed as part of a development agreement to be approved with the final plat.

VILLAGE PLAN REFERENCE:

One of the goals of the Village of McFarland Comprehensive Land Use Plan is to promote quality, affordable housing for families and older residents within neighborhoods and mixed use settings that are organized around safety, conservation, recreation, and connections to the broader community. A related housing objective is to expand the range of quality and affordable housing choices for empty nesters, seniors, and the McFarland workforce, while remaining a family-oriented community. A related housing policy is to promote affordable housing through allowing modest lot sizes and higher suburban densities, including appropriately planned and located multiple family housing, incentives where practical, and continued participation in County and State housing programs.

Developing affordable housing in the Village was also a theme that emerged from the Village's 2020-2030 Strategic Plan. In addition, actively promoting and supporting affordable housing in the Village is included in the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:

Chapter 56, Subdivisions

Sec. 62-67, PD Planned Development District

Sec. 62-343, Procedure for Changes and Amendments to the Zoning Code

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend to the Village Board approval of Ordinance 2020-16, with the following conditions:

1. Revise page 8 of the General Plan/Detailed Plan to include a third bullet under the section titled Permitted & Accessory Uses to reference the Declaration of Protective Covenants, Conditions, and Restrictions.
2. Revise pages 11, 14, and 17 to strike front porches and open porches, and insert unenclosed porches.
3. Revise page 16 to require a minimum rear yard setback for District III lots of 20 feet.
4. Approval of Ordinance 2020-15.
5. Recording with the Register of Deeds the Certified Survey Map creating Lot 2 of the Utterback Limited



Partnership property, as approved by the Plan Commission. The costs of preparing and recording paid by Veridian Homes.

6. Recording with the Register of Deeds the approved General and Detailed Plan with a copy of Ordinance 2020-16. The costs of preparing and recording paid by Veridian Homes.
7. Approval of a Final Plat, Development Agreement, and Declaration of Protection, Covenants, Conditions, and Restrictions by the Village Board.

ATTACHMENTS:

1. 2020-16 Rezoning Certain Lands Recently Annexed (Rosewood Fields)
2. 04 - RF Plan Commission Application 2020.04.07
3. 15 - Rosewood Fields Zoning Submittal (April 6, 2020) (reduced)
4. Pages from East Side Neighborhood Growth Area Plan (Adopted 3-10-08)
5. Utterback-Veridian Development Fire & Rescue Dept Postion_05.20.20

ORDINANCE 2020-16

AN ORDINANCE TO REZONE LANDS RECENTLY ANNEXED WEST OF CTH AB AND NORTH OF THE WISCONSIN & SOUTHERN RAILROAD IN THE VILLAGE OF MCFARLAND FROM A-1 AGRICULTURE TRANSITION TO PDD-GP GENERAL PLAN AND PDD-DP DETAILED PLAN APPROVED

Purpose: To rezone certain lands on recently annexed west of CTH AB and north of the Wisconsin & Southern Railroad, commonly referred to as the Rosewood Fields Subdivision.

Sponsor: Community & Economic Development Director Bremer

Recommended Referral: Plan Commission (Required)

Public Hearing: Required; Preceded by Class 2 Notice

WHEREAS, the developer of the proposed Rosewood Fields Subdivision on lands recently annexed west of CTH AB and north of the Wisconsin & Southern Railroad, in the Village of McFarland, has applied for approval of rezoning of the same property from the A-1 Agricultural Transition District to the Planned Development District; and,

WHEREAS, the developer has submitted documents fulfilling the requirements for approval of the General & Detailed Implementation Plans, dated April 6, 2020, a copy which is attached hereto as Exhibit A; and

WHEREAS, the proposed rezoning is consistent with the Village of McFarland Comprehensive Plan, which designates the subject land as Neighborhood; and

WHEREAS, the proposed rezoning is consistent with the Village of McFarland East Side Neighborhood Growth Area Plan, which designates the subject land as Traditional Neighborhood; and

WHEREAS, the Village Board is willing to grant approval of the request to rezone and the Village Board finds approval thereof is in the public interest;

NOW, THEREFORE, the Village Board of the Village of McFarland, does ordain as follows:

1. Section 62-62(a) of the McFarland Municipal Code and the Official Zoning Map are hereby amended so that the following described real estate is hereby rezoned from the A-1 Agriculture Transition District to the Planned Development District – General & Detailed Implementation Plan Approved:

A parcel of land located in the NE1/4 of the SE1/4 and the SE1/4 of the SE1/4 of Section 2, T6N, R10E, Village of McFarland, Dane County, Wisconsin to-wit:

Commencing at the East 1/4 corner of said Section 2; thence S02°07'30"W 258.00 feet along the East line of said SE1/4; thence N87°52'30"W, 34.21 feet to the point of beginning; thence S02°14'16"W, 973.22 feet; thence N77°25'35"W, 1291.46 feet; thence N02°35'02"E, 1186.37 feet; thence N86°00'55"E, 736.08 feet; thence S43°08'26"E, 746.88 feet to the point of beginning. Containing 1,582,369 square feet square feet (36.326 acres)..

2. The Zoning Administrator is hereby directed to label these changes on the Official Zoning Map, once the rezoning is effective.

3. This ordinance does not constitute approval of any earthwork or building construction within any of the property described in the ordinance. No construction of any kind, including earthwork or building construction, is permitted on the parcel described in Section 1 of this ordinance until applicable preliminary and final plats, and associated erosion control, stormwater management, engineering development plans, declarations of protective covenants, conditions and restrictions, development agreements and building permits are approved by the Village. If the property owner fails to obtain approval of a final plat for the parcel described in Section 1 by the Village within one (1) year after adoption of this ordinance, then Section 1 of this ordinance shall become null and void, and the zoning of the afore stated lands shall continue to be the existing A-1 District.

The above and foregoing Ordinance was duly adopted on roll call at a regular meeting of the Village Board of the Village of McFarland held on the 26th day of May, 2020.

[signature page follows]

APPROVED:

Brad Czebotar, Village President

ATTEST:

Cassandra Suettinger, Village Clerk-Treasurer

ORDINANCE 2020 – 16	
MOTION	SECOND
ACTION	
DATE	
Adopted	
Referred	
Tabled	
Withdrawn	
Defeated	
Published	
INDIVIDUAL VOTING RECORD	
Brassington –	Kryzenske -
Clow –	Rupert –
Czebotar –	Utter –
Flaherty –	
VOTING RESULTS	
Motion Carried	
Motion Defeated:	

**Village of McFarland
Community Development Department**

Plan Commission Application – 2020

~Application must be completed in full~

Applicant - Owner	VH Rosewood Fields LLC	Applicant's Agent	D'Onofrio Kottke & Assoc. Vandewalle Associates
	c/o Chris Ehlers	Name	c/o Dan Day c/o Brian Munson
Address	6801 South Towne Drive, Madison, WI	Address	7530 Westward Way 120 East Lakeside St. Madison, WI Madison, WI
Email	cehlers@veridianhomes.com	Email	dday@donofrio.cc bmunson@vandewalle.com
Phone #	608-226-3100	Phone #	608-833-7530 608-255-3988
Fax #		Fax #	

Parcel No(s). 0610-024-8070-0 **Type of Proposal – Please check boxes below that apply**

Requires Public Hearing (Class One)	FEES	Requires Public Hearing (Class Two)	FEES	Public Hearing Not required	FEES										
☒ Preliminary Plat	\$500+AF	☐ Conditional Use	\$370+F	☐ Annexation	At cost										
☐ Preliminary Plat (reapplication)	\$500+BF	☒ Rezoning (map)	\$405+	☐ Dev. Agreement Including Addendums	\$400 F										
☐ Certified Survey Map	\$300+FG	☐ Zoning Amendment (text)	\$405 +F	☐ Final Plat	\$500 +CF										
☐ Condominium	\$300+EF	☐ Variance-Board of Zoning Appeals	\$380+F	☐ Final Plat (reapplication)	\$400 +DF										
☐ Comprehensive Plan Amendment	\$500+F			☐ Site/Design Review	\$400 + F										
+ = Plus publication and notification charges Fee: \$500.00 + \$50.00(122) + \$405= \$7,005.00 A = Plus \$50.00 per lot B = Any preliminary plat which has previously been reviewed/revised within the last 36 months C = Plus \$50.00 for each lot within the final plat D = Any final plat which has been previously reviewed or/ revised within the last 36 months E = Plus \$40.00 for each unit shown F = Plus actual legal, engineering and financial consulting costs incurred by the Village G = Plus \$25.00 per lot for two or more lots.				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Escrow Deposits (covers costs for outside consultants; e.g., engineers, attorneys, etc.)</th> </tr> <tr> <td>☒ R-E, R-3 & PD (up to 50 acres)</td> <td style="text-align: center;">\$5,000</td> </tr> <tr> <td>☐ R-E, R-3 & PD (greater than 50 acres)</td> <td style="text-align: center;">\$10,000</td> </tr> <tr> <td>☐ Commercial Site/Design Review (5,000 sq. ft. or more)</td> <td style="text-align: center;">\$2,000</td> </tr> <tr> <td>☐ All Plats including condominiums</td> <td style="text-align: center;">\$5,000</td> </tr> </table>		Escrow Deposits (covers costs for outside consultants; e.g., engineers, attorneys, etc.)		☒ R-E, R-3 & PD (up to 50 acres)	\$5,000	☐ R-E, R-3 & PD (greater than 50 acres)	\$10,000	☐ Commercial Site/Design Review (5,000 sq. ft. or more)	\$2,000	☐ All Plats including condominiums	\$5,000
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☐ Commercial Site/Design Review (5,000 sq. ft. or more)	\$2,000														
☐ All Plats including condominiums	\$5,000														

Nature of the development proposal: Must provide address of proposed development, legal description, current zoning and description of proposal. (Attach additional paper if needed)

Residential development of Rosewood Fields. See attached zoning document and preliminary plat.

What action is the applicant requesting of the Plan Commission?

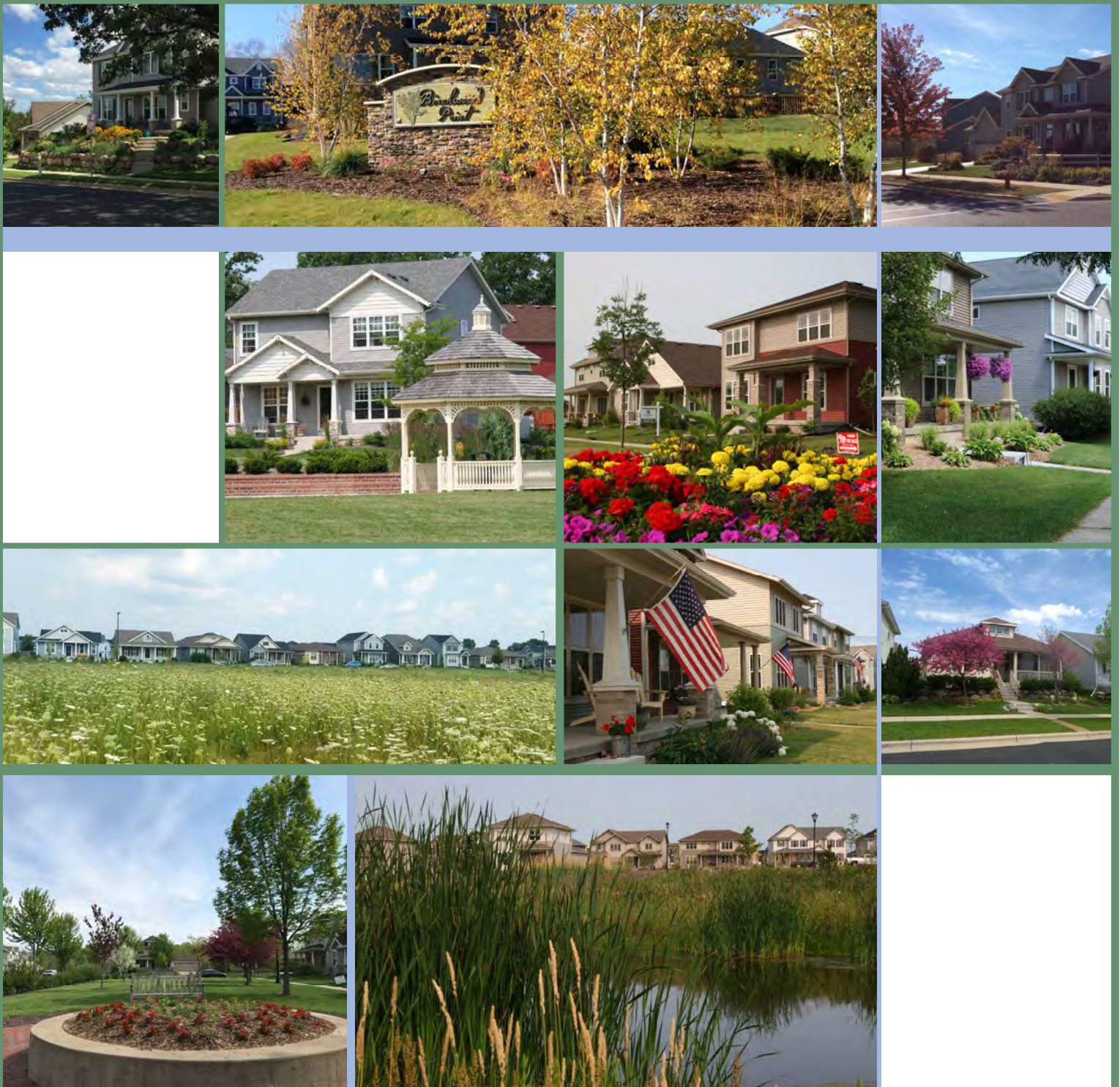
Approval of preliminary plat and rezoning

Has this specific proposal been previously discussed or acted upon by the Plan Commission?

☐ YES ☒ NO (If “yes” state the nature and the date(s) of the previous application.)

PLEASE READ AND SIGN AT THE BOTTOM ON THE REVERSE SIDE

Village of McFarland Plan Commission 2020 Schedule



ROSEWOOD FIELDS

McFARLAND, WISCONSIN

*PLANNED DEVELOPMENT:
GENERAL PLAN/ DETAILED PLAN*

SUBMITTED: APRIL 6TH, 2020



Intent of Document.....	1
Project Name.....	1
Project Owners.....	1
Contacts.....	1
Existing Conditions	2
Site Information	3
Zoning Request	4
Development Concept.....	7
Proposed Land Use Summary.....	7
Single Family Homes.....	7
Twin Homes	8
Parks and Open Space	8
Definitions	8
Permitted & Accessory Uses.....	8
District Descriptions/ Zoning Text.....	9
Rosewood Fields: District I.....	9
Rosewood Fields: District II	12
Rosewood Fields: District III.....	15
Architectural Standards	18
Open Space	19
Streets.....	20
Mailboxes	20
Phasing.....	20
Homeowner Association	20
Architectural Review Committee.....	21
Exhibits.....	22

INTENT OF DOCUMENT

The intent of this document is to provide the Village of McFarland with a Planned Development General Plan and Detailed Plan that summarizes the components of the proposed Rosewood Fields Neighborhood.

PROJECT NAME

Rosewood Fields

PROJECT OWNERS

Wayne Utterback
4627 Prairie Fire Court
DeForest, WI 53532

CONTACTS

Applicant:

VH Rosewood Fields, LLC.
6801 South Town drive
Madison, WI 53713
Chris Ehlers
Vice President of Land Development
cehlers@veridianhome.com
Phone: 608.226.3038
Fax: 608.235.4701

Design Team:

Engineering:

D'Onofrio Kottke
7530 Westward Way
Madison, WI 53717
Phone: 608.833.7530
Fax: 608.833.1089
Dan Day
dday@donofrio.cc

Planning:

Vandewalle and Associates
120 East Lakeside Street
Madison, Wisconsin 53715
Phone: 608.255.3988
Fax: 608.255.0814
Brian Munson
bmunson@vandewalle.com

EXISTING CONDITIONS

Existing Zoning:

Undeveloped Land A-1

Existing Parcels (PIN):

061002480700

061002495010

Legal Description:

See Exhibit A: Legal Description

Adopted Plans from Village of McFarland Comprehensive PlanFuture Land Use Plan

Project Area: Neighborhood Residential

Adjoining Parcels: Single family residential; Neighborhood residential; DNR
wetlands & potential wetland indicators over undeveloped
lands; park and open space

See Exhibit B: Future Land Use Plan

East Side Neighborhood Plan

Project Area: Traditional Residential

See Exhibit C: East Side Neighborhood Growth Area Plan

Lot Area: 36.3 acres

SITE INFORMATION

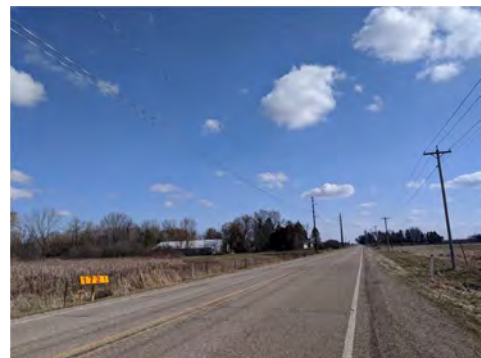
Rosewood Fields is located at the eastern gateway of the Village of McFarland along County Highway AB. The land is currently comprised of agricultural fields. The site generally slopes from a high point in the northern part of the site down toward the southern end of the site and to the western frontage along the greenway. A portion of the site is already annexed to the Village and the remainder will be annexed as part of the planning process.

Abutting Uses:

North:	Agricultural
East:	Agricultural
South:	Agricultural
	Rail Road ROW
	Wetlands/ Environmental Corridor
West:	Residential

See Exhibit D: Location Map

See Exhibit E: Existing Conditions



ZONING REQUEST

Planned Development District

General Plan (PDD-GP)

Detailed Plan (PDD-DP)

VARIANCES FROM SUBDIVISION ORDINANCE:

Sec. 56-142. - Lot design standards.

(d) *Corner lots.* Corner lots for residential use shall have a width sufficient to provide a building setback of at least 30 feet from each street.

Request: Corner lot setbacks per proposed districts in PUD

(e) *Access to public streets.* Every lot shall front or abut for a minimum distance of at least 40 feet on a public street. Lots with an access only to private drives or streets shall be permitted only with Village Board approval.

Request: Lot width per proposed districts in PUD and as reflected in plat submittals.

(f) *Lot depth.* Depth of lots shall be a minimum of 100 feet. Excessive depth in relation to width shall be avoided and a proportion of two to one shall be considered a desirable ratio under normal conditions. Depth of lots or parcels reserved or laid out for commercial or industrial use shall be adequate to provide for off-street service and parking required by the use contemplated.

Request: Lot depth per proposed districts in PUD and as reflected in plat submittals.

ZONING REQUEST JUSTIFICATION

The Planned Development District is established to provide a voluntary regulatory framework designed to encourage greater variety and flexibility in land development while achieving substantial compliance with the Village Land Use Plan and basic intent of the zoning ordinance and land uses beneficial to the Village. Such district is also established to promote the maximum benefit from coordinated area site planning, including diversified location of structures and mixed compatible uses, and to provide for safe and efficient systems for pedestrian and vehicular traffic, attractive recreation and landscaped open spaces, and economic design and location of public and private utilities and community facilities. Within this district are allowed the diversification and variation in the bulk and relationship of uses, structures and spaces in developments planned as comprehensive and cohesive unified plans and projects.

CRITERIA FOR APPROVAL

(a) *General requirements.*

(4) *Standards.* The following standards shall apply in the review of all general or detailed plans proposed for the Planned Development District:

- a. The uses proposed in the planned development shall be in general conformance with the Village Comprehensive Plan.

This project area is planned as neighborhood residential in the future land use plan, and as traditional residential in the East Side Neighborhood Growth Area plan. One of the comprehensive plan's initiatives is to encourage neighborhood development on the Village's East side, which is where this project is located. The comprehensive plan encourages a supply of vacant lots, homes for sale, and developable land for housing to maintain a vibrant housing market and enhance affordability. This policy is promoted in the diversity of housing types and price points proposed in Rosewood Fields.

- b. The establishment, maintenance or operation of the uses proposed in the planned development shall not substantially impair or diminish the use, value and enjoyment of other properties within the neighborhood.

The proposed residential neighborhood will be an extension of the surrounding McFarland neighborhoods. It's street network ties into the existing grid, and the new homes will blend easily with the style and scale of the existing homes nearby, while still creating some diversity in housing and lot layout.

- c. Traffic circulation into and within the development shall be designed to minimize traffic congestion and traffic hazards, provide for the accessibility of all uses and buildings and also provide for the safe and convenient movement of both vehicles and pedestrians.

Traffic circulation in the proposed Rosewood Fields neighborhood will minimize traffic congestion and create a safe and attractive pedestrian environment. The street grid from the existing western neighborhood will connect seamlessly into the Rosewood Fields neighborhood, maintaining similar street widths, terrace treatment, and walkable sidewalks throughout the project.

- d. The planned development shall incorporate environmental design considerations, including the preservation of topography, trees and ground cover, streams and natural bodies of waters, and other significant natural features and control of erosion and runoff in accord with the Village Erosion Control and Stormwater Management Ordinances.

This proposed planned development preserves the existing wetland in the southeast area of the site and extends the regional greenway on the west side of the site. There will be two stormwater basins on-site to collect stormwater runoff.

- e. The planned development shall provide for convenient and harmonious groups of buildings, structures and uses; and buildings shall be spaced and sited to ensure adequate safety, light, ventilation and privacy.

This new neighborhood will create diversity in housing within McFarland, while remaining in harmony and cohesion with the surrounding areas.

- f. The following provisions shall apply:

- 1. In a planned development for residential use, adequate open space and recreational areas shall be provided in appropriate locations, and all public and common open spaces shall be designed and located to provide safe and convenient access to residents.

This planned development will provide a blend of park dedication and fee in lieu of dedication. A 3.2 acre public park has been designated in the

southern portion of the site for residents to enjoy. This park location will be easily accessible to all new residents and will provide active and passive recreational options for people of all ages and abilities. On the west side of the site, there is a regional greenway accessible by a trail that runs south into the southern park and then into the existing wetland to the east. This path will connect this development to the neighborhood to the west, and offer more passive recreational activities like dog walking, running or biking. It will also extend a connection to the planned path along county highway AB, creating a seamless regional trail system.

- g. The planned development will not adversely affect the ability of public agencies to provide school or other municipal services.

This area was planned for residential development in the comprehensive plan and in the East side Neighborhood Growth Area plan and is reflected by public agencies providing school and other municipal services.

- h. The width of street rights-of-way, width of paving, width and location of street or other paving, outdoor lighting, location of sewer and water lines, provision for stormwater drainage or other similar environmental engineering considerations shall be based on a determination of the appropriate standards necessary to implement the specific function in the specific situation; provided, however, that in no case shall standards be less than those necessary to ensure the public safety and welfare as determined by the Village.

Environmental engineering considerations have been incorporated into the design to ensure the public health, safety and welfare as determined by the Village. These plans are incorporated into the separate plat submittal documents.

- i. The proponents of a Planned Development District application shall provide evidence satisfactory to the Village Board of its economic feasibility of available adequate financing and that it would not adversely affect the economic prosperity of the Village or the values of surrounding properties.

This planned development is shown as neighborhood residential in the comprehensive plan and in the East Side Neighborhood Growth Area plan. The comprehensive plan encourages the expansion of the range of quality and affordable housing choices for empty nesters, seniors, and the McFarland workforce, while remaining a family-oriented community. This development will be able to do that by providing a diverse range of price points and housing types that will be desirable to a wide range of people.

- j. The proponents of a Planned Development District shall submit a reasonable schedule for the implementation of the development to the satisfaction of the Village Board, including suitable provisions for assurance that each phase could be brought to completion in a manner that would not result in an adverse effect upon the community as a result of termination at that point.

Approving this PDD will create a voluntary framework designed to encourage greater variety and flexibility in land development while complying with the Village Board's time schedule. The comprehensive plan promotes quality, affordable housing for families and older residents within neighborhoods, which is what a PDD helps make possible in Rosewood Fields.

DEVELOPMENT CONCEPT

Rosewood Fields site concept plan provides opportunities for quality, affordable housing for families and older residents that are organized around safety, conservation, recreation, and connections to the broader community. Rosewood Fields creates a seamless connection to the adjoining western McFarland neighborhood, while also respecting the greenway corridor on the west side of the site and extending the community character of The Village of McFarland.



PROPOSED LAND USE SUMMARY

See Exhibit F: Zoning Map

See Exhibit G: Master Plan

See Exhibit H: District Plan



Projected Construction: 2020-2032

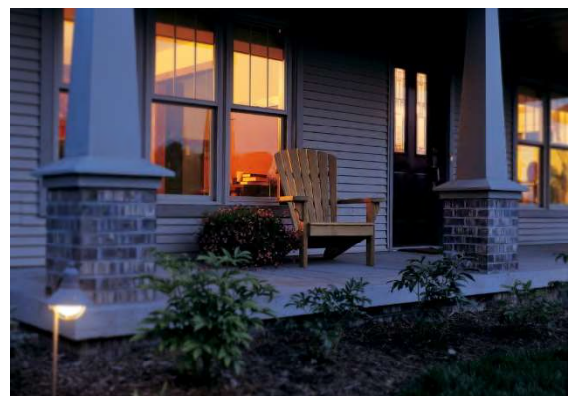
Proposed Use:

- 24 Carriage Lane Accessed Single Family Homes
- 83 Street Accessed Single Family Homes
- 10 Flat Site Twins - front
- 10.8 Acres of Parks and Open Space



SINGLE FAMILY HOMES

Single family homes within the project will include both carriage lane accessed, and street accessed configurations that can accommodate a wide range of house types, architectural treatments, landscaping, floor plans and price points. This will create an integrated and diverse neighborhood that also blends easily into the surrounding McFarland neighborhoods. Price points within the single-family format will range from entry level/first time home buyer to move up/missing middle housing options.



TWIN HOMES

Twin homes within the neighborhood include a range of floor plans and configurations with street accessed garages. These homes offer additional price points and housing variety within the neighborhood.

PARKS AND OPEN SPACE

This project preserves and enhances the existing wetland in the southeast corner and the greenway on the west side of the site. A public park, stormwater and a trail will also be added to the overall open space offering a range of passive and active recreational activities and gathering areas to serve the neighborhood.

DEFINITIONS

Lot width: Lot width is measured at the front yard setback and may be wider or narrower at the ROW due to road curvature.

Useable Open Space: Usable open space shall be provided on each lot, devoted in whole or in part to any residential use, as set forth in each district. Such usable open space provided on the ground level shall be in a compact area and having no dimension less than ten feet and having no slope grade greater than ten percent. Required open space may be designed to be part of the individual living units in the form of balconies, porches, patios or decks. Usable open space may count area on adjoining lot if granted as part of a recorded use easement.

PERMITTED & ACCESSORY USES

Primary uses within the proposed districts will be for single family homes or two unit attached single family homes. Additional permitted and accessory uses will be allowed provided per the following:

- *District I & II:* Uses consistent with the R1-B residential district
- *District III:* Use consistent with the R-2 residential district



DISTRICT DESCRIPTIONS/ ZONING TEXT

ROSEWOOD FIELDS: DISTRICT I

General Plan/ Detailed Plan:

Single Family Homes

Carriage Lane Alley accessed garage

See Exhibit G: Master Plan



Description

Carriage lane homes enhance the variety of housing and neighborhood character through the use of single-family home sites served by alleys. These homes are designed with integrated architecture and reduced setbacks which create an unbroken front façade of houses without garages that emphasize a human-based scale and texture in which the pedestrian and front porches become the focus.

Proposed Dwelling Units

24 units



Character Guidelines

- Balconies, entry bays and front entry porches are recommended to enhance the human scale of the public street façade.
- Porches, stoops, and bays are allowed to encroach into the front yard setback to allow for increased porch width and to encourage the inclusion of porches or entry bays onto each house.
- Varied building setbacks are encouraged to create a more organic streetscape in which there are varied building placements along the length of the street.
- As the buildings are moved closer to the street and each other, special attention should be taken to design details, house details, and landscaping to ensure that the public street façade is of proper pedestrian scale.



District I Zoning

Minimum Lot Area	3,500 square feet
Minimum Lot Width (at front yard setback)	37 feet (42 feet corner lots)
Maximum Building Height	35 feet
Minimum Lot Depth	95 feet
Minimum Front Yard Setback	15 feet
Maximum Front Yard Setback	24 feet
Minimum Side Yard Setback	5 feet
Minimum Dwelling Unit Separation	10 feet minimum setback between buildings on adjacent lots
Sum of Side Yards	10 feet minimum
Minimum Corner Lot Side Yard Setback	10 feet from the street side right of way
Minimum Garage Rear Yard Setback	2 foot
Maximum Garage Rear Yard Setback for Exterior Lots (lots adjacent to the street)	4 feet
Minimum Paved Surface Setback	2 feet
Maximum Height of Detached Garage	20 feet
Detached Garage Side Yard Setbacks	5 feet
Required Off-street Parking and Loading	Two off-street parking stalls per lot
Usable Open Space	500 square feet

Permitted Encroachments

Front porches, balconies, stoops, open porches and covered walkways may encroach a maximum of 6' into the front yard setback.

Front Yard Setbacks of 18-20' must utilize 6-8' porch encroachment

Corner lot porches, and bay windows may not encroach the vision triangle. The triangle is defined by: the intersection of the curbs at the corner, and a point 30 feet back along each curb from the corner.

Bay windows and fireplace chases may encroach a maximum of 2' into the side yard

Garden walls or fences shall be no more than 4' in height and will require approval by the Architectural Control Committee. Walls and fences located within the vision triangle shall not exceed 30" in height.

Appropriate Architectural Styles (not limited to):

Victorian

Salt Box

Prairie

Cottage

Four Square

Traditional

Southern Traditional

Shingle

Craftsman

ROSEWOOD FIELDS: DISTRICT II

General Plan/ Detailed Plan:

Single Family Homes

Front-access garage

See Exhibit G: Master Plan

Description

This district's homes offer additional diversity and housing choices in a single-family format. Conventional single-family homes within the neighborhood will span from entry level/first time homebuyer, to market rate, and downsizer opportunities.

Proposed Dwelling Units 83 units

Character Guidelines

- Balconies, entry bays and front entry porches are recommended to enhance the human scale of the public street façade.
- Porches, stoops, and bays are allowed to encroach into the front yard setback to allow for increased porch width and to encourage the inclusion of porches or entry bays onto each house.
- Varied building setbacks are encouraged to create a more organic streetscape in which these are slight variations between buildings along the length of the street.
- As the buildings are moved closer to the street and each other, special attention should be taken to design details, house details, and landscaping to ensure that the public street façade is of proper pedestrian scale.
- The front entry of each house should be oriented towards the public street frontage.
- Garages will be set back a minimum of two feet from the front façade of the house to ensure that the garage does not dominate the façade of the house



District II Zoning

Minimum Lot Area	5,100 square feet
Minimum Lot Width (at front yard setback)	51 feet
Maximum Building Height	35 feet
Minimum Lot Depth	100 feet
Minimum Front Yard Setback	18 feet
Maximum Front Yard Setback	25 feet
Minimum Side Yard Setback	5 feet
Sum of Side Yards	10 feet minimum
Minimum Corner Lot Side Yard Setback	10 feet from the street side right of way
Minimum Rear Yard Setback	20 foot
Garage Setback	20 feet Garage must be setback a minimum of 2' from front façade of the house Side entry garages may be allowed in front of façade There shall not be more than (2) single car width and (1) double car width garage doors per street facing elevation. On street facing facades with a three stall garage, one single width door must be setback on a new façade a minimum of 2' from the double width garage door's façade.
Minimum Paved Surface Setback	2 feet
Bulk Mass	The width of the garage wing shall not exceed 50% of the total structure width
Required Off-street Parking and Loading	Three off-street parking stalls minimum per lot
Usable Open Space	1,000 square feet

Permitted Encroachments

Front porches, balconies, stoops, open porches and covered walkways may encroach a maximum of 6' into the front yard setback.

Corner lot porches, and bay windows may not encroach the vision triangle. The triangle is defined by: the intersection of the curbs at the corner, and a point 30 feet back along each curb from the corner.

Bay windows & fireplace chases may encroach side yard setbacks and will require approval by the Architectural Control Committee.

Garden walls or fences shall be no more than 4' in height and will require approval by the Architectural Control Committee. Walls and fences located within the vision triangle shall not exceed 30" in height.

Decks may encroach up to 10' into rear yard setback

Appropriate Architectural Styles
(not limited to):

Victorian

Salt Box

Prairie

Cottage

Four Square

Traditional

Southern Traditional

Shingle

Craftsman

ROSEWOOD FIELDS: DISTRICT III

General Plan/ Detailed Plan:

Twin homes/zero lot line single family

Street facing garage

Flat site

See Exhibit G: Master Plan

Description

This district's homes offer additional diversity and housing choices in a twinhome format. District III twin homes offer paired attached single-family housing with street accessed garages. This district will offer more affordable housing for a range of different home buyers.

Proposed Dwelling Units 10 units

Character Guidelines

- Balconies, entry bays and front entry porches are recommended to enhance the human scale of the public street façade.
- Porches, stoops, and bays are allowed and encouraged to encroach into the front yard setback to allow for increased porch width and to encourage the inclusion of porches or entry bays onto each house.
- Varied building setbacks are encouraged to create a more organic streetscape in which these are slight variations between buildings along the length of the street.
- As the buildings are moved closer to the street and to each other, special attention should be taken to design details, house details, and landscaping to ensure that the public street façade is of proper pedestrian scale.
- The front entry of each house should be oriented towards the public street frontage.



District III Zoning Text

Minimum Lot Area	9,100 feet for combined twin home 4,550 feet for zero lot line home
Minimum Lot Width (at front yard setback)	91 feet for combined twin home building 45.5 feet for zero lot line home
Maximum Building Height	35 feet
Minimum Lot Depth	100 feet
Maximum Number of Units Per Lot	2 units if paired building 1 unit for zero lot line home
Minimum Front Yard Setback	15 feet
Minimum Side Yard Setback	5 feet (exterior building lot line) 0 feet for zero lot line home sites (party wall)
Sum of Side Yard Setback	10 feet minimum (combined building)
Minimum Corner Lot Side Yard Setback	15 feet from the street side right of way
Minimum Rear Yard Setback	2 feet
Minimum Paved Surface Setback	2 feet
Required Off-Street Parking and Loading	Two off-street parking stalls per unit minimum
Usable Open Space	1,000 square feet per unit

Permitted Encroachments

Front porches, balconies, stoops, open porches and covered walkways may encroach a maximum of 6' into the front yard setback.

At grade patios may encroach up to the paved side yard setback allowance.

Corner lot porches, and bay windows may not encroach the vision triangle. The triangle is defined by: the intersection of the curbs at the corner, and a point 30 feet back along each curb from the corner.

Bay windows and fireplace chases may encroach a maximum of 2' into the side yard

Garden walls or fences shall be no more than 4' in height and will require approval by the Architectural Control Committee. Walls and fences located within the vision triangle shall not exceed 30" in height.

Additional Requirements A minimum one-hour fire rated wall assembly division, separating all areas from the lowest level flush against the underside of the roof, is required between each dwelling unit.

Appropriate Architectural Styles
(not limited to):

Victorian

Salt Box

Prairie

Cottage

Four Square

Traditional

Southern Traditional

Shingle

Craftsman

Mid-Century Modern

ARCHITECTURAL STANDARDS

Development of the property will require review and approval by the Architectural Review Committee for Rosewood Fields prior to submittal to the Village of McFarland.

The following additional guidelines will also apply:

Massing

- Awnings, bays, canopies, porches, stoops, towers and windows are encouraged to enhance the building scale.
- Primary façade rooflines are encouraged to be broken with bays, gables, and smaller roof forms to reduce the overall size of roof elements. Pitched or flat roof forms may be allowed, as appropriate to the overall style of the building.
- Building architecture should utilize a tripartite composition with base, middle, and top elements clearly defined with material and façade design changes.
- Façade breaks and wall recessions shall be used to further break up massing of buildings.

Styles

- Each individual building shall select one style of architecture and apply appropriate details, massing, rooflines, façade breaks, colors, and materials on all of the buildings within the project site. Using a variety of architectural styles throughout the neighborhood will create more visual interest and appeal. The buildings should contain variations in materials and colors between buildings to enhance the overall character of the site.
- Appropriate styles:
 - Victorian
 - Salt Box
 - Prairie
 - Cottage
 - Four Square
 - Traditional
 - Southern Traditional
 - Shingle
 - Mid-Century Modern
 - Craftsman

Materials

- Building design shall feature high quality, durable materials in a range of types and colors.
- Appropriate materials:
 - Brick
 - Stone and cast stone
 - Cement board, composite siding, or vinyl siding
 - Wood, composite, vinyl, or cement board shingle siding/ board and batten siding
 - Metal panels
 - Synthetic trim materials

OPEN SPACE

The open space system features about 10.8 acres of park space, stormwater management and open space; roughly 30% of the project. The components of the open space include a new public park and stormwater basins, which connect to the existing wetland and greenway through connections to the planned regional trail system.

Parks	3.2 Acres
Wetlands	1.2 Acres
Stormwater	3.3 Acres
Passive Open Space	3.1 Acres

Dedicated Park 3.2 Acres

See Exhibit I: Parks and Open Space Plan

PAVED TRAILS

The trail system comprises of both sidewalks and a paved trail to accommodate bicycle and pedestrian traffic. All trails will be owned and maintained by the Village.

ENVIRONMENTAL CORRIDOR AND STORMWATER

The greenway in the western portion of the site connects to the regional environmental corridor. The wetland in the southeastern portion of the site is buffered to protect the quality and the integrity of the ecosystem. There will also be two stormwater detention basins designed to not only treat runoff but also to be a part of the open space system and viewed as an amenity with public access via the trail network. All environmental corridor and stormwater will be owned and maintained by the Village.



STREETS

Rosewood Fields features a complete street network, extending west to Prairie Wood Dr and Tuscobia Trail, and east to County Highway AB. Residential collector and local street widths have been used to meet both vehicle and pedestrian needs. Street trees and grass terraces will enhance the pedestrian experience.

The Homeowners Association will be responsible for the maintenance of any planting islands within right-of-way.



See Exhibit J: Street Right-of-Way Width Map

See Exhibit K: Street Cross Sections

MAILBOXES

Per United States Postal Service requirements, cluster mailboxes will be used and placed throughout the neighborhoods in private easements or private outlots. The final CBU locations will be determined on a phase by phase basis and are subject to USPS approval and may be revised as necessary.

The Home Owners Association will be responsible for the maintenance of the CBUs.

See Exhibit L: Conceptual CBU Location Map



PHASING

The neighborhood is projected to be built out in multiple phases over the span of the next 5-6 years. Final phase lines and sequencing will be determined based on market demand

See Exhibit M: Conceptual Phasing Plan

HOMEOWNER ASSOCIATION

Rosewood Fields will be governed by a Homeowners Association. Maintenance responsibilities will be further detailed in the amended covenants and restrictions recorded against each property.

ARCHITECTURAL REVIEW COMMITTEE

The Architectural Review Committee and The Rosewood Fields Covenants and Restrictions Code will be set up to ensure the continued development of high-quality design, architecture and site execution is carried throughout the neighborhood.

Architectural and Landscape plans for any site within Rosewood Fields shall be submitted to the Architectural Review Committee for review and approval prior to the issuance of any Building Permit, or prior to any site improvements.

The Committee will review all submitted plans to ensure the continuation of the distinct architectural character, and landscape quality established within the development. Plans will be reviewed based on the design guidelines as established in the Covenants and Restrictions guide and standards outlined for each zoning district. The Committee will review any future remodeling plans that will change the outward appearance of any structure found within Rosewood Fields. The Committee will not review any re-landscaping plans that take place more than one year after the original landscape plan is installed.

The Committee has the right to enforce all design guidelines and standards found within the Covenants and Restrictions, Design Guidelines, or zoning text. The Committee also retains the right to grant exceptions to the design guidelines and standards based on the merit of exceptional design that may not fall within or meet the technical requirements of the guidelines and standards, but generally accomplished the basic principles and intent of the aforementioned documents. Exceptions may also be made on a case-by-case evaluation of individual site context issues that would inhibit the practical implementation of these guidelines and standards.

The Architectural Review Committee shall initially be appointed by the Developer, and references in this Zoning Text to the Architectural Review Committee shall mean the Developer for such period of time as the Developer remains the only member of the Architectural Review Committee as provided in the Association Bylaws. As long as the Developer is the only member of the Architectural Review Committee, the Developer, acting alone, may exercise all of the rights and ceases to be the sole member of the Architectural Review Committee, the Architectural Review Committee shall thereafter consist of such persons as are elected pursuant to the Bylaws.

EXHIBITS

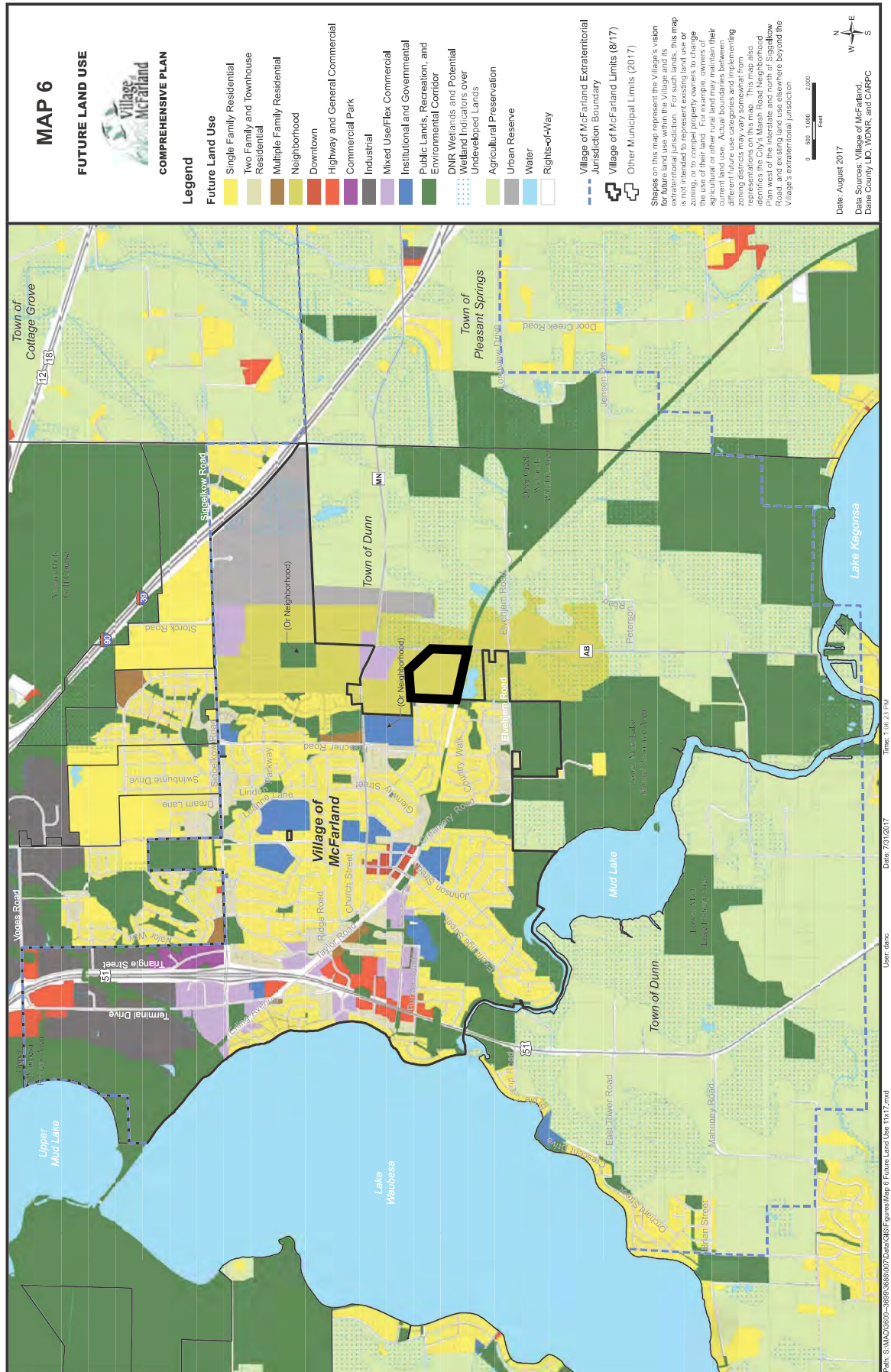
- Exhibit A:** Legal Description
- Exhibit B:** Future Land Use Plan
- Exhibit C:** East Side Neighborhood Growth Area Plan
- Exhibit D:** Location Map
- Exhibit E:** Existing Conditions
- Exhibit F:** Zoning Map
- Exhibit G:** Master Plan
- Exhibit H:** District Plan
- Exhibit I:** Parks & Open Space Plan
- Exhibit J:** Street Right of Way Width Map
- Exhibit K:** Street Cross Sections
- Exhibit L:** Conceptual CBU Location Map
- Exhibit M:** Conceptual Phasing Plan

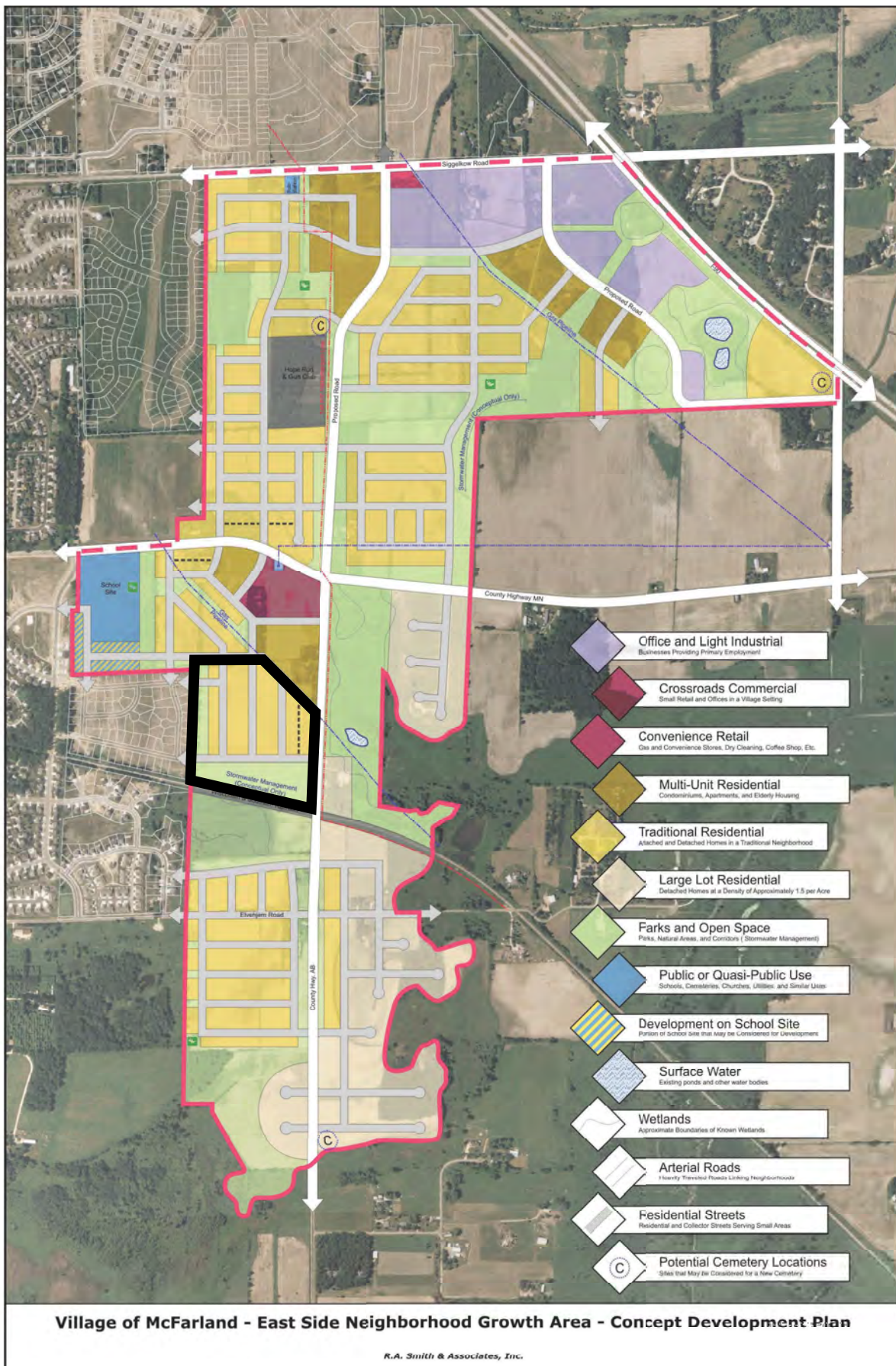
Exhibit A: Legal DescriptionLot 2 Proposed CSM:

A parcel of land located in the NE1/4 of the SE1/4 and the SE1/4 of the SE1/4 of Section 2, T6N, R10E, Village of McFarland, Dane County, Wisconsin to-wit:

Commencing at the East 1/4 corner of said Section 2; thence S02°07'30"W 258.00 feet along the East line of said SE1/4; thence N87°52'30"W, 34.21 feet to the point of beginning; thence S02°14'16"W, 973.22 feet; thence N77°25'35"W, 1291.46 feet; thence N02°35'02"E, 1186.37 feet; thence N86°00'55"E, 736.08 feet; thence S43°08'26"E, 746.88 feet to the point of beginning.

Containing 1,582,369 square feet square feet (36.326 acres).



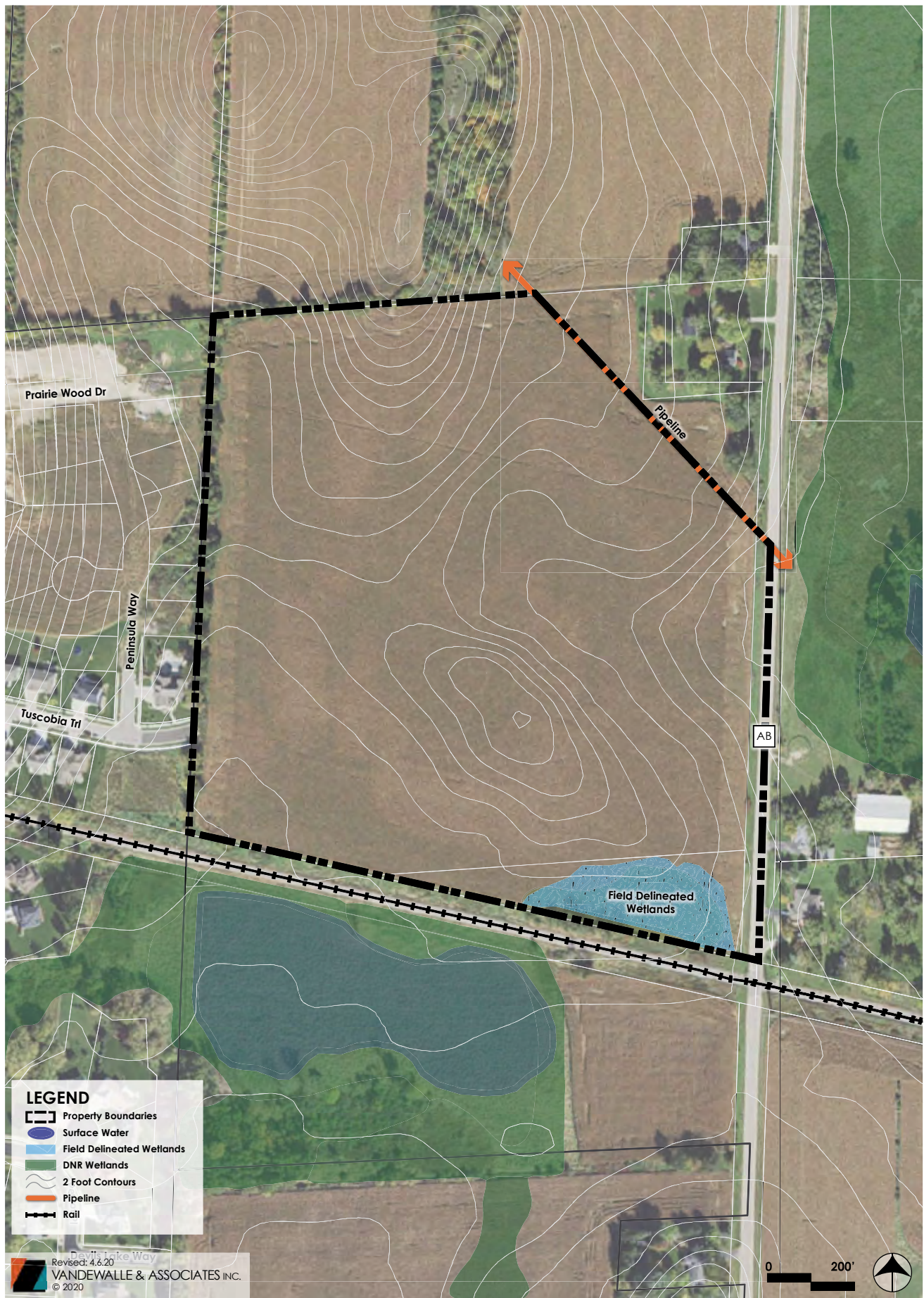




**EXHIBIT D:
LOCATION
MAP**

ROSEWOOD FIELDS
MCFARLAND, WISCONSIN





**EXHIBIT E:
EXISTING
CONDITIONS**

ROSEWOOD FIELDS
MCFARLAND, WISCONSIN



LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
VILLAGE - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 65	22	18.8%
ESTATE - 69	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION	
DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



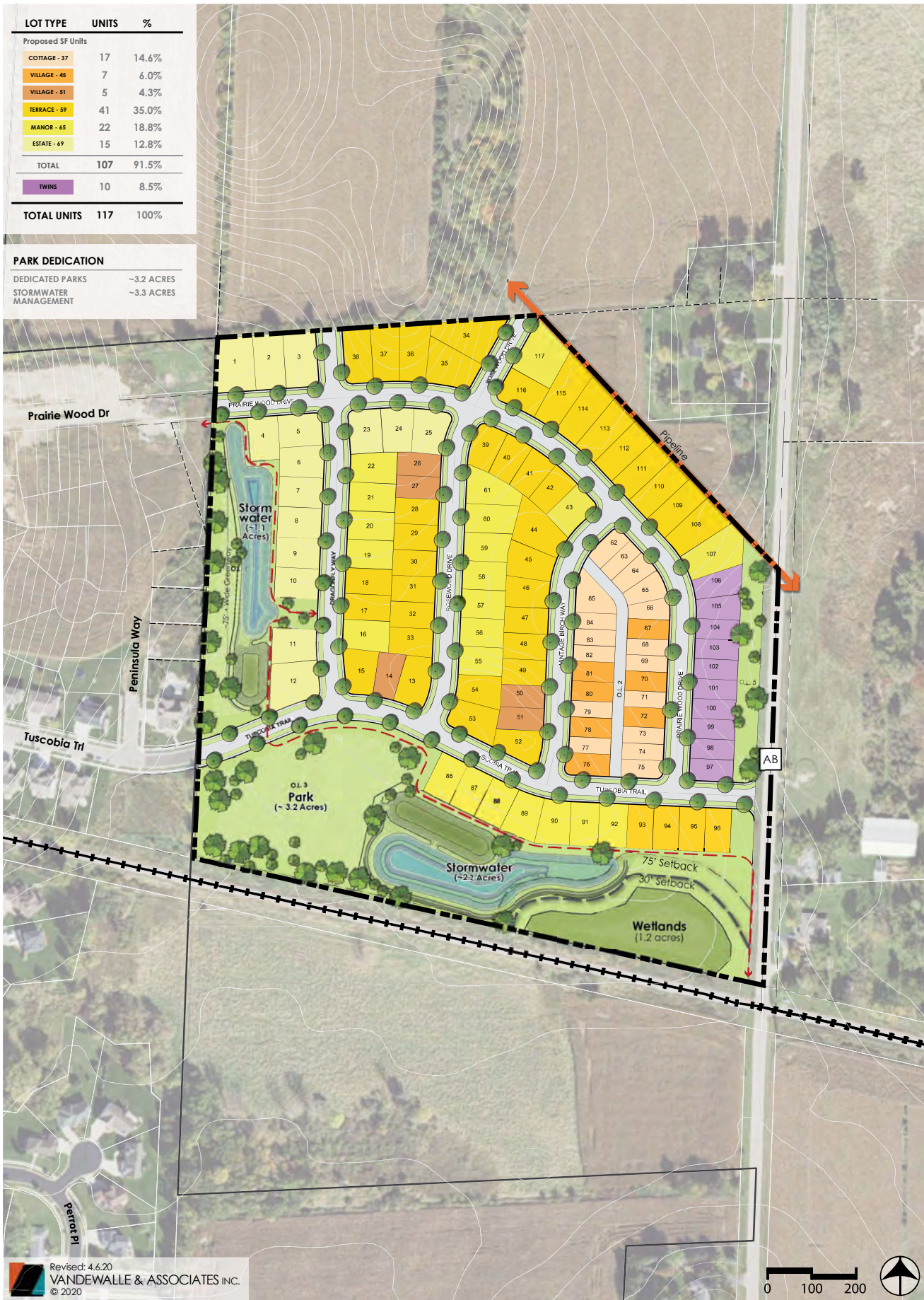
**EXHIBIT F:
ZONING MAP**

**ROSEWOOD FIELDS
MCFARLAND, WISCONSIN**



LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
VILLAGE - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 65	22	18.8%
ESTATE - 69	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION	
DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



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EXHIBIT G:

MASTER

PLAN

ROSEWOOD FIELDS

McFARLAND, WISCONSIN

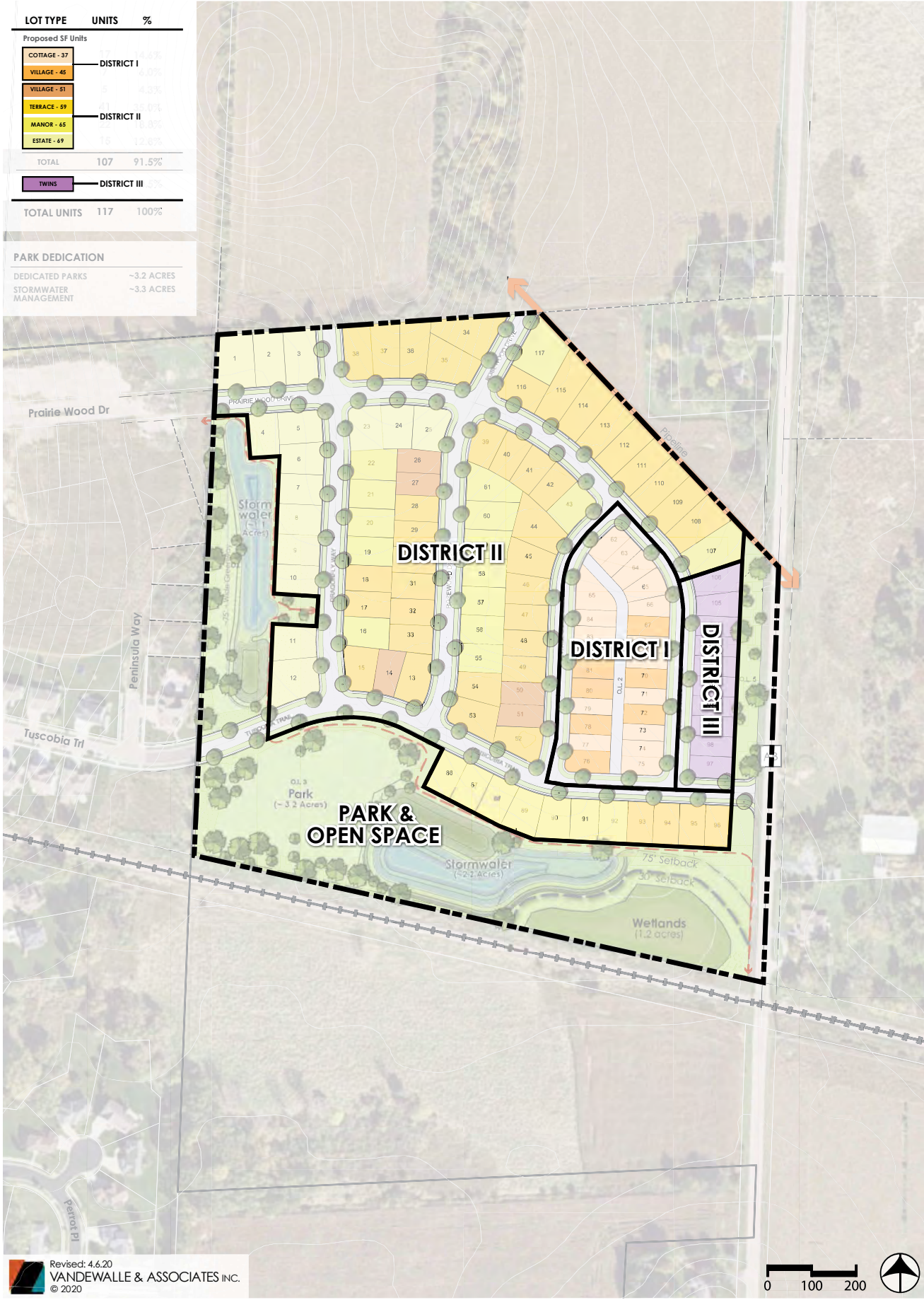


VERIDIAN

HOMES

LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	17	14.6%
VILLAGE - 51	5	4.3%
TERRACE - 59	17	14.6%
MANOR - 65	17	14.6%
ESTATE - 69	16	13.7%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION	
DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



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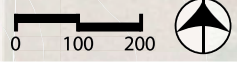


EXHIBIT H:
DISTRICT
PLAN

ROSEWOOD FIELDS

MCFARLAND, WISCONSIN

VERIDIAN
HOMES



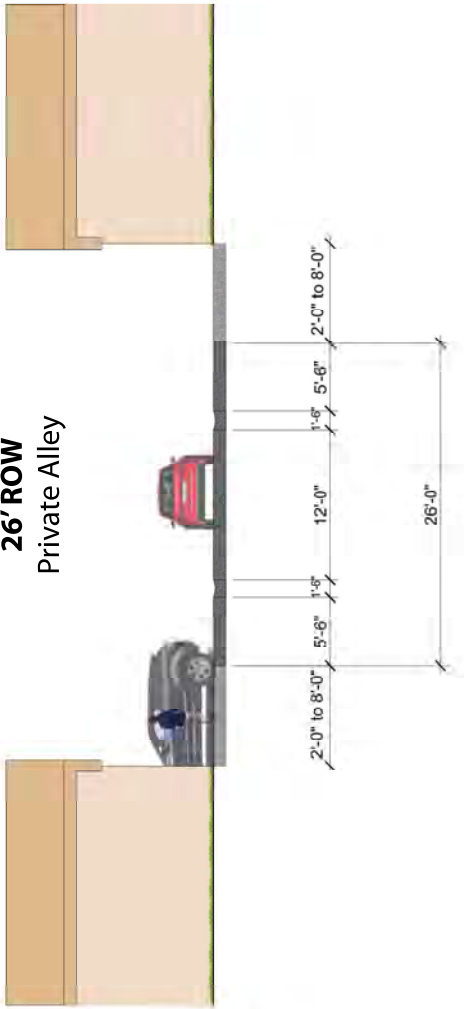
**EXHIBIT I:
 PARKS & OPEN
 SPACE PLAN**

ROSEWOOD FIELDS
 MCFARLAND, WISCONSIN

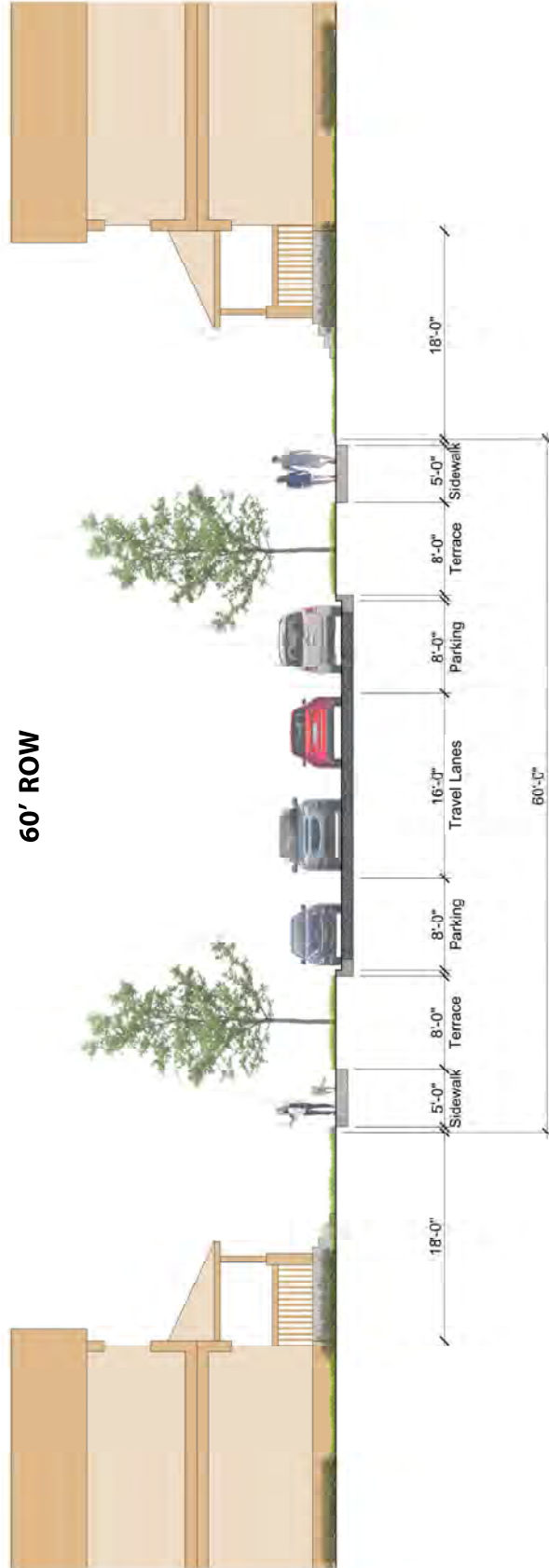




26' ROW
Private Alley



60' ROW



LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
VILLAGE - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 65	22	18.8%
ESTATE - 69	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION

DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



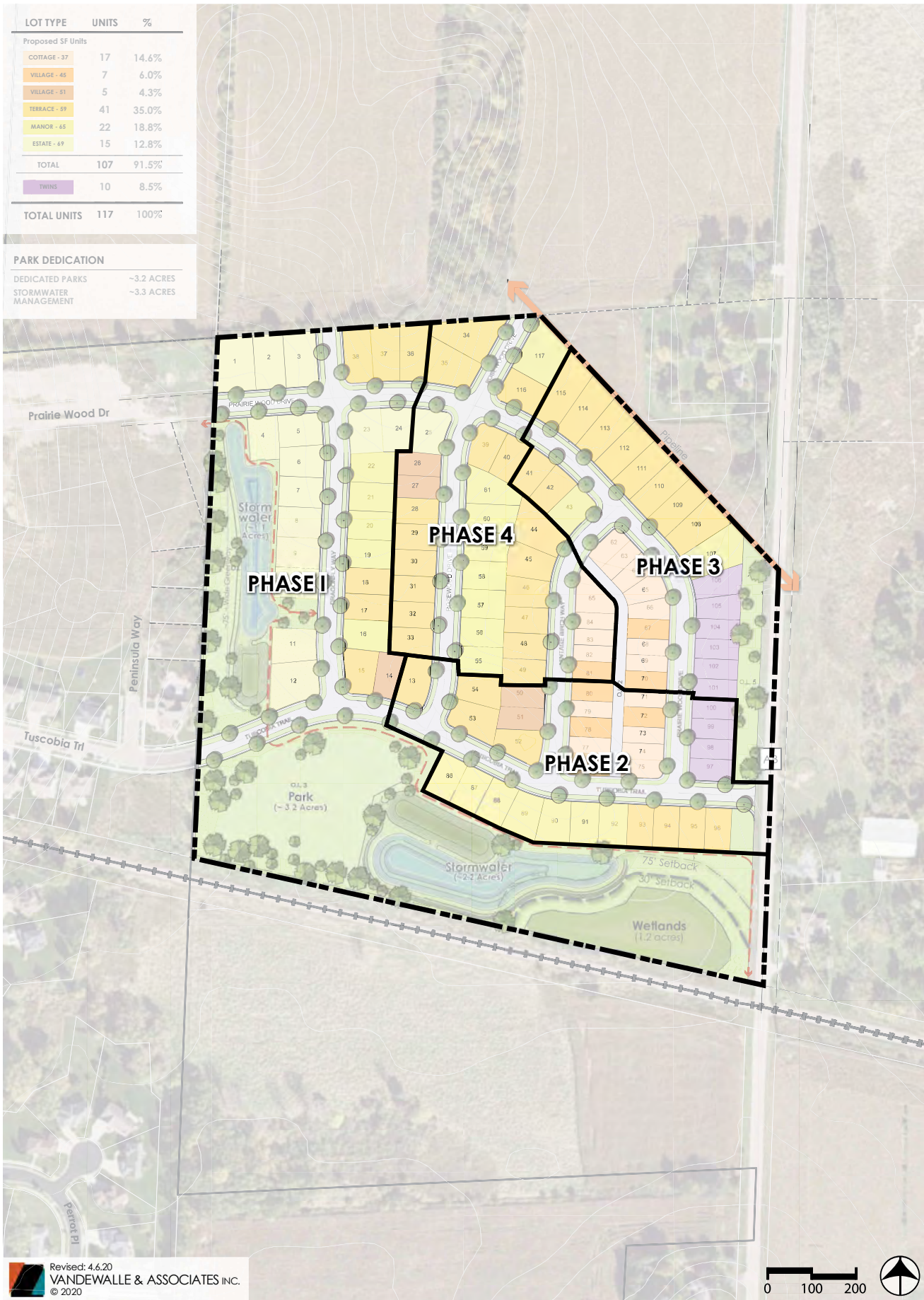
EXHIBIT L: CONCEPTUAL CBU LOCATION MAP

ROSEWOOD FIELDS MCFARLAND, WISCONSIN



LOT TYPE	UNITS	%
Proposed SF Units		
COTTAGE - 37	17	14.6%
VILLAGE - 45	7	6.0%
VILLAGE - 51	5	4.3%
TERRACE - 59	41	35.0%
MANOR - 65	22	18.8%
ESTATE - 69	15	12.8%
TOTAL	107	91.5%
TWINS	10	8.5%
TOTAL UNITS	117	100%

PARK DEDICATION	
DEDICATED PARKS	~3.2 ACRES
STORMWATER MANAGEMENT	~3.3 ACRES



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EXHIBIT M:
CONCEPTUAL
PHASING PLAN

ROSEWOOD FIELDS

McFARLAND, WISCONSIN

VERIDIAN
HOMES



Native plantings may be an attractive and sustainable approach to landscaping

- Every home and business should have nearby and unobstructed access to public space. This may include public parks, natural areas, private recreational facilities (on multi-unit residential sites), plazas, or other spaces.
- Whenever possible, sites and buildings should be designed on an east-west axis to maximize solar orientation for daylighting.

Landscaping

- Landscape public spaces and non-residential properties with plant species native to the region. Residential property owners should be encouraged to use natives as well. These plants are adapted to the region, provide food and habitat for wildlife, and can help to maintain ecological connections between natural open spaces in the neighborhood.
- Use natural plantings to buffer wetlands and other significant natural features.
- Manage existing wetlands and woodlands to maintain their ecological health. This may include the removal of non-native or invasive species.

Dimensional Criteria

The following table summarizes area, setback, and similar dimensional criteria for the different land use categories in the neighborhood.

Dimensional Criteria for Neighborhood Land Uses

Criteria	Office & Lt. Industry	Commercial Crossroads	Convenience Commercial	Traditional Neighborhood	Multi-Unit Residential	Large Lot Residential	Cluster Residential
Min. lot area (SF)	10,000	none	10,000	5,000	3,000	15,000	15,000*
Min. lot width	50'	none	50'	50'	50'	80'	40'
Building height	none	35'	35'	35'	45'	35'	35'
Front yard setback (min./max.)	25' / 50'	20' / 25'	25' / 25'	20' / 25'	20' / 25'	25' / none	20' / none
Front yard Encroachment**	none	none	none	10'	10'	10'	10'
Garage setback	n/a	n/a	n/a	25'	25'	25'	25'
Side yard setback	10'	none	10'	6'	6'	10'	6'
Rear yard setback	20'	none	20'	20'	30'	30'	20'
Rear yard deck encroachment	n/a	n/a	n/a	10'	n/a	10'	10'
Commercial setback from residential	20'	none	20'	n/a	n/a	n/a	n/a
Open space per dwelling unit (SF)**	n/a	500	500	1,000	750	10,000	10,000

* Minimum lot area may be reduced to 5,000 square feet where a minimum of 10,000 square feet per lot of open space is located contiguous to the lot.

** Unenclosed porches may be allowed to encroach ten feet into the front yard setback area.



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

May 20, 2020

To: Village Board of Trustees
From: Christopher C. Dennis, Fire & Rescue Chief

Re: Rosewood Fields Development Plan

The Fire & Rescue Department has reviewed the proposed development plan presented by the Veridian Homes for Rosewood Fields. The Fire & Rescue Department provided a position statement to the Plan Commission, stating that we support the proposed development with the provision of providing residential fire sprinklers for the homes with the reduced setbacks. Our concern is primarily with the side setbacks being reduced to 5'.

Attached is information from the Home Fire Sprinkler Coalition with facts about residential fire sprinklers. The national average cost is \$1.35 per square foot, and for a 2,000 square foot ranch style home, it would \$5,360 and \$4,050 for a two-story home. We reached out to local installers and found the cost in our area is about \$1.65 per square foot. In our market, the range would be \$6,600 for the 2,000 square foot ranch style home and \$4,950 for a two-story home. The coalition further provided information that insurance rates are reduced, and we have found that reduction is between 5% and 10% depending on the insurance company. Attached is an article from the National Association of Home Builders providing information on discounts for fire sprinklers. The main reason for the reduction is fires are often contained before the home becomes a complete loss or spread to adjacent property. Attached is the typical timeline in a residential fire in today's homes to illustrate the difference home fire sprinklers can make.

There is often a misconception on the National Fire Protection Association's (NFPA) 13D system. Often individuals envision the NFPA 13 system in commercial buildings with metal piping and larger flow heads or the NFPA 13R system in apartment buildings with plastic pipe and similar heads. Both of the NFPA 13 and 13R systems are separate piping for the plumbing in a building. The NFPA 13D system is an extension of the

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plumbing system in a home. The same water to the faucets, showers, etc. is used for the NFPA 13D system, reducing the cost drastically. The installation, when performed correctly, has the same if not less risk of water damage than having plumbing in a home. Fire sprinklers are often stated to cause water damage. To prevent damage, we provide oversight on the installation to avoid improper locations susceptible to freezing. We assist in remediation when problems occur by removing water and shutting down the systems. The majority of the times we have experienced issues, the plumbing in the buildings is a concern also.

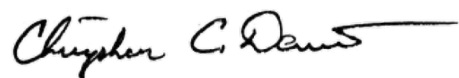
The question becomes, why don't home builders automatically include fire sprinklers in new homes. It often becomes a cost that is difficult to recover in the sale price of the house. The fire sprinklers aren't included in the appraisal and value of the home. The home buyers will compare homes based on other features, and the fire sprinklers will often not be considered for the additional expense. The value to the homeowner in reduced insurance premiums and safer home is overlooked. When a community decides to protect homes and businesses with fire sprinklers, the tax levy sees savings fewer firefighters, fire trucks, and fire stations are needed to protect the community.

In closing, the recommendation from the Fire & Rescue Department is to approve the proposed development plan with the condition that any homes with side lot setbacks less than the current bulk standards be required to install NFPA 13D fire sprinklers.

NFPA 13D Fire Sprinklers

- Cost less than carpet
- Save 5% - 10% on homeowners insurance premiums
- An extension of the existing plumbing system in the home
- Saves lives

Sincerely,



Christopher C. Dennis, Chief
Fire & Rescue Department
Village of McFarland

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[Home](#) > [FREQUENTLY ASKED QUESTIONS](#)

Frequently Asked Questions

On average,
fire sprinklers cost

Saving you, your family
and your property.



✕ [Where do I start?](#)

If your home builder is not familiar with contractors that install residential fire sprinklers, you still have several options.

Most contractors have Web pages describing their capabilities. You can also look in your local Yellow Pages under “Sprinklers, Fire”

Ask your local or state fire marshal if contractors in your state are required to be licensed. If they are, contact the state licensing board for a current list of licensed contractors.

Contact fire sprinkler contractor associations for names of residential sprinkler contractors in your area.

Any professional fire sprinkler contractor can install sprinklers, but for best results look for a contractor that specializes in residential fire sprinklers or one that has a residential sprinkler installation unit within the company.

✕ What should I do if my home builder or architect has questions or says I don't need fire sprinklers?

Most fire chiefs around the country will recommend fire sprinklers, as they have witnessed first hand their benefit to life and property safety. Some, but not all architects and builders are educated, at least partially, about residential fire sprinklers. If your builder and architect are not familiar with these systems, have them contact the organizations below for information.

And, if your builder or architect tries to discourage you from finding out more about your possibilities, you can obtain information by contacting any of these resources.

Any of the organizations listed in the Member Section.

U.S. Fire Administration
(301-447-1018)

✕ How much should I expect to pay for my fire sprinklers?

If installed during new home construction, home fire sprinklers cost an average of \$1.35 per square foot of sprinklered space, which is about what you'd pay for an upgrade in carpeting. The investment in your family's fire protection may be slightly lower or higher, depending on the location and complexity of the home.

✕ How long should installation take? Can other construction work continue while the sprinklers are going in?

Again, fire sprinkler installations are like electricity, plumbing or any other operational system in your home. The total time involved will depend on the size and complexity of your home.

Certain portions of the installation (i.e. water piping) are more easily and cost-effectively installed in the earliest stages of construction, while the actual finish (i.e. installing the fire sprinkler devices, testing, etc.) will take place after the house is framed. Fire sprinklers are often completed prior to the other systems in your home, but other mechanical trades may work alongside the sprinkler contractor if necessary.

✕ How do I take care of my fire sprinklers?

Residential fire sprinklers are basically maintenance free. The only testing required on a regular basis is opening the drain/test valve to check the alarm operation. Fire sprinklers are designed to operate properly for 20 years or more without any maintenance.

Some basic precautions to safeguard your fire sprinklers are:

- Avoid painting or otherwise covering the fire sprinkler devices, as that will affect their sensitivity to heat.
- Do not hang decorations, plants or other objects from the sprinkler or piping.

More information is available in our [Living with Sprinklers™](#) section of this website.

✕ What if my home will not be connected to a public water supply?

Homes can be protected by automatic fire sprinklers in even the most remote areas. Several manufacturers offer self-contained water tanks to supply residential fire sprinklers. These tanks are designed to fit in your garage or another storage area of the home, and they hold enough water to comply with the National Fire Protection Association Standard 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

✕ Will my insurance premiums go up?

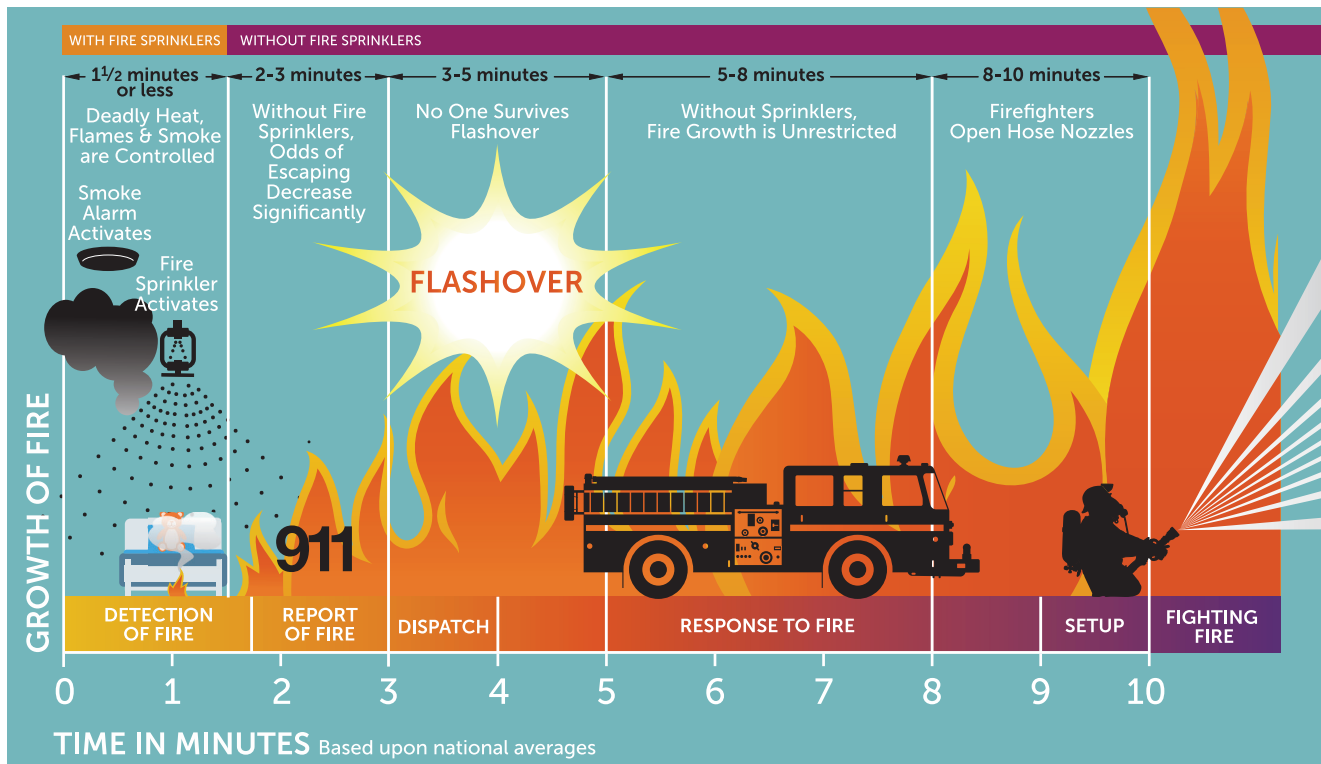
No. Generally insurance rates will go down because fire sprinklers will keep damage low. Shop around; the savings vary by insurance company.

✕ Can I retrofit fire sprinklers into my existing home?

[Here is a video that explains the process.](#)

DEADLY IN 2 MINUTES OR LESS

Can You Survive a Home Fire?



Most fatal structure fires happen at home. Most are at night when people are sleeping.

A home fire can become deadly in two minutes or less. That's not much time. Could you wake up, realize you're in danger and make your way to a safe exit in under two minutes? Could your children?

New Homes

Fires in new homes are deadlier today. Common unprotected lightweight building material and flooring burns faster and fails quicker. Our furniture and belongings are made of synthetics that create deadly smoke when they burn.

An uncontrolled house fire grows quickly. The hot, deadly smoke travels room to room. It can take lives in just seconds.

Home Fire Sprinklers Save Lives

Home fire sprinklers detect a fire and control it automatically. The sprinkler puts water on a fire while it's still small. That keeps heat, flames and poison smoke from spreading. Having fire sprinklers gives you, your family and your pets time to get out safely. If you plan to build or buy a home, ask for fire sprinklers.

Learn more at HomeFireSprinkler.org

Follow HFSC on Facebook: facebook.com/HFSCorg#, Instagram: [homefiresprinklercoalition](https://instagram.com/homefiresprinklercoalition), and on Twitter: [@HFSCorg](https://twitter.com/HFSCorg). You can also follow HFSC activities on Pinterest: pinterest.com/hfsc/ and LinkedIn.



Home Fire Sprinkler
COALITION
Protect What You Value Most
HomeFireSprinkler.org

Fire Sprinklers and Homeowner Insurance

Normal View

Fire Sprinklers and Homeowner Insurance

Special Studies, September 14, 2007

By Lanlan Xu

Report available to the public as a courtesy of HousingEconomics.com

The issue of installing fire sprinklers in homes raises a number of questions. To what extent are sprinklers able to prevent injuries or property damage due to fire? Is it enough to justify the added cost of sprinklers? If so, what is the impact on housing affordability, and are there any factors that can help offset the added cost?

The issues would be somewhat simplified if we could show that monetary savings existed to offset, or almost offset the added upfront costs of installing fire sprinklers. Builders in that case would be able to install sprinkler systems in most new homes and market the sprinklers effectively to prospective buyers as an added safety feature that pays for itself.

Fire sprinkler proponents sometimes allege that such savings already exist in the form of reduced rates on home owner insurance. This article studies that particular issue. From the insurer's point of view, sprinklers may generate savings, but also additional costs. Savings to insurance companies occur if sprinklers extinguish fires in their early stage or contain fires until the fire fighters get to the scene —resulting in reduced injuries, deaths, and property damage. Additional costs may occur if sprinklers discharge accidentally and cause unnecessary water damage. Insurance companies thus have both the means and incentive to track savings and costs associated with sprinklers. If the expected savings are greater than the expected costs, it should show up as discounts on insurance for owners of homes with fire sprinklers. Information compiled from various sources for this article indicates that most insurers do offer meaningful discounts for residential sprinkler systems. The discounts vary somewhat from state to state, but are not high enough in any state to offset the added upfront cost buyers pay for sprinklers.

Sprinkler Discounts by State

In each state, NAHB obtained data about the practices of the top insurers. In some cases, the data could be obtained from state government departments of insurance. In others, it was necessary to contact insurance companies or individual agencies. Data were compiled on insurers that cumulatively have at least 40% of the market in every state (including DC) except for Hawaii, where the cumulative share covered is 23.6%. [1] Some insurance companies, like State Farm and Allstate, have large market shares in many states, but there are also states where the market is spread more evenly at the top and includes a number of regional companies, particularly in New England. (Table 1)

Although a few of these regional insurance companies such as Indiana Farm Bureau and Kentucky Farm Bureau do not currently offer discounts for fire sprinklers, they are the exceptions. Most insurance companies do offer discounts, most often in the form of a percentage off the basic premium. To qualify for the discount, the sprinkler system has to meet the National Fire Protection Association standard. [2]

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See previous Special Studies	

Insurance companies generally make a distinction between two types of sprinkler systems: Class A, where automatic sprinklers are installed in all areas including bathrooms, attics, closets, and attached structures; and Class B, where automatic sprinklers are totally or partially omitted in bathrooms, attics, closets, and attached structures. Insurance usually, but not always, offers different discounts for each type of system. Many discounts are in the neighborhood of 10% for Class A sprinkler systems and 5% for Class B systems. In fact, companies like State Farm and Farmers Insurance offer a uniform 10% and 5% in all states except for in North Carolina. [3] Other insurance companies offer different discounts in each state. Among the companies shown in Table 1, the maximum discount is 16% for Class A systems, and 10% for Class B systems. [4]

The same percentage doesn't lead to the same dollar savings for all new home buyers, due to differences in insurance rates, coverage, and values of the homes purchased, which vary by state. Table 2 shows median new home prices (estimated by NAHB for 2007), median insurance costs paid by new home owners (calculated from the Census Bureau's 2005 American Community Survey and based on homes built after 1999), and average fire sprinkler discount rates in each state. The discounts in Table 2 are weighted averages of the discounts in Table 1, with the weights based on the companies' market shares.

Without more information about the type of policies on which the median insurance payment is based, it's impossible to calculate with precision how much buyers can expect to save on the average new home with a sprinkler system. The best we can manage with the data in Table 2 is a rough upper bound. Using the average insurance payment as a crude proxy for the basic premium [5], the most an average new home buyer in a particular state can expect to save on homeowners insurance appears to be about \$95 a year. This is in Florida, where the average annual insurance payment and the average sprinkler discounts are both relatively high. As mentioned, the \$95 in annual savings are an upper bound that almost certainly overstates the savings somewhat, as the average insurance payment is likely to include charges beyond the basic premium, and the discount applies only to the basic premium.

Beyond that, the added savings attributable to fire sprinklers will usually depend on the home's other safety features. Most insurance companies offer discounts for devices such as dead bolt locks, smoke detectors, fire extinguishers, burglar alarms, etc. Although the discount offered for each kind of safety device varies, there is normally a cap on the combined discounts for all safety devices, usually at 20%. This means that, given a large enough number of other safety features, the marginal impact of a sprinkler system on the insurance payment could be very small or zero.

Cost of Fire Sprinklers

How do the potential savings on homeowners insurance compare to the costs? At times, different organizations have cited different cost figures, not always documenting the source. For example, in its brochure for consumers titled "Protect What You Value Most", the Home Fire Sprinkler Coalition simply states that a good rule of thumb estimate is to add 1 to 1½ percent to the cost of new housing. Applying this general rule to the \$246,500 median price of a new home sold in 2006 [6] is \$246,500 translates into a \$2,465-\$3,698 increase in its price.

In 2007, Home Innovation Research Labs collected information on sprinkler costs in a nationwide survey completed by 102 builders who built 5,527 homes with fire sprinklers in 2006. The survey results show that the median cost of installing fire sprinklers in the 5,527 homes was about \$5,573 (Table 3). The median size of the surveyed homes was 2,271 square feet, very close to the 2,248 square feet reported by the federal government for homes built in 2006. [7-8]

The extra costs Home Innovation Research Labs' survey was careful to include are the costs of increased permit, tap, and inspection fees, as well as any costs of redesigning the home to accommodate the

sprinklers. It's important to include these items, as costs are not limited strictly to the material and labor used in installing the sprinkler system itself.

In addition, the increase in price to the home buyer will generally be more than the increase in the construction costs. This occurs because, when construction costs rise, other costs such as financing costs and broker commissions also rise. Moreover, normal profit margins must be maintained to keep home building competitive and prevent the capital and entrepreneurship from moving to other industries. Based on these factors, NAHB estimates that a \$5,573 increase in construction costs will raise the final price of the home to the buyer by \$6,677 (Table 4).

One way to put this in the same time frame as the annual savings on homeowners insurance is to assume that the \$6,677 is financed and see by how much that would increase the buyer's annual mortgage payment. Using Freddie Mac's 30-year fixed-rate mortgage rate of 6.70% in July 2007, a \$6,677 increase in the amount of the mortgage translates to an increase of \$522 in the annual payment, roughly 5½ times the upper bound of the amount the average new home buyers could save on their insurance premium in any state. Even under the lowest of the above cost estimates (\$2,465), the annual mortgage payment would increase by \$193, roughly double the upper bound on the average insurance savings.

An added factor is that home buyers will take insurance savings into account when making their purchase decisions only if they understand the magnitude of the annual savings and believe these savings to be real and long lasting. Federal or state agencies could help achieve this by monitoring the insurance industry and compiling data to show that accidental sprinkler discharges do not in the long run lead to cancelled policies or increased premiums.

Moreover, the above costs included only the initial installment costs to homeowners. A fire sprinkler system has to be maintained. Although homeowner insurance usually covers damage caused by water discharged from the sprinkler system (even if the discharge is accidental) it does not cover repairs to the sprinkler system itself. In addition, the damage caused by water leaking from the system slowly over a long period of time, such as rot, is not covered. These items can all add to the annual cost of the sprinkler system to a homeowner, although probably not by much in the first few years after a typical new home is purchased.

Summary and Further Discussion

This article looks at the dollar costs of fire sprinklers to home builders and home buyers, and compares these costs to the dollar savings buyers can obtain on homeowner insurance policies. Buyers may have other reasons for desiring for fire sprinklers, such as an added sense of security it gives them, but this article looks only at the dollar savings available to them on insurance policies.

The article found that most, but not all, insurance companies offer discounts on homeowner insurance policies for sprinkler systems. The data, although incomplete, are enough to establish a rough upper bound of \$95 on the average annual savings to new home buyers in a particular state. This represents a substantial and significant discount, but only modestly offsets the increase in price for a typical new home buyer (for which estimates presented in this article range from \$2,465 to \$6,677).

Under prevailing interest rates, a \$95 savings in annual insurance cost is able to fully offset the increase in mortgage payments only if the up-front cost of the sprinkler system to the home buyer is approximately \$1,200 or less. Reducing the cost of producing and installing the average Class A residential sprinkler system to somewhere in the neighborhood of \$1,200 would thus be a worthwhile goal. If achieved, it would allow the market to provide sprinkler systems in most new homes without adversely affecting affordability. Local governments could make a contribution toward achieving this by not increasing permit, tap, or other fees on homes with sprinkler systems.

Footnotes:

[1] Based on the National Association of Insurance Commissioner's 2005 Market Share Report by State (04-Homeowners Multiple Peril), major insurance companies that cumulatively have at least 50% of the market share in all 50 states and the District of Columbia are selected for the survey.

[2] Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

[3] In North Carolina, there is a uniform discount rate of 13% for Class A sprinkler systems and 7% for Class B systems. Insurance companies have to file any intended changes from these rates and have them approved by the state. So far only Auto-Owners has filed for a 15% discount on both Class A and Class B systems.

[4] Although Concord Group in Maine reports a 20% discount for Class A, the discount only applies to the situation where fire sprinkler system is combined with central alarm system, fire extinguisher and smoke detector.

[5] The discounts in Table 1 apply to the basic homeowner insurance premium. Based on the information contained in the American Community Survey, there is no way to calculate a relationship between basic premium and final premium. The premium paid by the owner will generally be higher than the basic premium if the homeowner chooses additional coverage for items like jewelry or fur, or additional replacement cost protection.

[6] "Characteristics of New One-Family Houses Sold," U.S. Census Bureau.

[7] "Characteristics of New One-Family Houses Completed" U.S. Census Bureau.

[8] While the response rate of the survey is unknown for several reasons, the median square feet of houses surveyed is close to the Census' number, suggesting that selection bias is probably not an issue.

For more information about this item, please contact Paul Emrath at 800-368-5242 x8449 or via email at pemrath@nahb.org.



McFarland Fire & Rescue Department

5915 Milwaukee Street • PO Box 110 • McFarland, WI 53558-0110

(608) 838-3278 • Fax: (608) 838-3619

Emergency: 911

April 20, 2020

Andrew Bremer

Village of McFarland Community Development

5915 Milwaukee St.

McFarland, WI 53558

RE: Site Plan Review for proposed Utterback-Veridian development

Dear Andrew,

I have reviewed the proposed Utterback-Veridian development on the east side of the Village of McFarland. This proposal is to develop open land into residential homes. Under the proposal, the set setbacks between the buildings are to be reduced to five (5) feet from lot-line or a combination of ten (10) feet from both sides of the home. The physical separation between buildings is proposed to be no less than ten (10) feet.

Per Village Ordinance Sec. 62-70 table under the R-1A column, the minimum allowable set back between property lot-lines is to be no less than seven (7) feet or a combination of fourteen (14) feet with a building separation of fourteen (14) feet.

While reviewing proposals to reduce the minimum current standards, we utilize model codes. In this case, we utilized the 2018 International Zoning Code (IZC) and the 2018 International Residential Code (IRC). The IZC permits one and two-family dwellings the requested reduction of setbacks but does so based on using the IRC.

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According to the 2018 International Residential Code (IRC):

"R313.2 One- and two-family dwellings automatic fire sprinkler systems.

An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings." The IRC is the model code of one and two-residential building code that many fire departments would recommend following. The recommendation is based on best practices. Wisconsin has not adopted the code for a variety of reasons and many are not supported by best practices.

We acknowledge the recommendation exceeds the current outdated Wisconsin Uniform Dwelling Code. We, however, feel that following current model codes is the best practice. Especially when the cost is often less than 2.5% of the home selling price.

To accommodate the reduced building setback, the McFarland Fire & Rescue recommends all homes have fire sprinkler systems installed according to the *National Fire Protection Association (NFPA) 13D-Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*.

If you have any questions regarding the above, please contact me via phone at 608-838-3278 or via email at mitchell.sutter@mcfarland.wi.us

Sincerely,



Mitchell Sutter

Fire Inspector/Public Education Specialist

Cc: Chris Dennis, Fire & EMS Chief (McFarland Fire & Rescue Department)



PLAN COMMISSION SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding a request by Veridian Homes Rosewood Fields LLC regarding Preliminary Plat approval for Rosewood Fields Subdivision located west of CTH AB in the Village of McFarland.

PREVIOUS ACTION:

On April 16th, 2020 the Parks Committee met to review the proposed parkland dedication and unanimously recommended approval to the Village Board.

On May 12th, 2020 the Public Works and Public Utilities Committee met and unanimously recommended approval of the preliminary plat, conditioned on addressing the items in the Village Engineer's Staff Report dated May 7, 2020.

On May 18th, 2020 Plan Commission met and recommend on a vote of 6-1, approval of the preliminary plat with those conditions as enumerated under Board, Commission or Committee Recommendation.

ISSUE SUMMARY:

Background and Meeting Purpose

Veridian Homes (VH Rosewood Fields LLC) has petitioned the Village for approval of a preliminary plat (Rosewood Fields) for 36.29 acres of land along CTH AB. Veridian has an option to purchase this property from Utterback Limited Partnership. Concurrent with the preliminary plat approval, Veridian Homes is also petitioning for annexation, land division, and rezoning of the parent parcel. These requests will be reviewed by the Plan Commission and Village Board in May.

Plats are approved in a two step fashion with the preliminary plat phase allowing the applicant an opportunity to obtain design input and answer initial questions regarding general plat design, prior to having to incur additional expenses in the preparation of the final plat. The purpose of the May 18th Plan Commission meeting is to review and provide a recommendation to the Village Board. Assuming the preliminary plat is approved, the applicant will prepare the final plat for review by the Village, including the Public Works and Public Utility committees. Concurrent with the final plat approval a development agreement will be prepared by the Village Attorney specifying construction obligations, sureties, and related matters

Summary of Proposed Development

The proposed development consists of 117 residential lots, of which 107 will be for single family units and 10 will be for twin units (two attached dwellings separated by zero lot line). Twenty four (24) of the single family



lots would have their driveways accessed by a private alley (Outlot 2) to be maintained by the Rosewood Fields Homeowners Association. The proposed development includes 138,198 square feet (3.2 acres) of land dedicated as public park space (Outlot 3). There is an additional 7.6 acres of wetland, stormwater, and passive open space in Outlots 1, 4 & 5. A proposed off-road trail would run through Outlots 1, 3, and 4, from Prairie Wood Drive to the railroad crossing at CTH AB. Future development of lands south of the railroad would provide continued off-road connections to the Lower Yahara River Trail. The proposed neighborhood park and trail will be developed as part of Phase 1 of the subdivision development. Build-out of all lots is anticipated to occur over a 5-6 year period based on market conditions.

Consistency with the Village Comprehensive Plan of 2017

The Village's Future Land Use Map identifies the subject property in the "Neighborhood" category. Figure 4.1 of the Comp Plan provides additional details regarding development policies for this future land use category. The general description of land uses includes mostly single-family residential development with components of two family and townhouse residential, multi-family and institutional, and recreational land uses. The Development Policies in Figure 4.1 further explain the desire to accommodate a mixture of housing types, costs, and densities while maintaining at least 65% single family housing (development provides 91% single family). Typical implementing zoning districts include R-1 and PD, as proposed by Veridian, but can also include R-2, R-3, and R-E. The 10 proposed twin lots are consistent with uses allowed in the R-2 District. The comp plan references the Village's separate East Side Neighborhood Growth Area Plan for further conceptual guidance.

Consistency with the East Side Neighborhood Growth Area Plan of 2008

Included in the Rosewood Fields Zoning Submittal.pdf is a copy of the Village's East Side Neighborhood Growth Area Concept Development Plan, marked Exhibit C. This plan was adopted in 2008 and incorporated into the Village's 2017 Comprehensive Plan. The area of the preliminary plat is outlined on the map. The subject property is identified for Traditional Residential development. According to the plan, Traditional Neighborhood Areas are predominantly owner-occupied and intended to contain a combination of single-family, two-family, and 3-4 unit structures at a minimum density of four units per acre. The plan stipulates that density recommendations are inclusive of land area dedicated to public rights-of-way and utilities, but not dedicated parks and open space (including stormwater management facilities). Proposed net density is 4.7 units per acre. The neighborhood plan further identified the continuation of Tuscobia Trail to CTH AB, connectivity of new local streets to connect to undeveloped adjacent lands to the north, and the provision of park and stormwater management areas along the south side of Tuscobia Trail and on the west side of the property adjacent to the existing Park View Estates subdivision.

The PDD General & Detailed Plan is generally consistent with the Village's land use plans in terms of land uses, land use locations, unit mix, and street layout. Veridian has proposed rezoning to the PD District in order to reduce certain bulk standards found either within the Village's Subdivision, existing residential zoning districts, and Dimensional Criteria for Traditional Neighborhood Land Uses identified on page 32 of the East Side Neighborhood Growth Area Plan. Specifically the following provisions:

1. District I (Carriage Lane Lots). Proposed minimum lot widths of 37 feet. Sec. 56-142(e) of the Subdivision Code requires a minimum of 40 feet, while the ESNGAP recommends 50 feet. Veridian is



proposing the use of 37 feet on 11 of the 24 lots, with all but two lots less than 50 feet. Proposed minimum lot depths of 100 feet. Sec. 56-142(l) of the Subdivision Code requires a minimum of 100 feet. Proposed minimum lot size of 3,500 square feet, minimum front yard setback of 15 feet, minimum side yard setback of 5 feet, and minimum open space per dwelling unit of 500 square feet. The dimensional guidelines from the ESNGAP recommended 5,000 square feet, 20 feet, 6 feet, and 1,000 square feet respectfully. It should be noted that it is unclear if the dimensional guidelines in the ESNGAP for Traditional Neighborhoods were drafted to reflect alley development. Veridian is specifically proposing the carriage lane lots in order to increase the net density of the subdivision to meet the minimum density requirements of the ESNGAP, while also providing a diversity of housing style and purchase prices consistent with other goals and objectives of the Village and ESNGAP.

2. District II (Traditional Lots). Minimum front yard setback of 20 feet, 18 proposed. Minimum side yard setback of 6 feet, 5 feet proposed. Minimum sum of side yards of 12 feet, 10 feet proposed. Minimum corner lot side yard setback of 12 feet, 10 proposed.
3. District III (Twin Lots). Minimum lot size of 10,000 square feet (5,000 per unit), 9,100 square feet (4,550 per unit) proposed. Minimum front yard setback of 20 feet, 15 feet proposed. Minimum side yard setback of 6 feet, 5 feet proposed. Minimum sum of side yards of 12 feet, 10 feet proposed.

Included within the packet is a review letter provided by the Village Fire and Rescue Department. To accommodate the reduced building setback, the McFarland Fire & Rescue recommends all homes have fire sprinkler systems installed according to the National Fire Protection Association (NFPA) 13D-Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

Consistency with Village Subdivision Ordinances (Parkland)

Section 56-173(a) of the Village's Subdivision Ordinance requires 2,106 square feet of parkland dedication per single family unit and 1,463 square feet of parkland dedication per duplex and multi-family unit. The dedicated parkland must be usable for playground and recreational uses. The proposed parkland area is gently sloping with 3-4 feet of elevation change from the northwest corner to the southeast corner. The proposed park site is currently used for agricultural crops, does not contain wetlands, and is not located within a designated floodplain. The majority of Outlot 3 consists of Kegonsa Silt Loam (KeB) soils which are classified as well drained.

The parkland dedication requirement translates to a required dedication of 239,972 square feet (5.51 acres), with the proposed plat providing 138,198 square feet (3.17 acres), leaving a deficit of 101,774 square feet (2.34 acres). Section 56-173(b) provides the Village the ability to accept parkland impact fees in lieu of parkland dedication, or partial parkland dedication. The current fee in lieu of parkland dedication is \$3,915.46/SF unit and \$2,719.90/MF unit. The estimated fee in lieu of parkland dedication is \$189,216.50. These funds would be payable under the terms of a development agreement to be approved at the time of the final plat. Note, the Developer has indicated interest in directly constructing park and playground equipment as part of meeting the fee in lieu of parkland dedication. Acceptance of this request will be determined through the final plat and development agreement approval process.

In addition, to the fees in lieu of parkland dedication, Section 8-464(b) requires park improvement impact fees to be paid at the time of issuance of a building permit in the amounts specified under the Village's Fee Schedule



at the time of permit issuance. The current fees are \$1,099.65 per single family unit and \$712.52 per multi-family unit. These fees are subject to annual changes by the Village Board and are currently planned to increase annually based on the prior recommendation of the Parks Committee and the most recent Park Impact Fee Study. For reference purposes, if all the units in the development were built in 2020, the proposed development would pay \$124,787.75 in total park improvement impact fees; however, the total fees will likely be higher as the development will be built over 5-6 years based on market demand.

Consistency with Village Subdivision Ordinances (Transportation Facilities)

Section 56-139(w) of the Village's Subdivision Ordinance requires right-of-way widths for collector streets of 70 feet, local streets of 60 feet, and alleys of 24 feet. The preliminary plat provides for a 66 foot wide ROW along CTH AB. This should be expanded to 70 feet, requiring an additional two (2) feet of ROW dedication by Veridian; the remaining two (2) feet would be provided on the other side of CTH AB if and when those lands were subdivided. The local roads are planned with a 60-foot ROW and the alley with a 26-foot ROW, both of which meet the Village subdivision ordinance requirements. Exhibit K of the Rosewood Fields Zoning Submittal.pdf includes a cross section of the ROW designs for the proposed alley and local roadways, including the provision of 5-foot sidewalks along both sides of all local roads.

Consistency with Village Subdivision Ordinances (Utilities)

The packet includes a copy of the draft Rosewood Fields Preliminary Engineering Plan and Preliminary Stormwater Management Plan. The Village Engineer has reviewed these documents and provided a letter outlining recommend conditions of approval to address compliance with Village requirements and best management practices. Addressing these comments will be part of the scope of the developer's efforts prior to submittal of the final plat, final engineering plan, and final stormwater management plan.

FINANCIAL/BUDGET IMPACT:

Assuming at least an average assessment value of \$325,000 for each lot would yield approximately \$250K in annual property tax payments to the Village upon full build-out. Additional revenue from park impact fees, library impact fees, and public water impact fees would be payable to the Village as well. The Developer will also be responsible for paying for utility, street, trail, and park improvements within the development. Specific requirements will be addressed as part of a development agreement to be approved with the final plat.

VILLAGE PLAN REFERENCE:

One of the goals of the Village of McFarland Comprehensive Land Use Plan is to promote quality, affordable housing for families and older residents within neighborhoods and mixed use settings that are organized around safety, conservation, recreation, and connections to the broader community. A related housing objective is to expand the range of quality and affordable housing choices for empty nesters, seniors, and the McFarland workforce, while remaining a family-oriented community. A related housing policy is to promote affordable housing through allowing modest lot sizes and higher suburban densities, including appropriately planned and located multiple family housing, incentives where practical, and continued participation in County and State housing programs.

Developing affordable housing in the Village was also a theme that emerged from the Village's 2020-2030



Strategic Plan. In addition, actively promoting and supporting affordable housing in the Village is included in the 2019-2020 Village Board Goals.

ORDINANCE REFERENCE:

Chapter 56, Subdivisions

Sec. 62-67, PD Planned Development District

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend approval of the proposed Rosewood Fields Preliminary Plat with the following conditions

1. Veridian Homes to address those conditions as provided in the Village Engineer's Rosewood Fields Development - Zoning Submittal Review letter dated May 7, 2020.
2. Provide for review by the Village Engineer, modeling of the impacts of a 150-year storm event to the proposed development.
3. Village Board approval of Ordinance 2020-15.
4. Village Board approval of Ordinance 2020-16.
5. Veridian Homes shall have 24 months after the date of approval of the Preliminary Plat to file the Final Plat for review and approval by the Village Board, otherwise the Preliminary Plat will be considered void unless an extension is requested in writing and granted by the Village.
6. Concurrent with the Final Plat, review and approval of a development agreement and declaration of protection covenants, conditions, and restrictions by the Village Attorney and Village Board.

ATTACHMENTS:

1. 02 - Rosewood Fields Preliminary Plat 2020.04.07
2. 07 - Rosewood Fields Preliminary Engineering 2020.04.07(reduced)
3. 08 - Rosewood Prelim SWMP 2020.04.07(reduced)
4. 03 - Rosewood Fields - CCRs (clean) 2020.04.07

SURVEYOR'S CERTIFICATE

I, Brett T. Stoffregan, Registered Land Surveyor, S-2742, hereby certify that this preliminary plat is a true and correct representation of all the adjacent existing land divisions and of the boundary of the preliminary plat and features and that I have fully complied with the Village of McFarland Subdivision Ordinance.

Dated this 7th day of April, 2020.

Brett T. Stoffregan
Brett T. Stoffregan, Professional Land Surveyor, S-2742
MADISON, WISCONSIN



LEGAL DESCRIPTION

A parcel of land located in the NE1/4 of the SE1/4 and the SE1/4 of the SE1/4 of Section 2, T6N, R10E, Village of McFarland, Dane County, Wisconsin to-wit:
Commencing at the East 1/4 corner of said Section 2; thence S02°07'30"W 586.21 feet along the East line of said SE1/4; thence N87°52'30"W, 34.21 feet to the point of beginning; thence S02°14'16"W, 973.22 feet; thence N77°25'35"W, 1291.46 feet; thence N02°55'02"E, 1186.37 feet; thence N86°00'55"E, 736.08 feet; thence S29°04'23"W, 9.53 feet; thence S44°25'02"E, 501.30 feet; thence S42°38'44"E, 242.81 feet to the point of beginning.
Containing 1,580,872 square feet square feet (36.292 acres).

to be known as

Lot 2, Certified Survey Map No. _____, recorded in Volume _____ of Certified Survey Maps on pages _____ as Document Number _____, Dane County Registry, located in the Village of McFarland, Dane County, Wisconsin.

NOTES

1. Zoning: Existing - FP-35
Proposed - Planned Development
2. All intersection radii are 15' unless noted.
3. Outlot designation:
1 - Dedicated to the public for storm water management and conveyance
2 - Private alley to be owned and maintained by the Rosewood Fields Neighborhood Association
3 - Dedicated to the public for park purposes
4 - Dedicated to the public for storm water management and open space. Public sanitary sewer easement over entire outlot.
5 - Private open space. Public storm water drainage easement over entire outlot.
4. Owner:
Ufferback Limited Partnership
c/o Wayne Ufferback
4627 Prairie Fire Ct.
DeForest, WI 53532
Subdivider:
Village of Rosewood Fields LLC
6801 South Towne Drive
Madison, WI 53713
Planner:
Vandewalle & Assoc.
120 E Lakeside St.
Madison, WI 53715

LEGEND

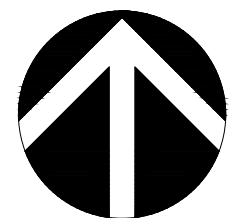
- FOUND 1" IRON PIPE
- FOUND 1-1/4" REBAR
- FOUND 3/4" REBAR
- PLACED 3/4"x18" REBAR (WT=1.5 LBS/FT.)
- SS SS SANITARY SEWER
- W W WATER MAIN
- G G GAS MAIN
- DHE DHE OVERHEAD ELECTRIC
- RAILROAD TRACKS
- MANHOLE
- POWER POLE
- RAILROAD CROSSING SIGNAL
- HYDRANT
- SOIL BORING
- - - - - EXISTING CONTOUR
- () "RECORDED AS" INFORMATION



PRELIMINARY PLAT

ROSEWOOD FIELDS

LOCATED IN THE NE1/4 OF THE SE1/4 AND THE SE1/4 OF THE SE1/4 OF SECTION 2, T6N, R10E, VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN



WISCONSIN COORDINATE
REFERENCE SYSTEMS (WISCRS)
DANE ZONE NAD83(2011)

SCALE: 1"= 100'

DATE: 04-07-20
REVISED:

FN: 19-07-114

Sheet Number:
1 of 1

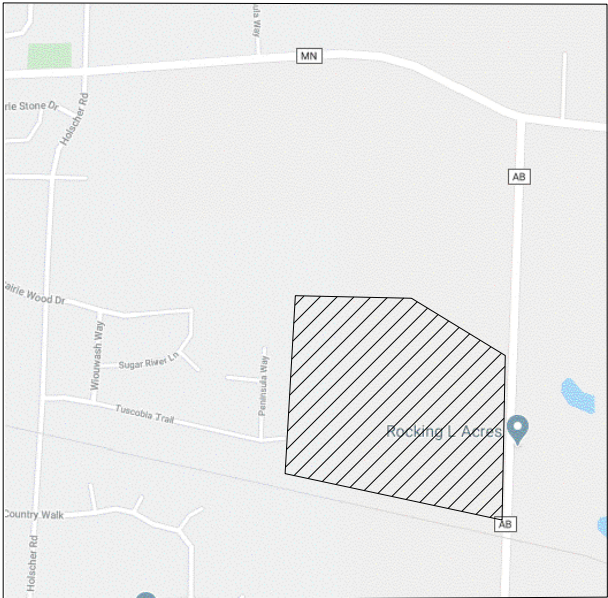
D'ONOFIO KOTHE AND ASSOCIATES, INC.

7530 Westwood Way, Madison, WI 53717
Phone: 608.833.7550 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

ROSEWOOD FIELDS

PRELIMINARY ENGINEERING

VILLAGE OF MCFARLAND
DANE COUNTY, WISCONSIN



PROJECT LOCATION


D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

FN: 19-04-113

ISSUE DATE: 04/07/20

SHEET 1 of 18



D'ONOFRIO KOTTKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

COVER SHEET

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND

DATE: 04/07/20
REVISED:

DRAWN BY: KWB

FN: 19-04-113

Sheet Number:
1 of 18

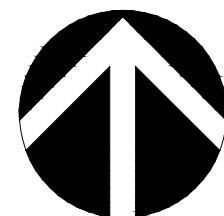
EROSION CONTROL MEASURES WILL
BE DESIGNED AND IMPLEMENTED ON
A PHASE BY PHASE BASIS



OVERALL GRADING PLAN

ROSEWOOD FIELDS

VILLAGE OF MC FARLAND



SCALE: 1"= 80'
(PAGE SIZE: 22x34)

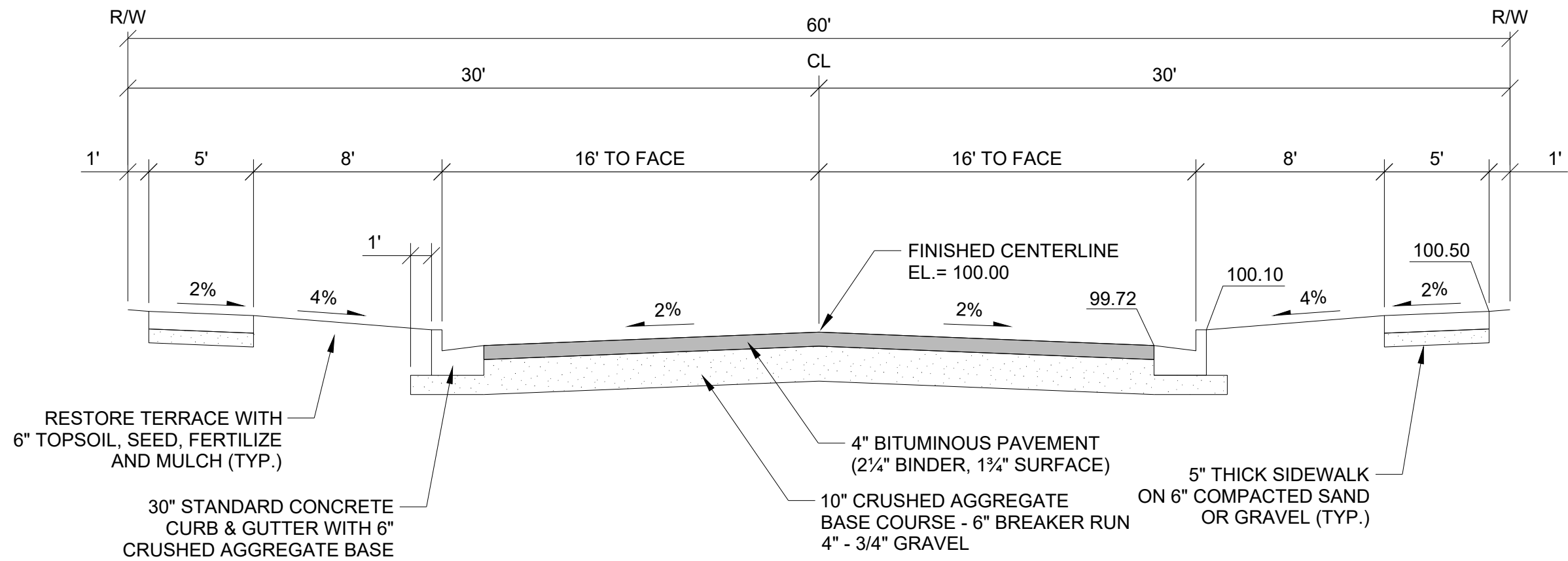
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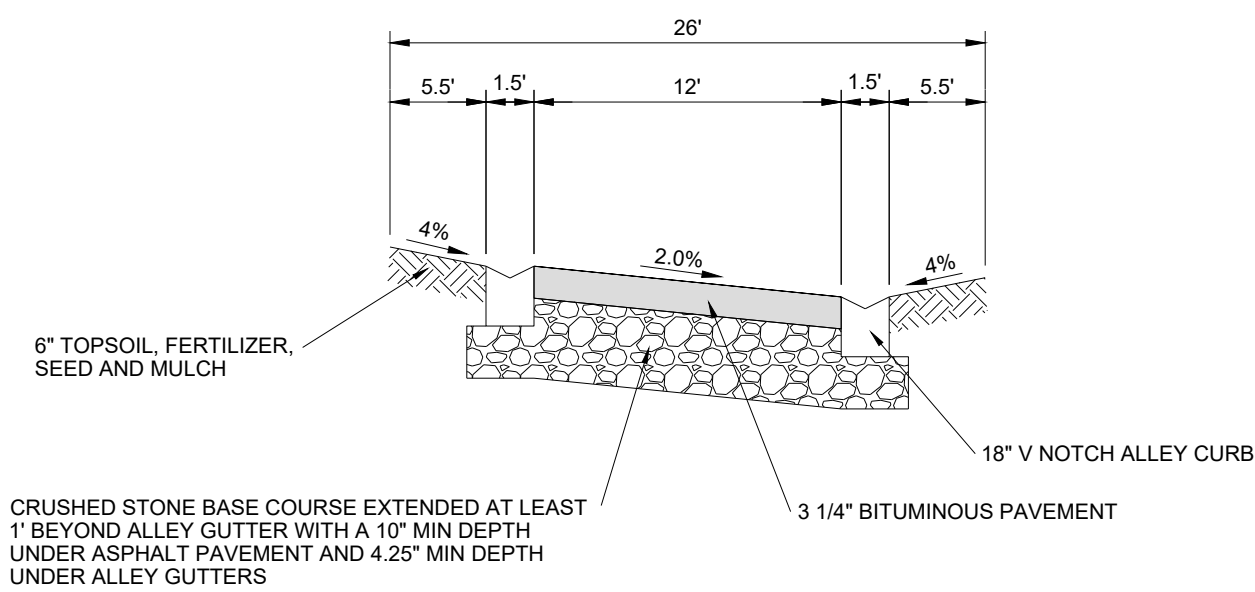
FN: 19-04-113

Sheet Number:

2 of 18



TYPICAL FINISHED SECTION - 60' R.O.W.



TYPICAL ALLEY SECTION

DETAILS - TYPICAL SECTIONS

ROSEWOOD FIELDS

VILLAGE OF MC FARLAND

DATE: 04/07/20
REVISED:

DRAWN BY: KWB

FN: 19-04-113

Sheet Number:

3 of 18

SANITARY SEWER TO BE
8" EXCEPT AS NOTED

CONNECT TO EXISTING SANITARY
SEWER MANHOLE IN TUSCOBIA TRAIL

EXISTING GAS PIPELINE

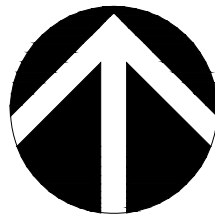
PROPOSED 10" SANITARY INTERCEPTOR

VILLAGE OF MCFARLAND TO
CONSTRUCT INTERCEPTOR SOUTH OF
ROSEWOOD FIELDS PLAT. CONNECT
TO THIS PROPOSED INTERCEPTOR

UTILITY SCHEMATIC - SANITARY SEWER

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND



SCALE: 1"= 80'
(PAGE SIZE: 22x34)

DATE: 04/07/20
REVISED:

DRAWN BY: KWB

FN: 19-04-113

Sheet Number:

4 of 18

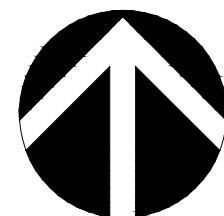
STORM SEWER SIZING TO BE DETERMINED FOR FINAL ENGINEERING DESIGN



UTILITY SCHEMATIC - STORM SEWER

ROSEWOOD FIELDS

VILLAGE OF MC FARLAND



SCALE: 1"= 80'
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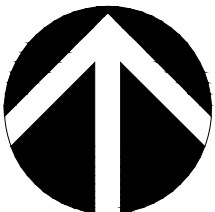
5 of 18

WATER MAIN TO BE 8"

CONNECT TO EXISTING WATER
MAIN IN PRAIRIE WOOD DRIVE

CONNECT TO EXISTING WATER
MAIN IN TUSCOBIA TRAIL

EXISTING GAS PIPELINE



SCALE: 1"= 80'
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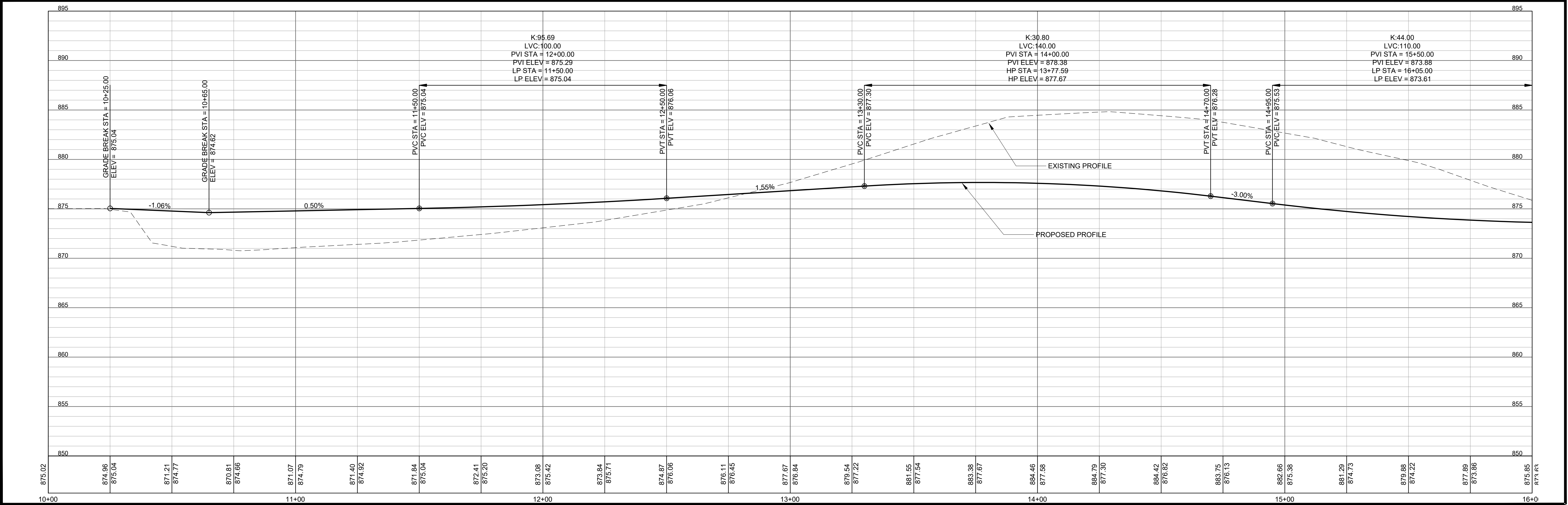
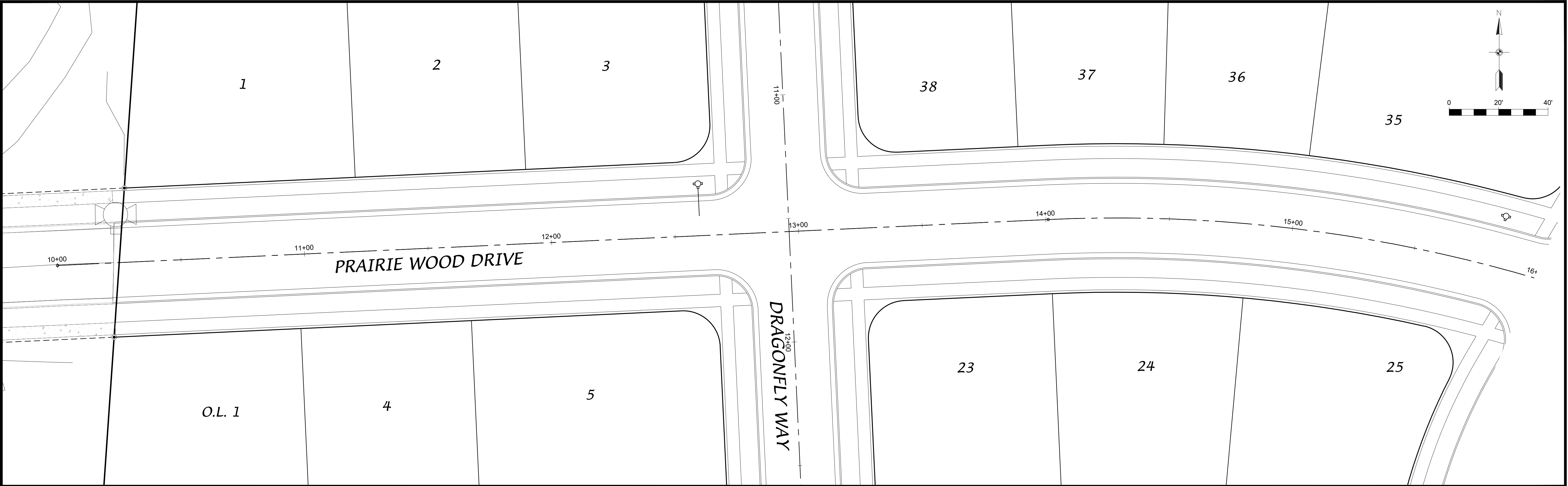


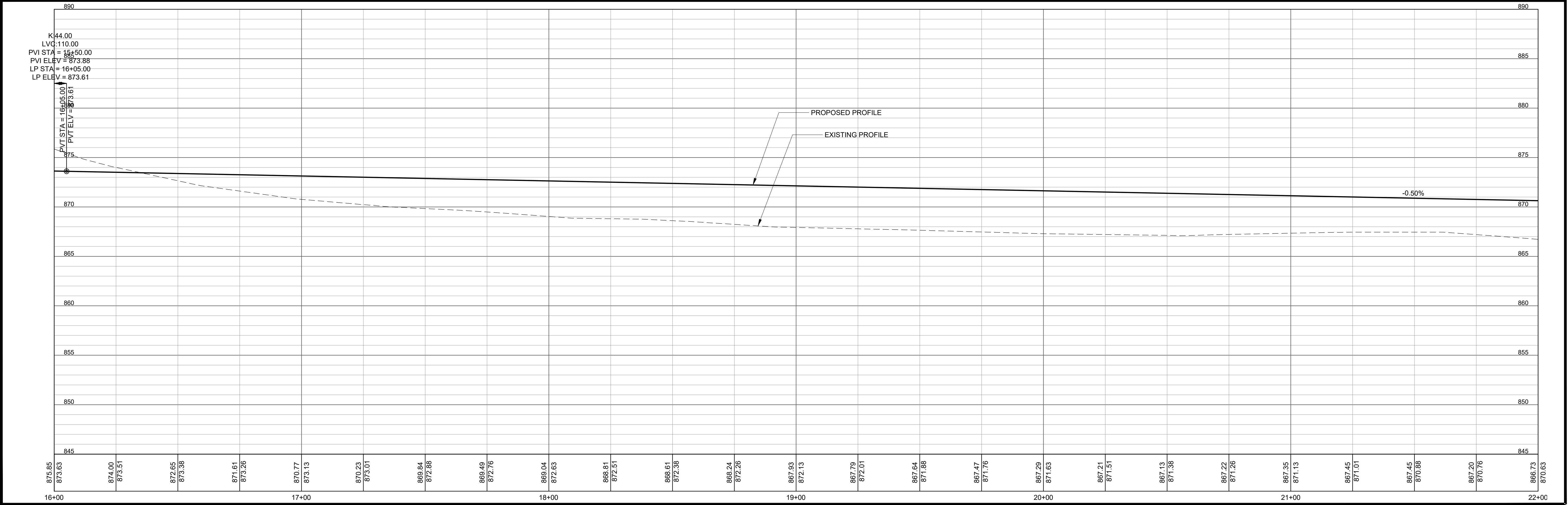
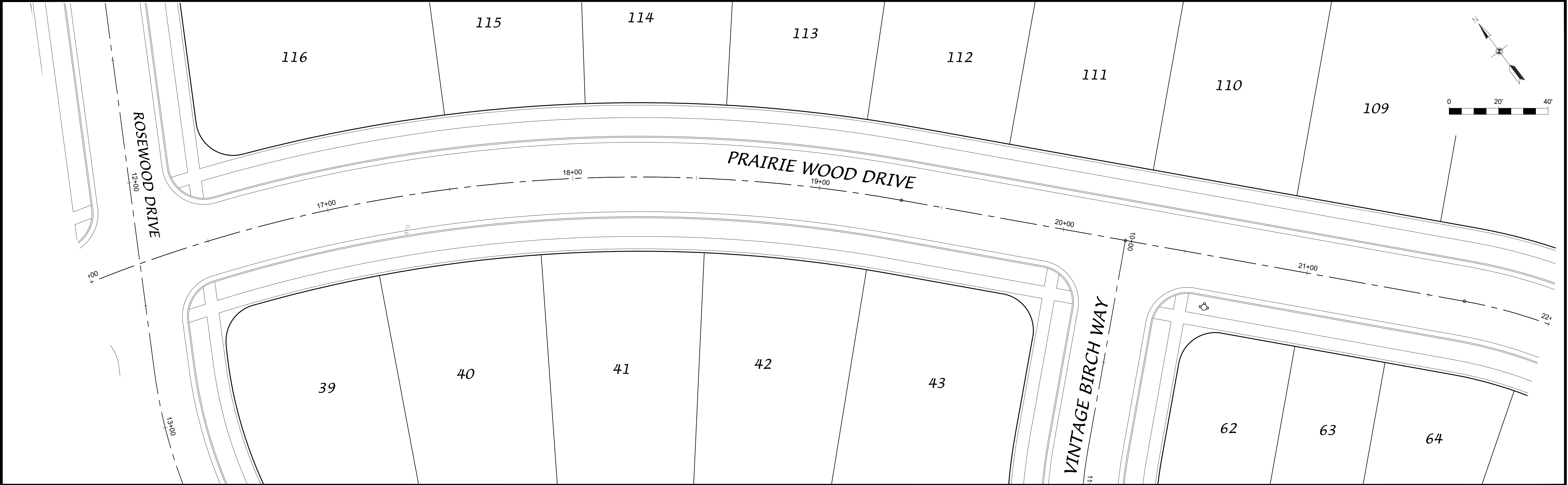
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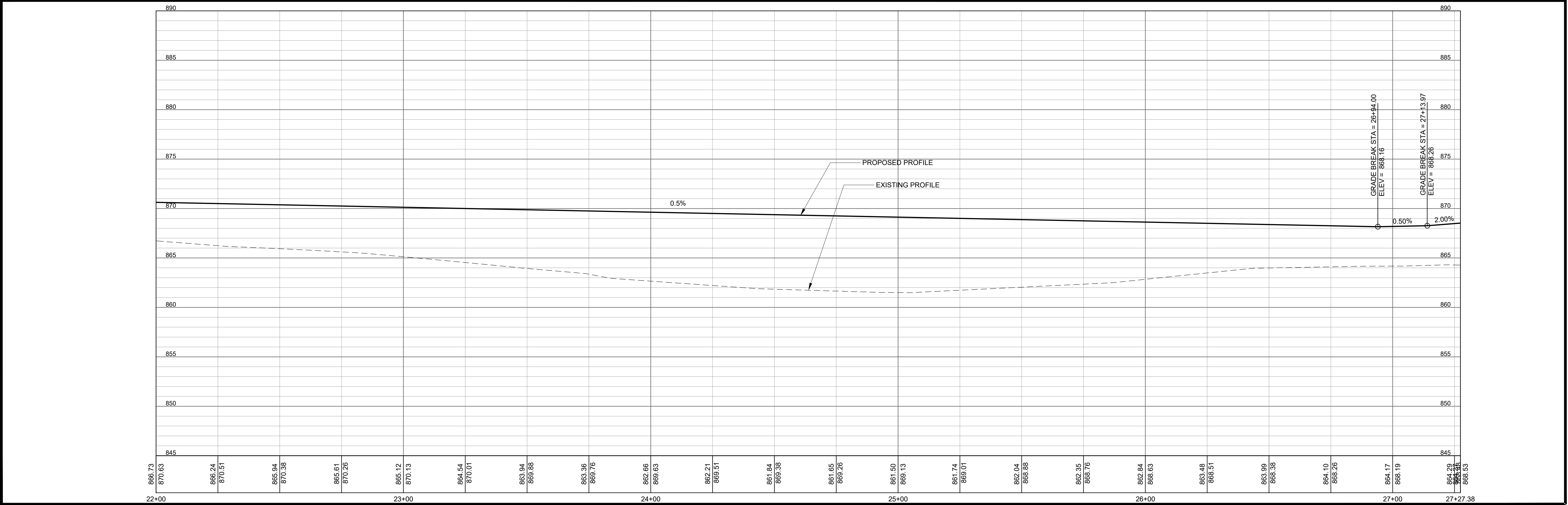
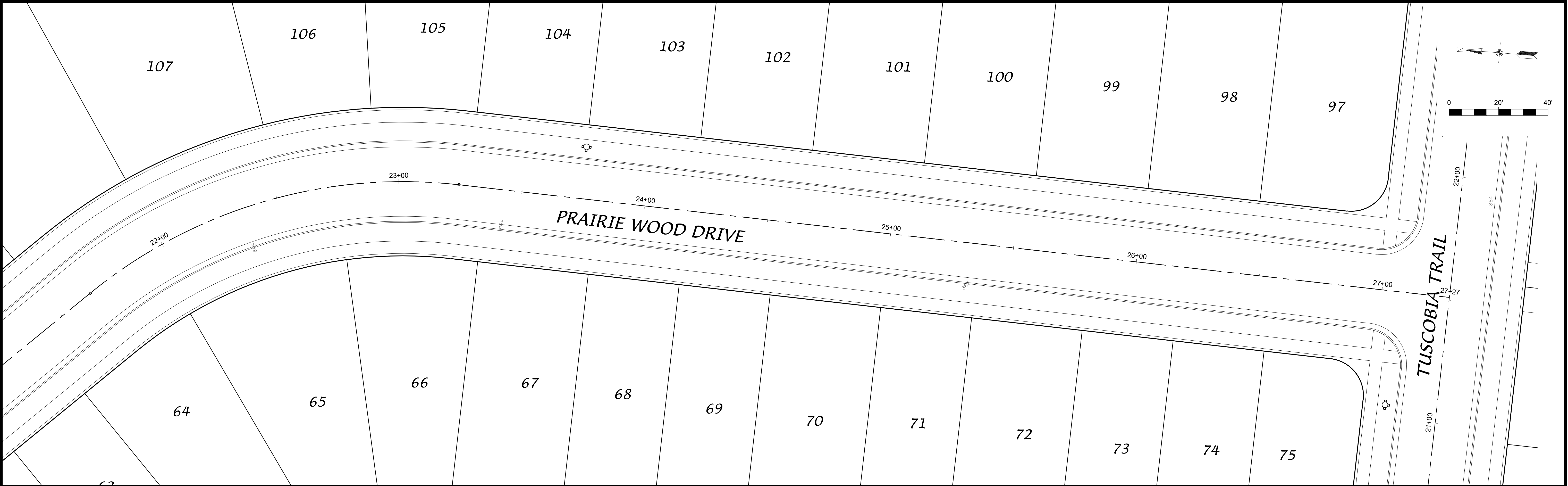
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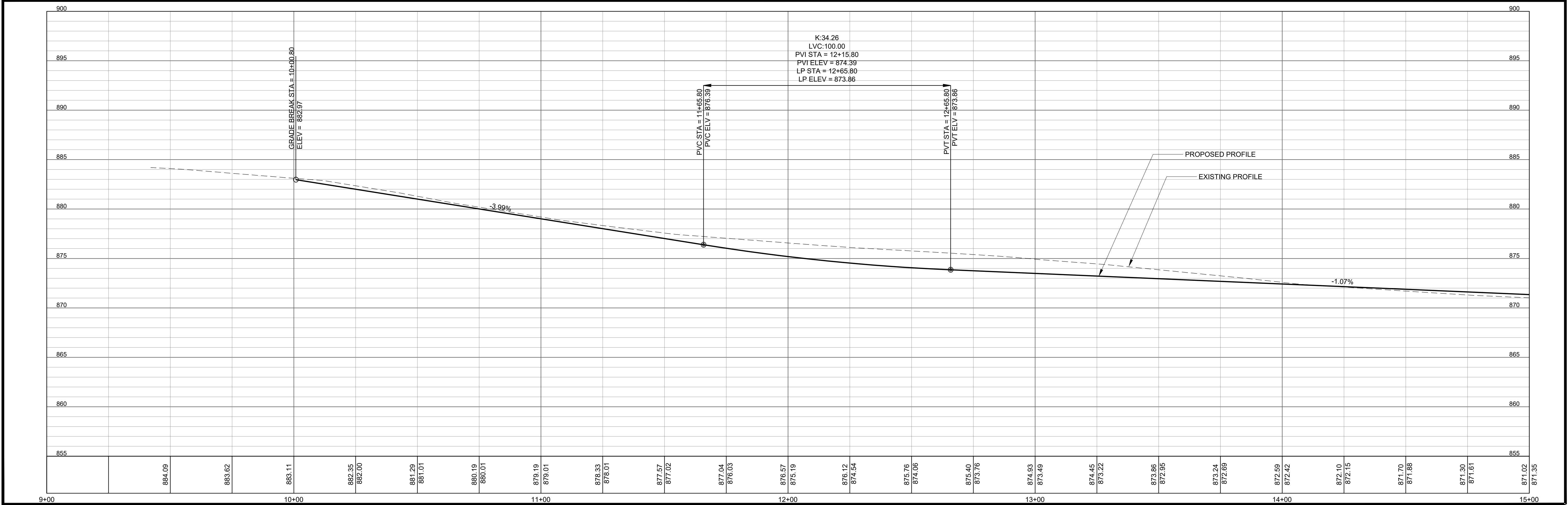
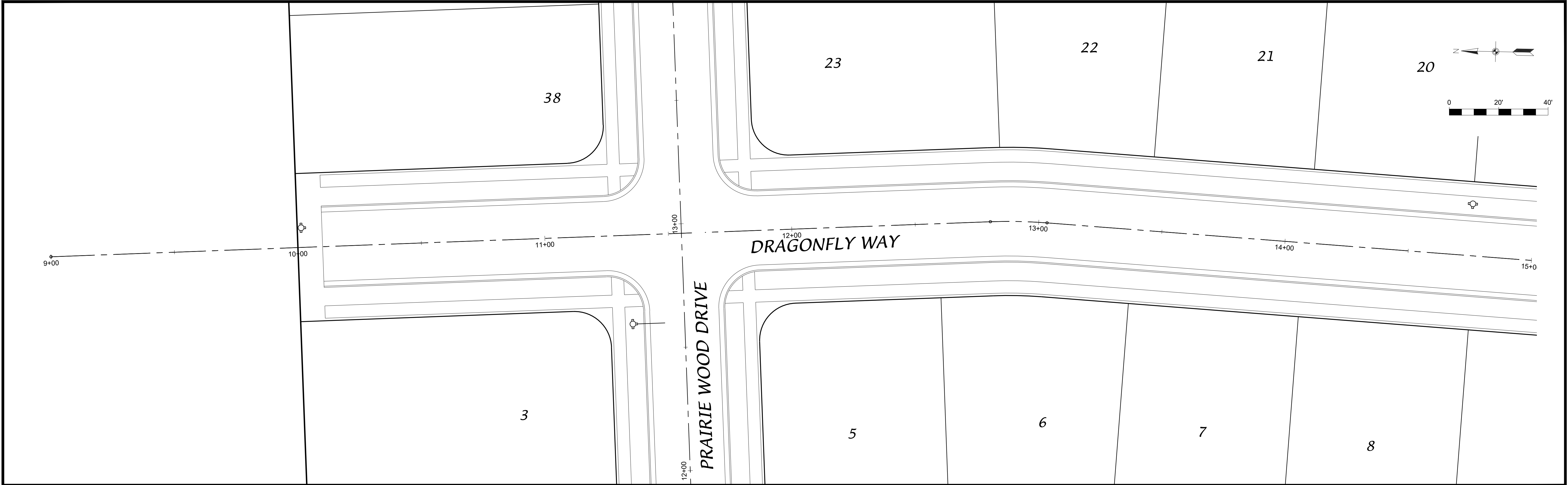
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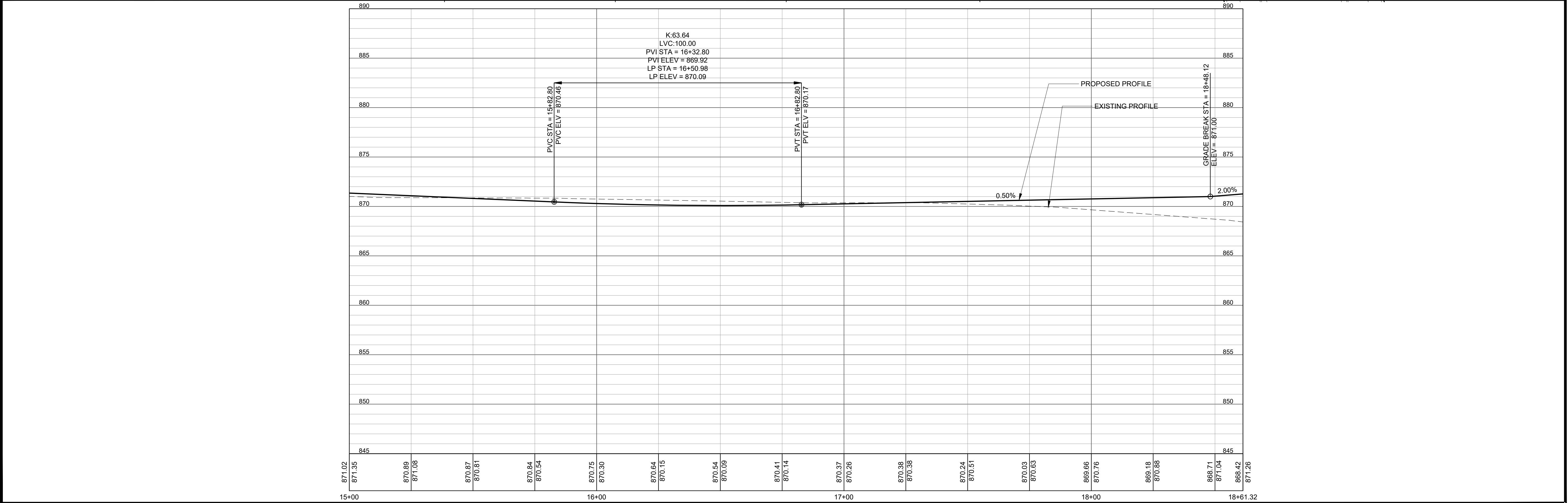
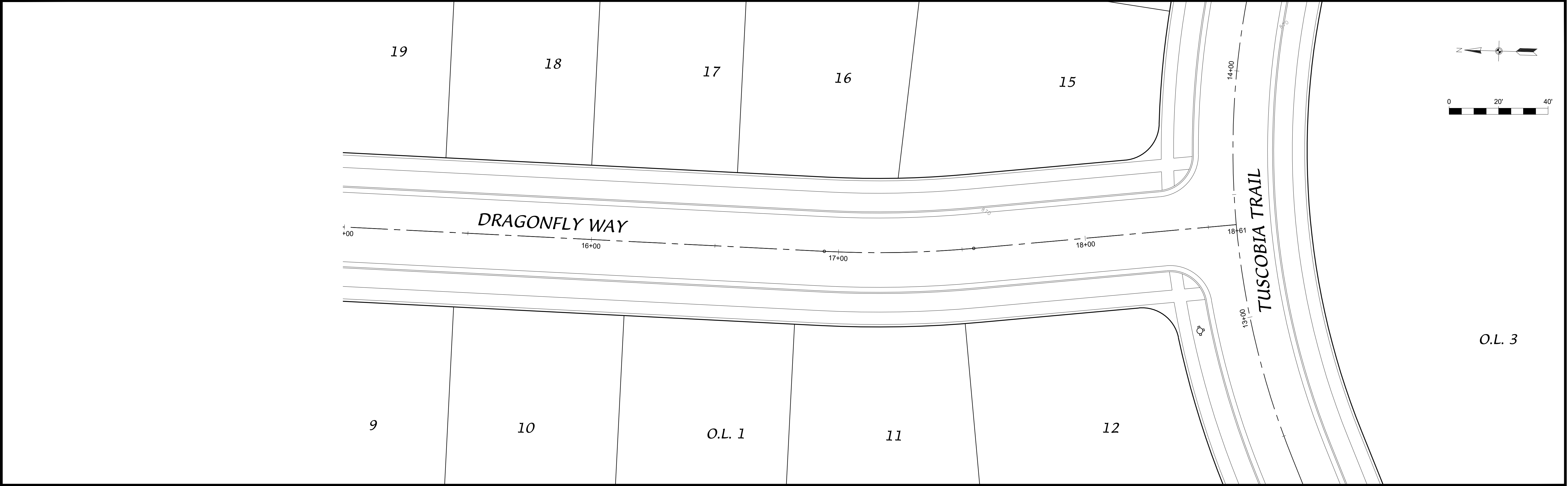
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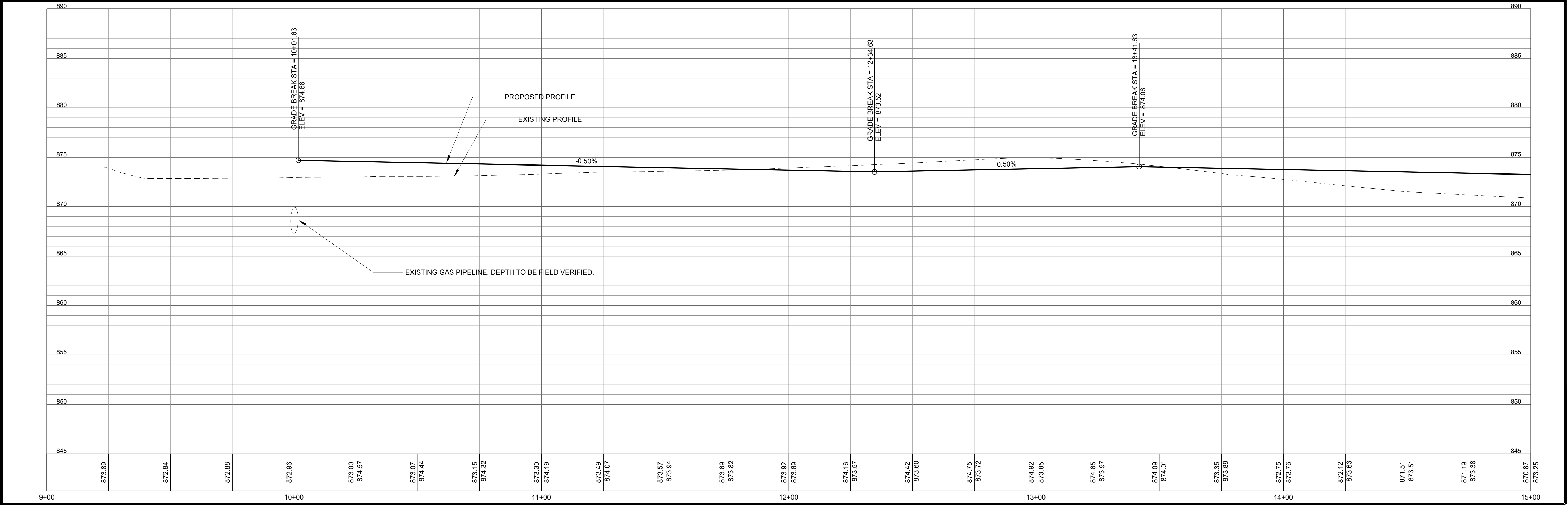
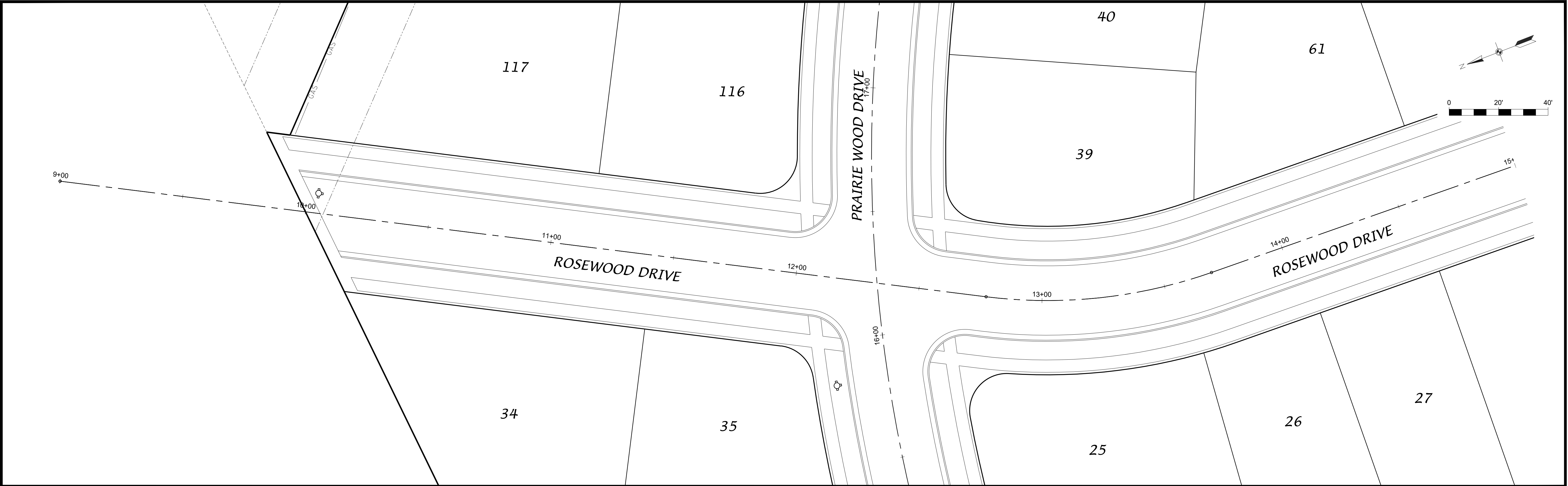


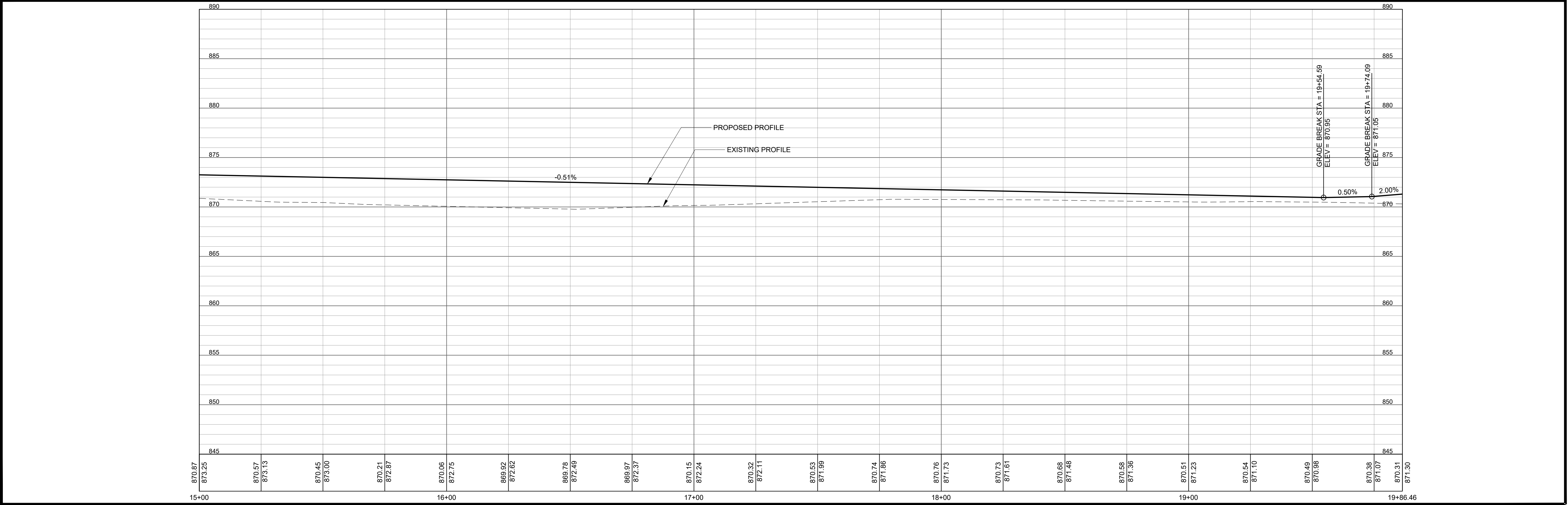
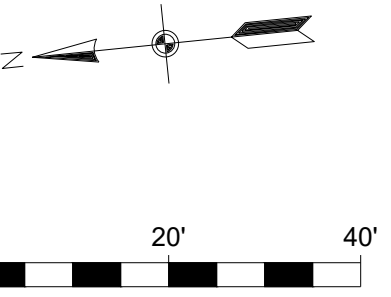
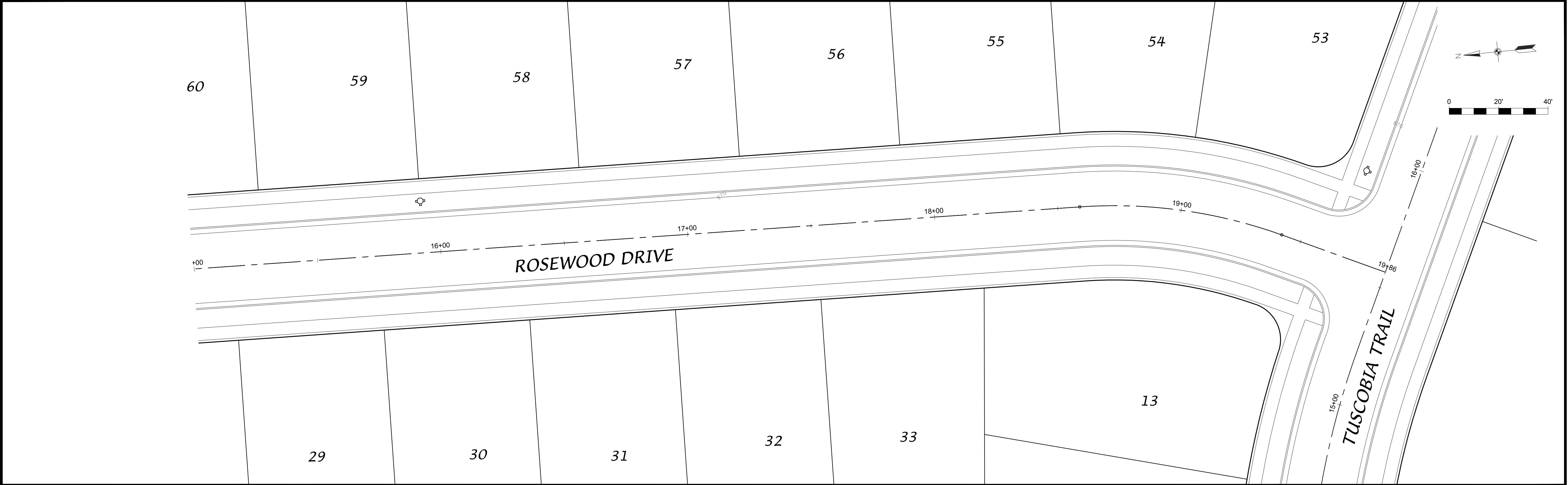


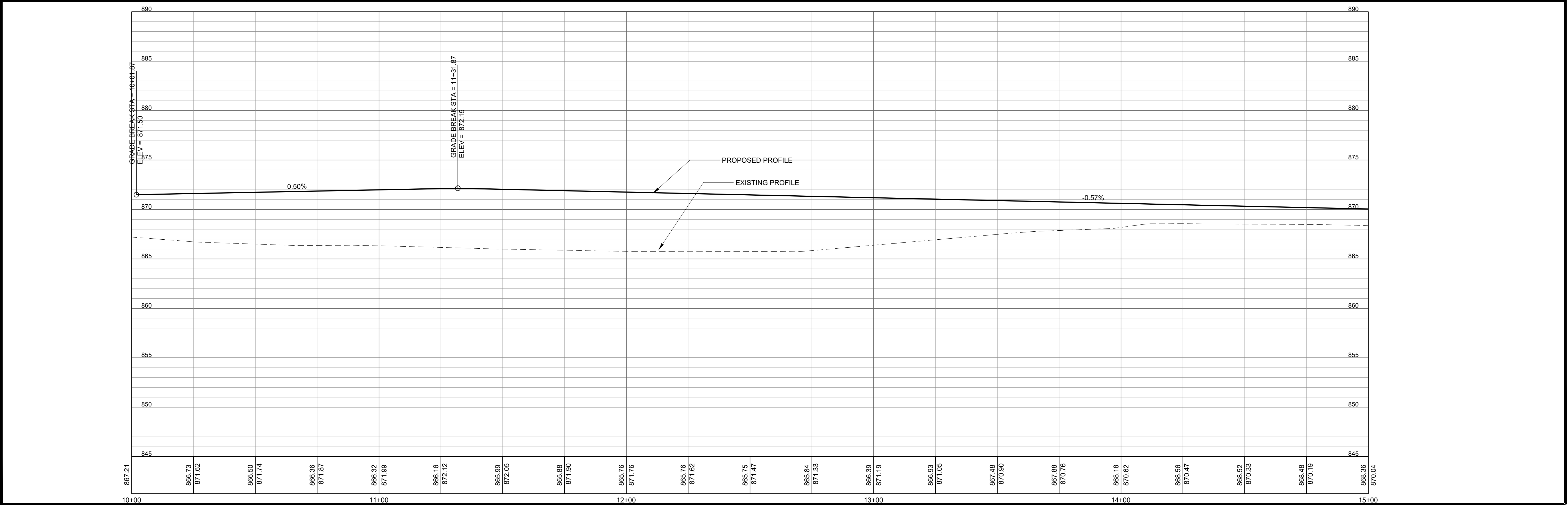
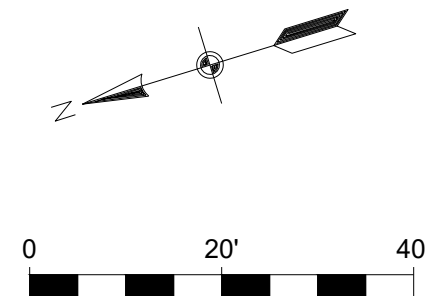
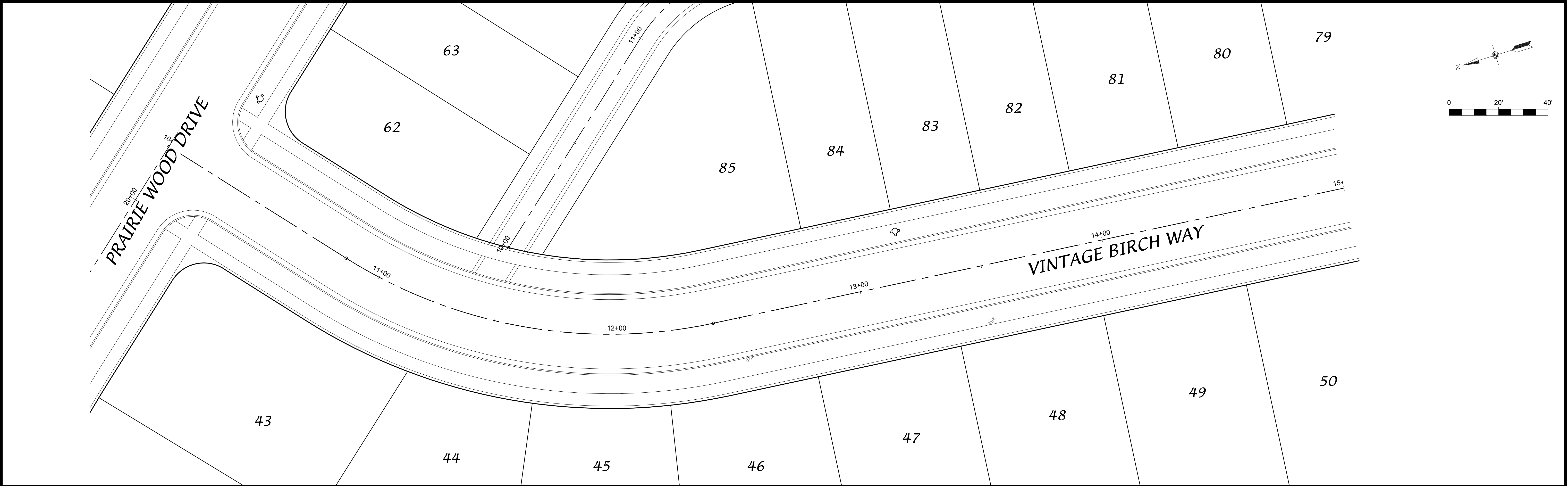


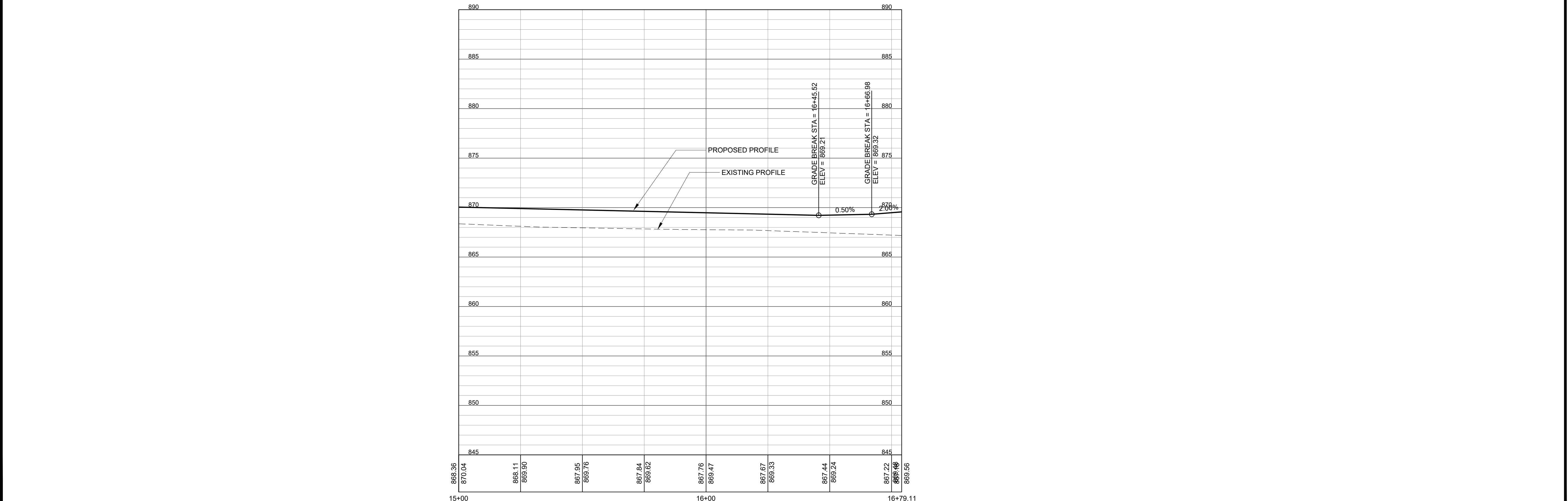
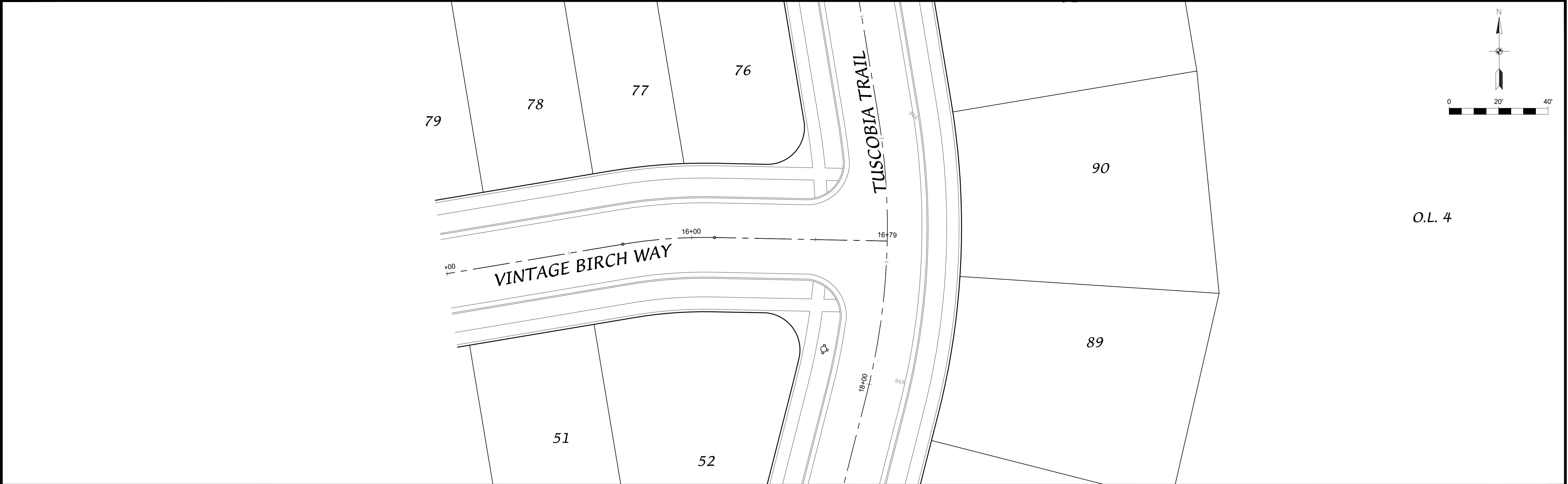


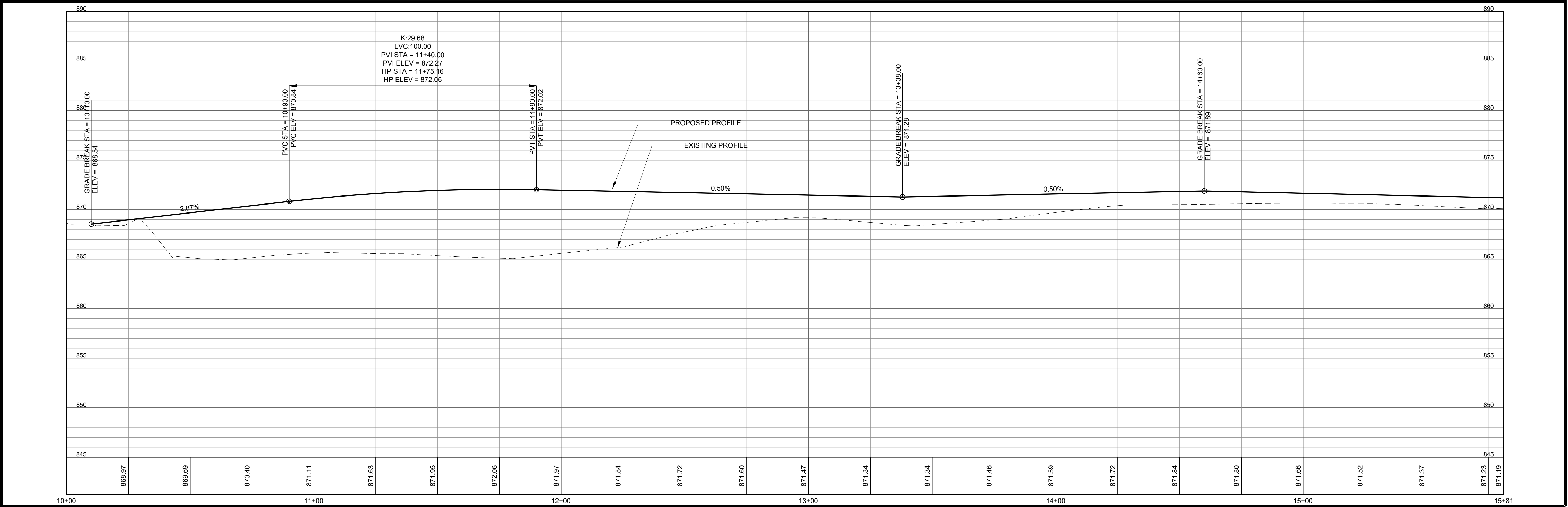
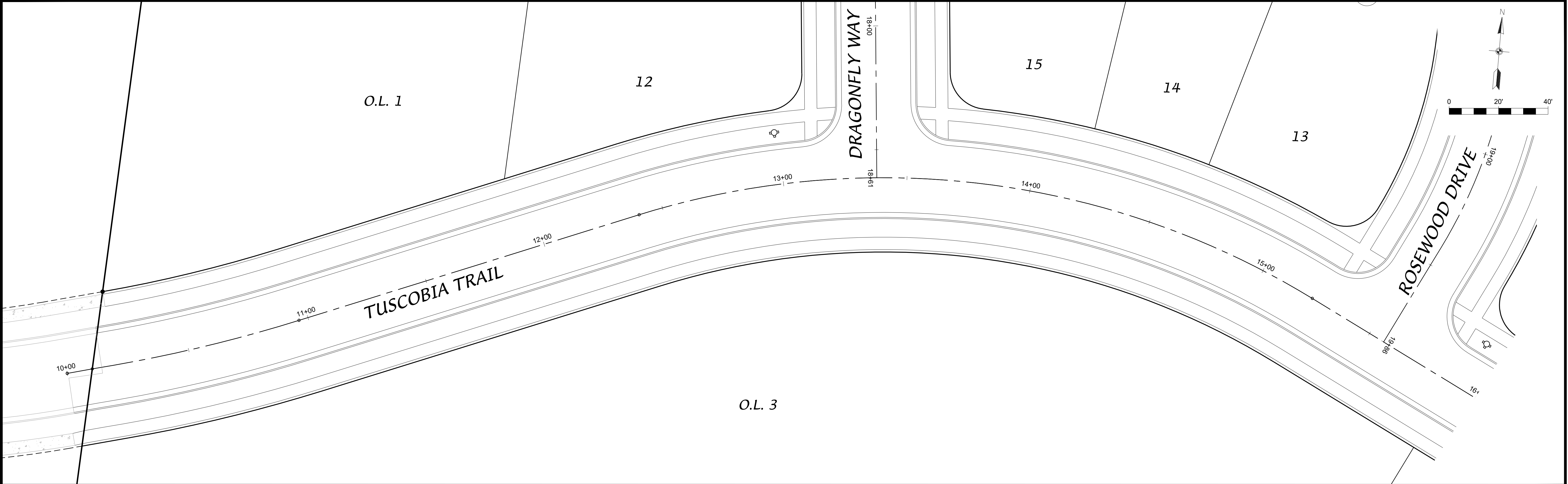


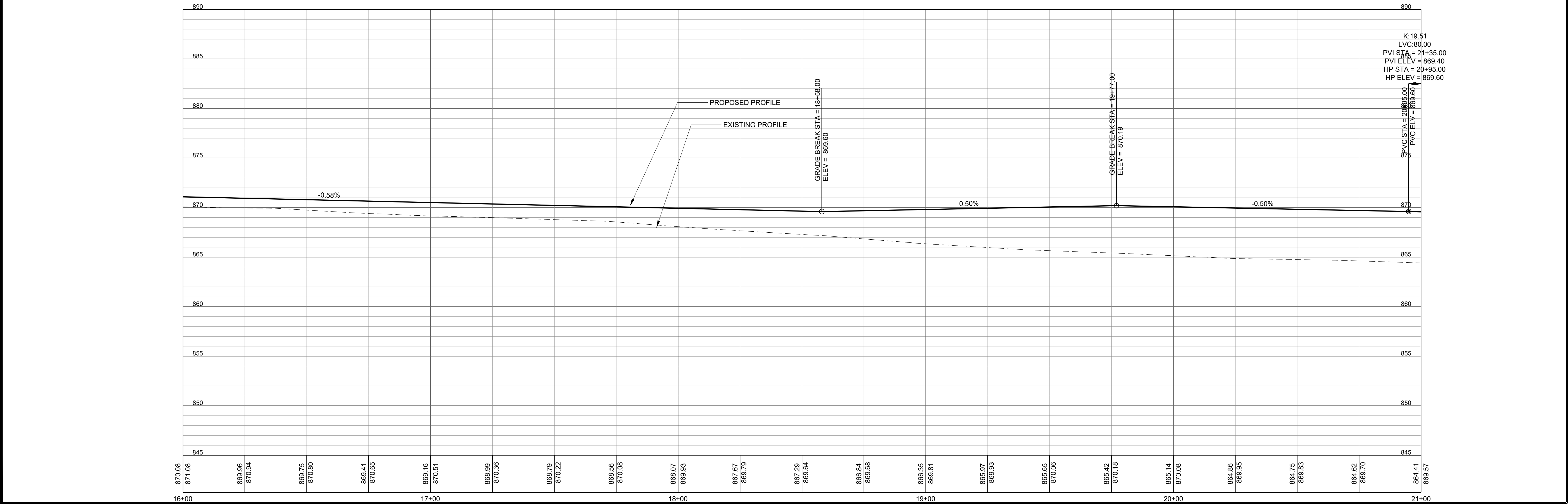
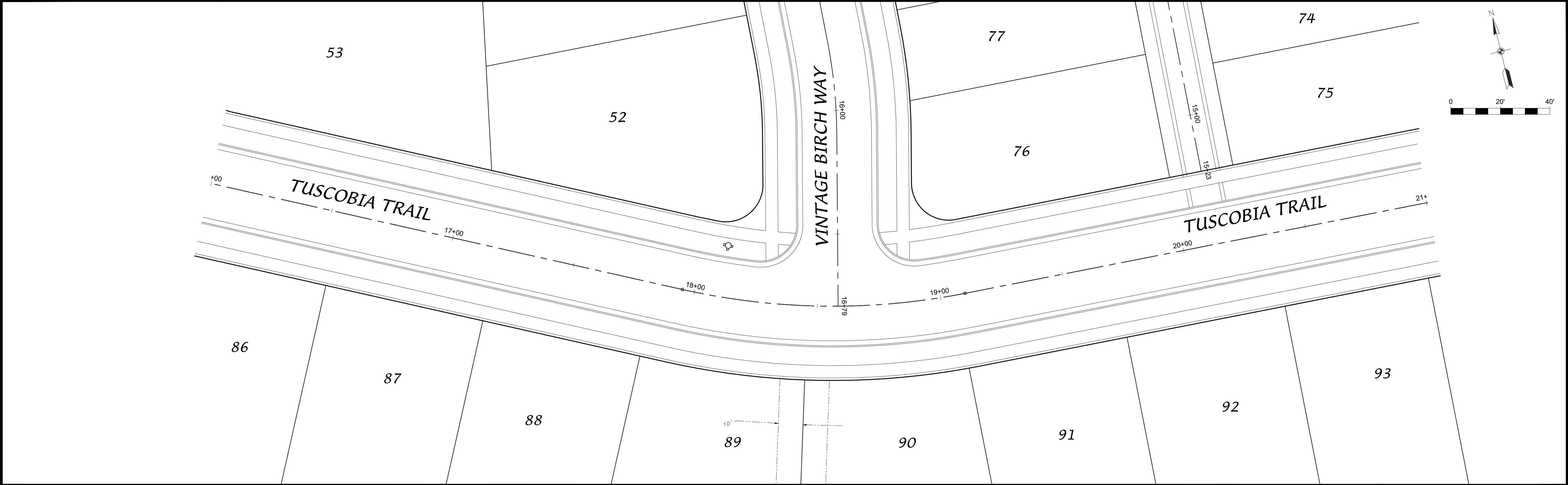


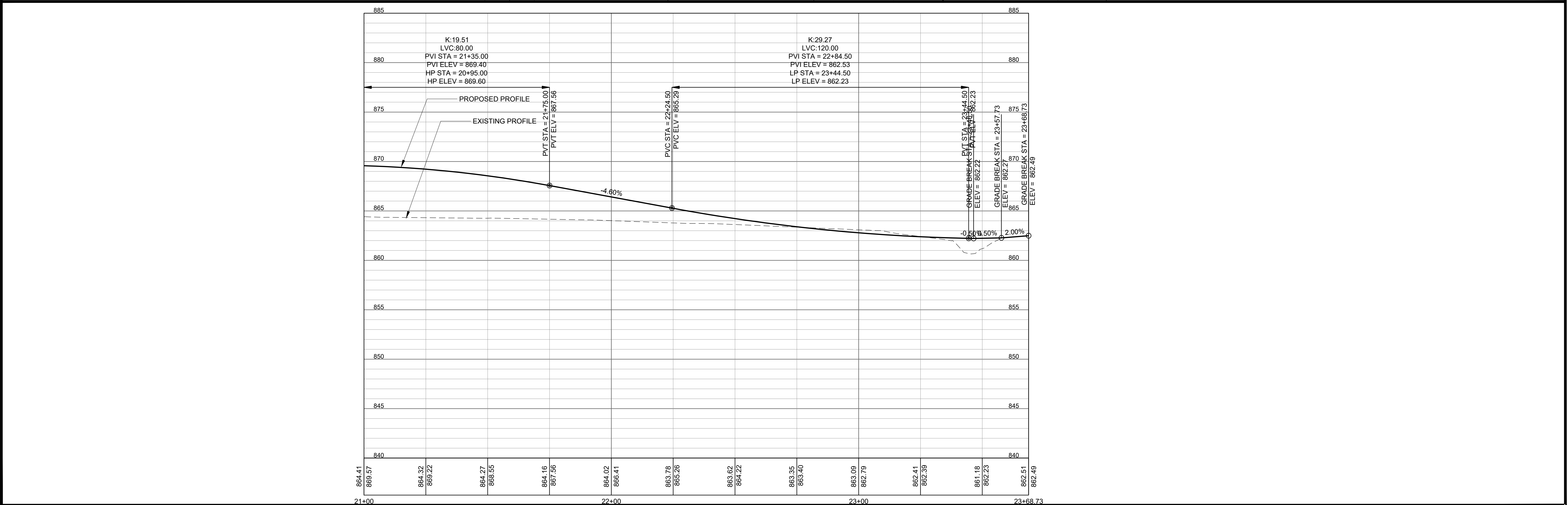
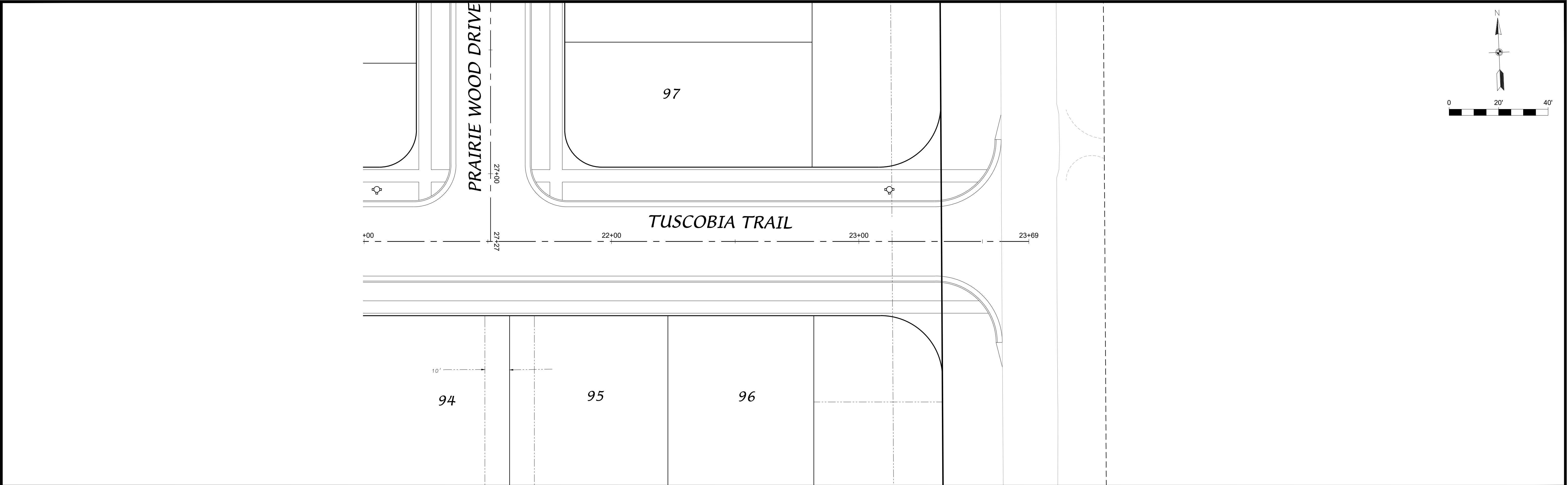












**ROSEWOOD FIELDS
VILLAGE OF MCFARLAND
COUNTY HWY AB
DANE COUNTY, WISCONSIN**

PRELIMINARY STORM WATER MANAGEMENT REPORT

OWNER

**VH Rosewood Fields, LLC
c/o Chris Ehlers
6801 South Towne Drive
Madison, WI 53713**

April 7, 2020

PREPARED BY

**D'Onofrio, Kottke & Associates, Inc.
7530 Westward Way
Madison, Wisconsin 53717
608.833.7530**

FN: 19-04-113

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Storm Water Management Measures	Page 6
Peak Flow Comparison Chart.....	Page 7
Conclusions.....	Page 7

EXHIBITS

1. Site Location Map
2. Site Soils Map
3. Existing Drainage Plan
4. Proposed Drainage Plan
5. Detention/Infiltration Basin Layout
6. Aerial Photo
7. USGS Map
8. Wetland Indicator Map

APPENDICES

- A. Detention Pond & Infiltration Basin Details
- B. Sediment Reduction Calculations
- C. Infiltration Design
- D. Hydrocad Output
- E. Soils Report
- F. Wetland Report
- G. Draft Maintenance Agreement

INTRODUCTION

The intent of this report is to provide details on how the proposed “Rosewood Fields” residential plat will be developed so that it is constructed in accordance with applicable storm water management standards.

The proposed development is approximately a 36 acre residential plat located in the Village of McFarland. The site is located to the east of the Park View Estates plat, north of the Wisconsin and Southern railroad tracks and west of County Hwy AB in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 2 Township 06N, Range 10E. More specifically parcel number 0610-024-8070-0. A project location map can be found in Exhibit #1.

The existing layout of the site consists mostly of agricultural tilled land with surface water generally draining to the south and east sides of the site and eventually out of the plat. The drainage is split by a ridge running through the middle of the site from the north to south. In developed conditions the plat will create single family lots, 2-stormwater outlots and open space/parkland. The runoff from the plat will mostly be routed to wet detention/infiltration basin systems for stormwater treatment prior to leaving the site. The soil conditions on site consist of hydrologic soil group type B soils, with some type C soils. A site soils map can be found in Exhibit #2.

The proposed future improvements for this plat require land disturbing activity in excess of one acre and the future cumulative addition of 20,000 square feet of impervious surface area. Therefore, according to the Village of McFarland and State of Wisconsin ordinances, the site requires storm water management approvals and permits.

STANDARDS & RESULTS

The proposed development requires the following storm water management performance standards.

Sediment Control

Standard: Reduce, to the maximum extent practical, total suspended solids load leaving the site by eighty percent (80%) based on the average annual rainfall.

Design Results: Sediment from the site will be reduced by 80% by routing the site runoff through two wet detention basin/infiltration basin systems prior to leaving the site. A minimum of 60% of the sediment will be removed by the wet detention basins prior to entering the infiltration basins. WinSLAMM was used to model the sediment load reduction. The basin system was sized to compensate for any stormwater that drains directly offsite. See appendix B for sediment reduction calculations.

Temperature Control

Standard: For development of sites within thermally sensitive areas, provisions and practices to reduce the temperature of the storm water runoff shall be included.

Design Results: The proposed site does not fall within a defined thermally sensitive area.

Runoff Rate Control

Standard: For new developments, storm water management practices shall be designed and implemented to maintain post-development peak runoff discharge rates at predevelopment rates for the 1, 2, 10, 25 and 100 year-24 hour design storm events.

Design Results: The proposed detention basin system was designed to maintain the development's existing peak runoff rates for the 1, 2, 10, 25 and 100 year- 24 hour storm events. The peak flow comparison chart for the site can be found in the stormwater management measures section of this report and the HydroCAD output can be found within Appendix D. The soil curve number for the post development lawn areas has been dropped by a soil class to 71.

The existing and proposed runoff curve numbers used for this development are as follows:

Description	CN
Existing Type B Soil	58
Existing Type C Soil	71
Impervious Area	98
Proposed 60% Impervious Residential	87
Proposed 70% Impervious Residential	90
Proposed Park Area/ Assumed 10% Impervious	74
Proposed 10% Impervious Lightly Disturbed Areas	62

Along with analyzing the plat drainage information, the offsite stormwater draining through and around the site was also included in the model.

Infiltration

Standard: For new developments, design practices to infiltrate sufficient runoff volume so the post-development infiltration volume shall be at least 90% of the predevelopment infiltration volume.

Design Results: The proposed development was designed to meet the 90% stayon requirement for the plat through two infiltration basins. The infiltration basins were sized using WinSLAMM modeling software. A minimum of 60% sediment reduction will occur in the proposed wet detention basin cells prior to entering the designed infiltration basins. The basin system was sized to compensate for any stormwater that drains directly offsite. The infiltration design calculations can be found in Appendix C.

STORM WATER MANAGEMENT MEASURES

The proposed plat was modeled as five drainage areas in developed conditions and as two drainage areas in pre-developed conditions. The stormwater from the site will be treated by routing runoff to two wet detention/infiltration basin systems located at the west and southeast sides of the plat. Peak flow, sediment reduction, and stayon requirements will be met for the entire plat with this system.

HydroCAD Stormwater Modeling software has been used to analyze the stormwater runoff characteristics for the development. HydroCAD uses the TR-55 methodology for determining peak discharge rates. The model output shows the runoff leaving the site in existing and proposed conditions. The site was designed to utilize two combination wet detention basin and infiltration basin systems prior to leaving the site in proposed conditions. In these systems, the wet detention chamber in each basin will limit flow into the infiltration basin chamber for the 1yr-24hr storm event to remove sediment before entering the infiltration basin. During larger storms, the two chambers in the basin systems will act as one basin to limit peak flow from the site (see basin details in Appendix A). The detention and infiltration basins were modeled dynamically to better represent the elevations of the two chambers working together. The peak flow results from the stormwater modeling and basin design are shown in the chart on the next page. The chart shows the proposed results from each individual drainage area along with a comparison of the overall existing and proposed peak flows leaving at the edge of the site. The detention basin system will maintain the combined existing peak runoff rates leaving the plat on south, east and overall for the 1, 2, 10, 25 and 100 year- 24 hour storm events.

The offsite west, northeast and north drainage areas were also included in this model to show how the offsite water will be routed through the site. A bypass channel was sized to route this offsite water around the west side of the site, through two culverts under Tuscobia Trail and eventually to the south where it flows in existing conditions.

Infiltration modeling for the site was calculated using WinSLAMM software and meets the 90% predevelopment standard per the ordinance. The infiltration basins will be implemented when at a minimum 75% of the plat area draining to the basin is complete. WinSLAMM was also used to perform the sediment reduction calculations for the proposed basin system. Appendix B contains the calculation results. The stormwater management system will provide 80% sediment removal for the plat.

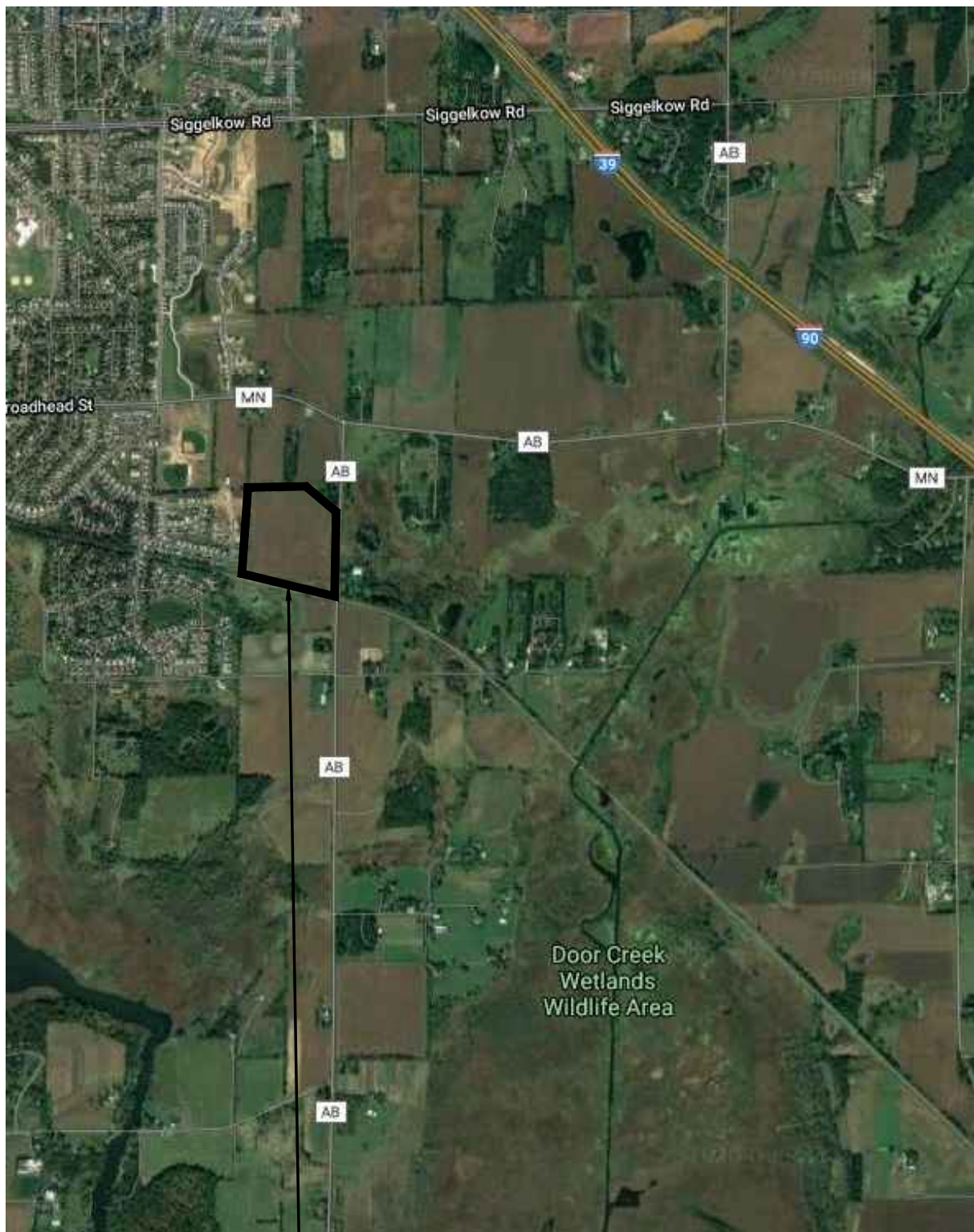
PEAK FLOW COMPARISION CHART

24-HR STORM EVENT (PEAK FLOW IN CFS)-PEAK FLOW COMPARISION					
	1YR	2YR	10YR	25YR	100YR
TOTAL EXISTING COMBINED FLOW THOUGH SITE	4.35	9.71	45.73	83.98	166.65
TOTAL PROPOSED COMBINED FLOW WITH BASIN TREATMENT	2.75	6.00	31.79	62.21	120.58
TOTAL PROPOSED COMBINED FLOW WITHOUT DETENTION	46.73	57.96	103.66	143.23	221.56
TOTAL EXISTING FLOW LEAVING SOUTH SIDE OF SITE	3.09	7.09	34.57	64.14	128.47
TOTAL PROPOSED/TREATED FLOW LEAVING SOUTH SIDE OF SITE	2.29	5.03	28.75	56.78	110.42
TOTAL EXISTING FLOW LEAVING EAST SIDE OF SITE	1.53	3.22	13.7	24.07	45.72
TOTAL PROPOSED FLOW LEAVING EAST SIDE OF SITE	1.07	2.09	7.66	12.86	23.52
OFFSITE FLOWS					
EXISTING WEST OFFSITE DRAINAGE	0.4	0.97	5.42	10.27	20.81
EXISTING NW OFFSITE DRAINAGE	1.34	3.2	16.34	30.61	61.96
EXISTING N OFFSITE DRAINAGE	0.59	1	2.96	4.7	8.21
EXISTING NE OFFSITE DRAINAGE	0.86	1.72	6.22	10.39	18.89
FLOW TO WEST BYPASS CHANNEL	1.76	4.07	20.54	38.53	78.16
PRO FLOWS DIRECTLY OFFSITE					
PRO SOUTH DIRECTLY OFFSITE	0.66	1.22	4.24	7.11	13.05
PRO EAST DIRECTLY OFFSITE	0.29	0.55	1.94	3.24	5.94
WEST WET DETENTION BASIN: OUTLET = 867.0, TOP OF BERM = 871.0					
PROPOSED FLOW INTO DETENTION	13.72	17.15	30.36	40.49	58.97
ROUTED DETENTION	0.44	0.50	4.06	11.59	22.22
ELEVATION	868.26	868.58	869.19	869.44	870.12
WEST INFILTRATION BASIN: BOTTOM = 866.0, OUTLET = 867.0, TOP OF BERM = 871.0					
ROUTED INFILTRATION OFFSITE	0.41	0.47	2.86	6.21	9.09
ELEVATION	867.27	867.30	867.88	868.77	870.10
EAST WET DETENTION BASIN: OUTLET = 862.0, TOP OF BERM = 866.0					
PROPOSED FLOW INTO DETENTION	33.13	40.59	67.99	88.35	124.79
ROUTED DETENTION	1.85	2.11	16.76	25.39	58.85
ELEVATION	863.55	863.9	864.5	864.97	865.63
EAST INFILTRATION BASIN: BOTTOM = 861.0, OUTLET = 862.0, TOP OF BERM = 866.0					
ROUTED INFILTRATION OFFSITE	1.56	1.82	8.24	10.85	19.36
ELEVATION	862.54	862.60	863.64	864.35	865.58

CONCLUSIONS

As the results indicate, the storm water management system for the proposed development meets the Village of McFarland and State of Wisconsin Ordinances. The peak flow, sediment control and infiltration requirements will be met for this site at the time of development.

EXHIBITS



PROJECT LOCATION

LOCATION MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717

Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

DRAWN BY: GVP

EXHIBIT 1



SOILS MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

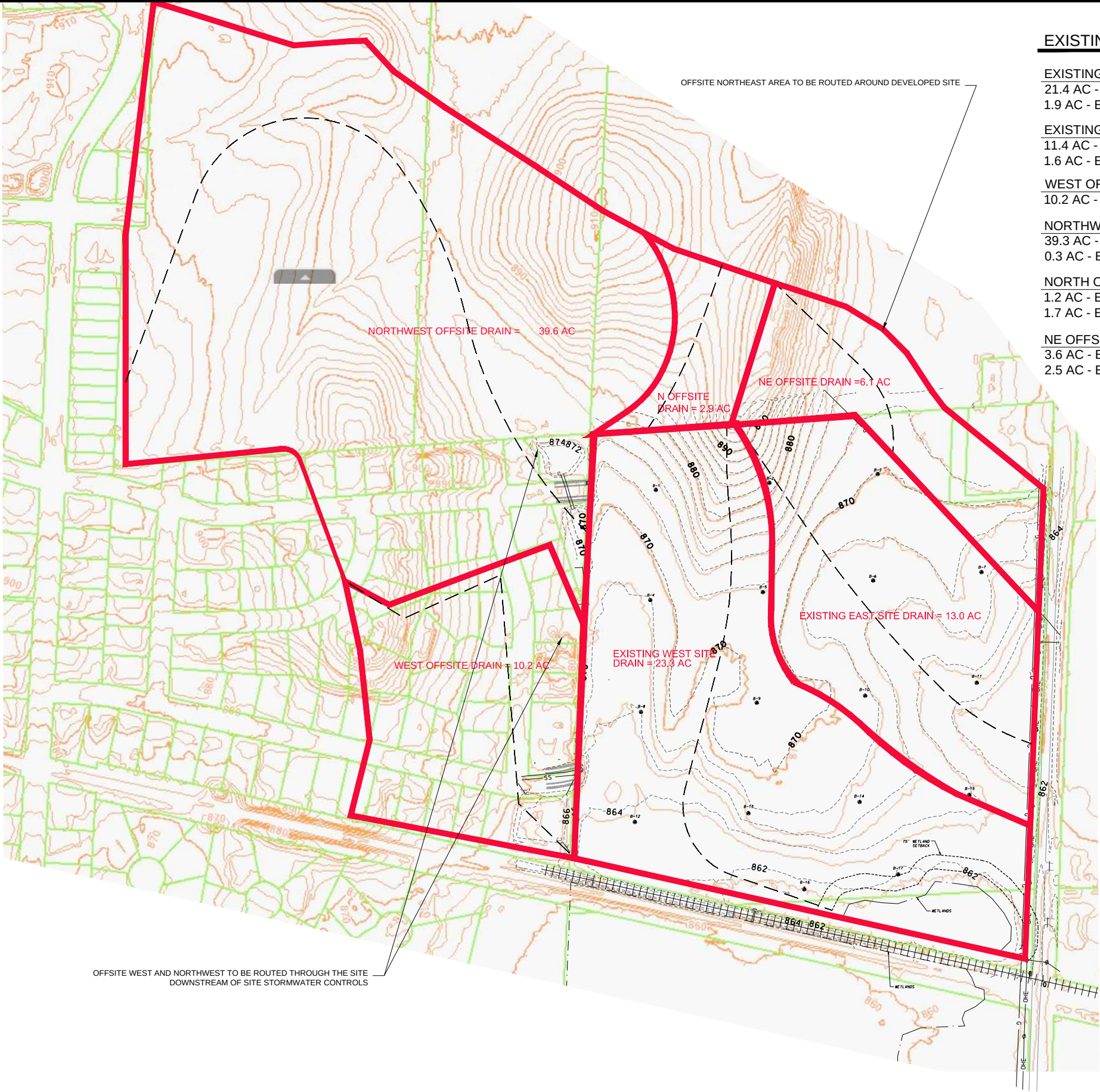
DRAWN BY: GVP

EXHIBIT 2

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT



EXISTING DRAINAGE BASIN INFORMATION

EXISTING WEST SITE DRAINAGE AREA = 23.3 AC	
21.4 AC - EXISTING TYPE B=	CN 58
1.9 AC - EXISTING TYPE C=	CN 71
EXISTING EAST SITE DRAINAGE AREA = 13.0 AC	
11.4 AC - EXISTING TYPE B=	CN 58
1.6 AC - EXISTING TYPE C=	CN 71
WEST OFFSITE DRAINAGE AREA = 10.2 AC	
10.2 AC - EXISTING TYPE B=	CN 58
NORTHWEST OFFSITE DRAINAGE AREA = 39.6 AC	
39.3 AC - EXISTING TYPE B=	CN 58
0.3 AC - EXISTING TYPE C=	CN 71
NORTH OFFSITE DRAINAGE AREA = 2.9 AC	
1.2 AC - EXISTING TYPE B=	CN 58
1.7 AC - EXISTING TYPE C=	CN 71
NE OFFSITE DRAINAGE AREA = 6.1 AC	
3.6 AC - EXISTING TYPE B=	CN 58
2.5 AC - EXISTING TYPE C=	CN 71

DONOFRIO KOTTKE AND ASSOCIATES, INC.

7550 Westwood Way, Madison, WI 53717
Phone: 608.833.7550 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

EXISTING REGIONAL DRAINAGE PLAN

ROSEWOOD FIELDS

COUNTY HWY AB

VILLAGE OF MCFARLAND, WISCONSIN

0160

DATE: 03/11/20

REVISED:

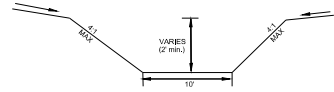
DRAWN BY: GVP

FN: 19-04-114

Sheet Number:

Exhibit 3

OFFSITE WEST AND NORTHWEST TO BE ROUTED THROUGH THE SITE DOWNSTREAM OF SITE STORMWATER CONTROLS



WEST BYPASS CHANNEL
SECTION @ 0.55%
NOT TO SCALE

WEST BYPASS CHANNEL

PROPOSED WEST DETENTION BASIN

TOP OF POND BERM - 871.00, AREA = 32,596 SQFT
TOP OF WET POND/OUTLET - 867.00, AREA = 15,467 SQFT
BOTTOM OF WET POND - 865.00

WEST DETENTION BASIN OUTLET STRUCTURES:
ROUTED TO INFILTRATION BASIN:
48" STANDPIPE
RIM = 869.00
W/4" ORIFICE @ 867.00
18" OUTLET PIPE @ 866.00
30' EQUALIZATION BERM @ 869.75

WEST INFILTRATION BASIN OUTLET STRUCTURES:
1-15" CULVERTS @ 867.00
5' OVERFLOW WEIR @ 870.00
8" CAPPED EMERGENCY DRAIN(DAYLIGHT) @ 866.00

PROPOSED WEST INFILTRATION BASIN W/ 12"
DEPRESSION ZONE
3,624 SQFT @ 866.00
10,466 SQFT (TOP OF BERM) @ 871.00

2 - 36" CULVERTS WITH ENDSECTIONS
UPSTREAM INV = 966.00
DOWNSTREAM INV = 965.00

PROPOSED EAST INFILTRATION BASIN W/ 12"
DEPRESSION ZONE
8,400 SQFT @ 861.00
19,855 SQFT (TOP OF BERM) @ 866.00

INFILTRATION BASIN OUTLET STRUCTURES:
1-18" CULVERTS @ 862.00
8" CAPPED EMERGENCY DRAIN(DAYLIGHT) @ 861.00
4' OVERFLOW WEIR @ 865.00

PROPOSED EAST DETENTION BASIN
TOP OF POND BERM - 866.00, AREA = 50,568 SQFT
TOP OF WET POND/OUTLET - 862.00, AREA = 30,928 SQFT
BOTTOM OF WET POND - 856.00

EAST DETENTION BASIN OUTLET STRUCTURES
ROUTED TO INFILTRATION BASIN:
48" STANDPIPE
RIM = 864.00
W/8" ORIFICE @ 862.00
24" OUTLET PIPE @ 861.00
20' EQUALIZATION BERM @ 864.75



30" CULVERT
INV = 857.63

30" CULVERT
INV = 858.12

DETENTION/INFILTRATION BASIN LAYOUT
ROSEWOOD FIELDS
COUNTY HWY AB
VILLAGE OF MCFAIRLAND, WISCONSIN



0 100

DATE: 04/07/20
REVISED:

DRAWN BY: GYP

FN: 19-04-113

Sheet Number:

Exhibit 5



AERIAL MAP

UTTERBACK PROPERTY

VILLAGE OF MCFARLAND, WISCONSIN

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

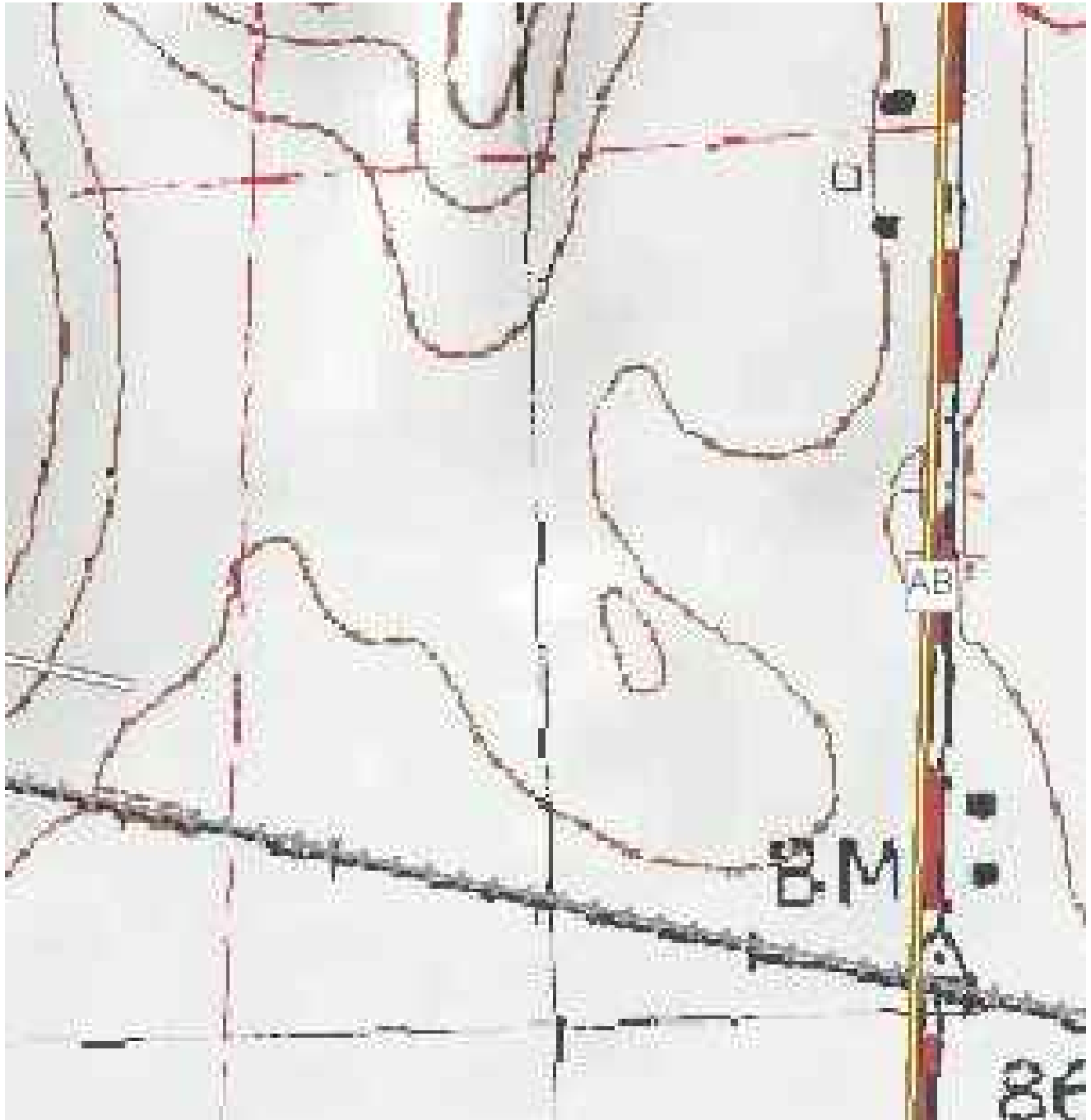
7530 Westward Way, Madison, WI 53717

Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

DRAWN BY: GVP

EXHIBIT 6



USGS MAP

ROSEWOOD FIELDS

VILLAGE OF MCFARLAND, WISCONSIN

D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

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EXHIBIT 7



D'ONOFRIO KOTTKE AND ASSOCIATES, INC.

7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089

YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

WETLAND INDICATOR MAP

ROSEWOOD FIELDS

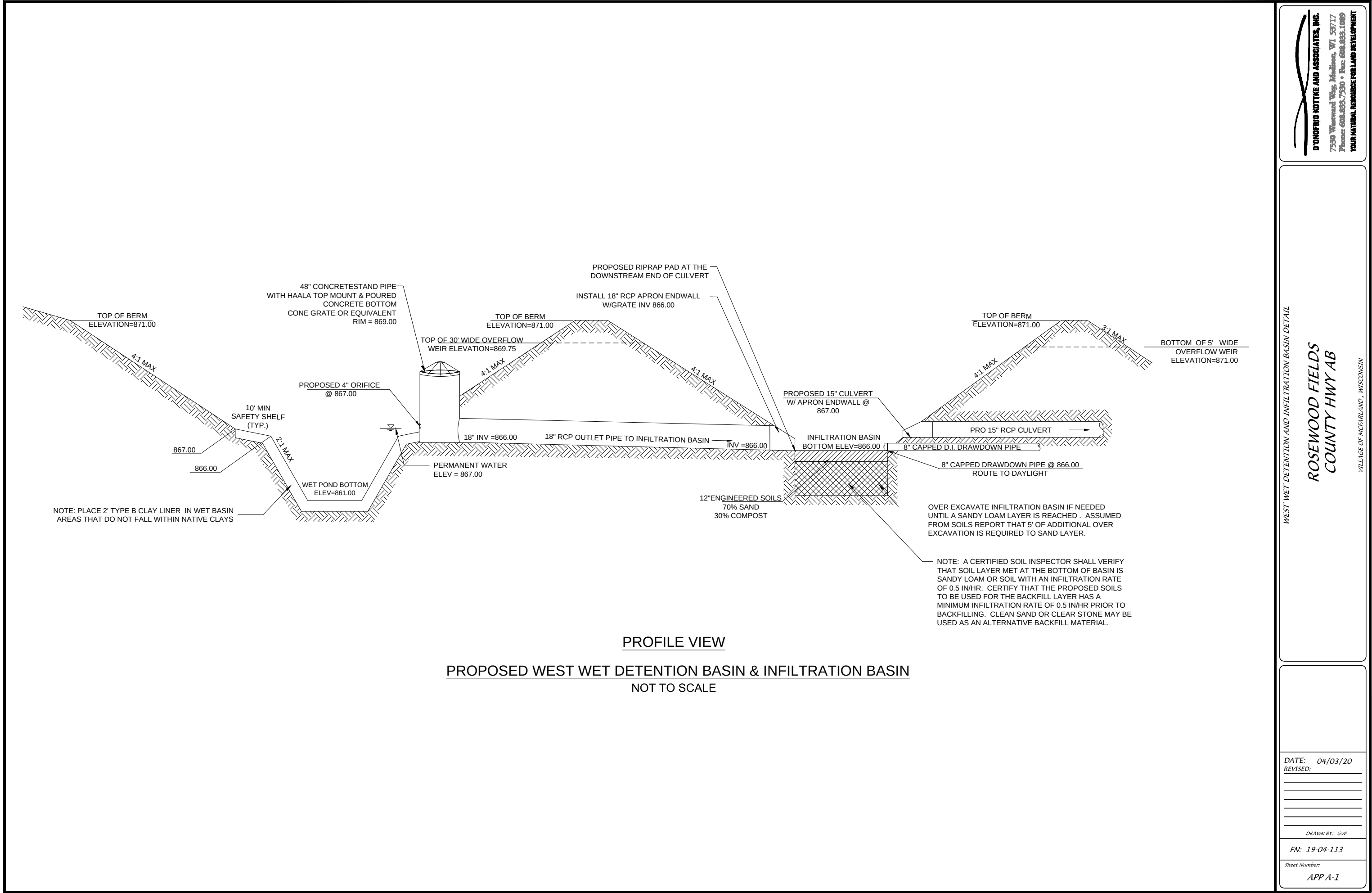
VILLAGE OF MCFARLAND, WISCONSIN

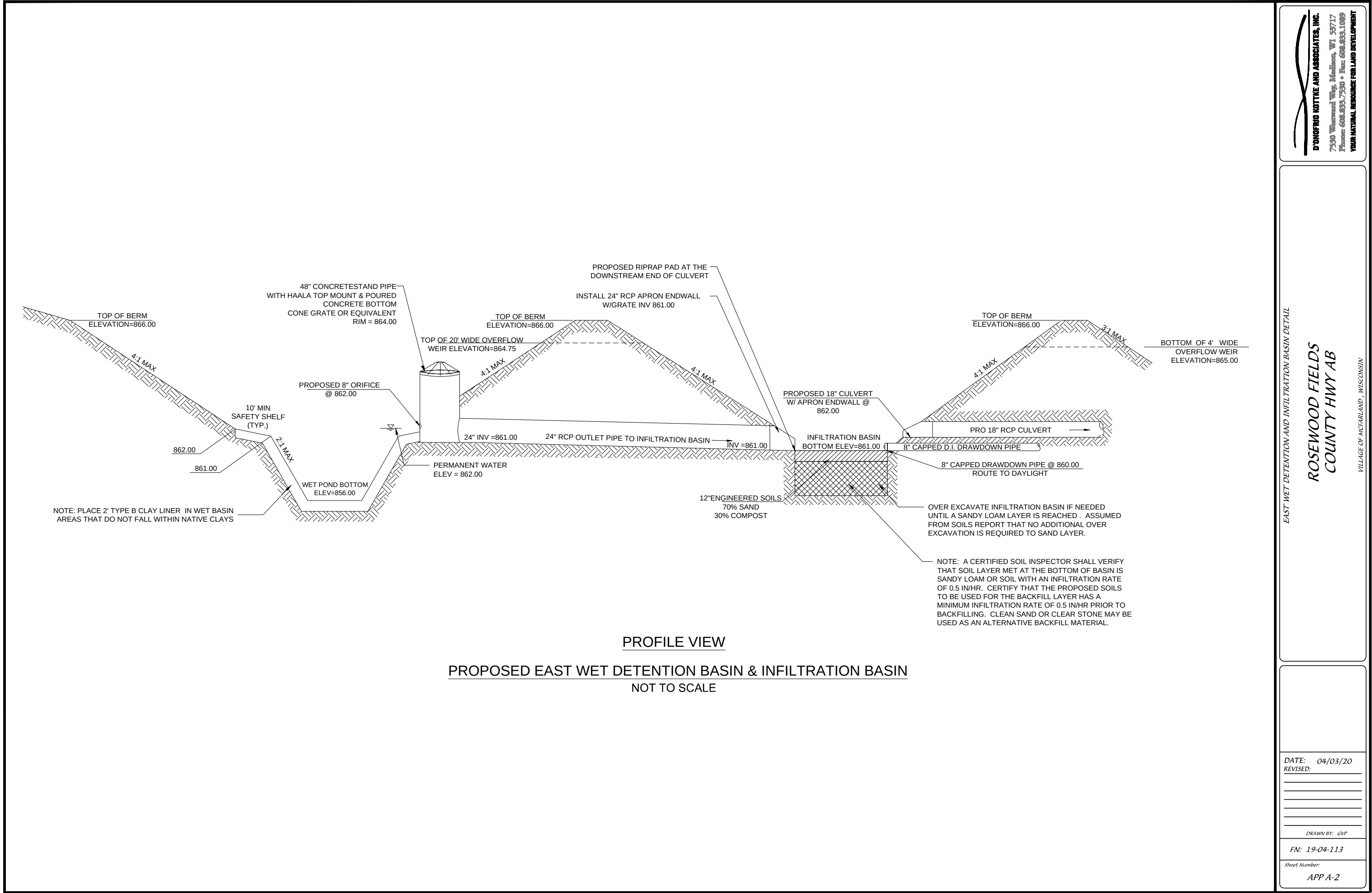
DRAWN BY: GVP

EXHIBIT 8

APPENDIX A

DETENTION POND & INFILTRATION BASIN DETAILS





APPENDIX B

SEDIMENT REDUCTION CALCULATIONS

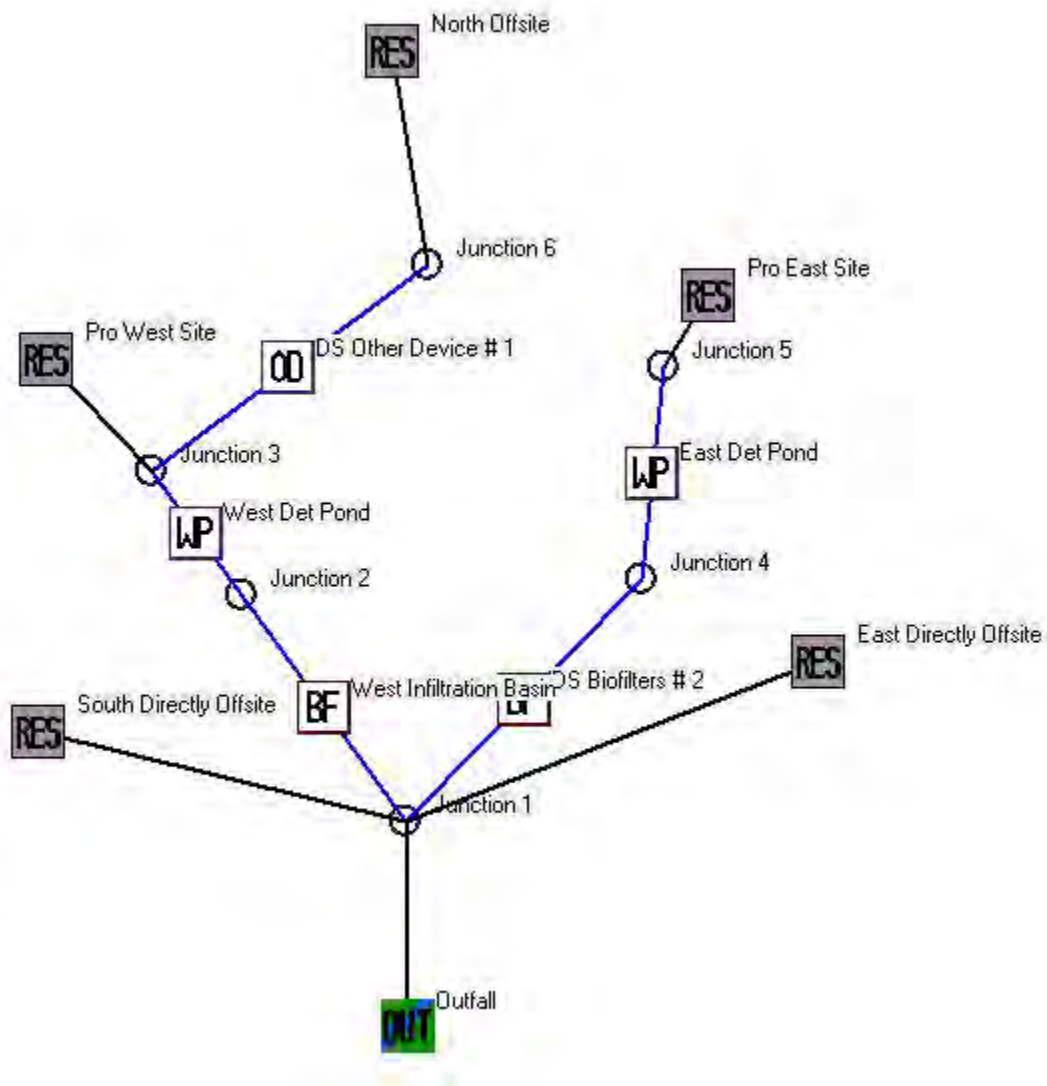
DETENTION BASIN SEDIMENTATION REDUCTION CALCULATIONS (WINSLAMM)

WinSlamm Design

The following WinSlamm design shows that 80% of sediment is being removed from the proposed site

Total site sediment reduction in developed conditions = 83.56%

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Sed Pro Utterback Slamm.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdpx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 04-02-2020 Time: 16:41:46
Site information:

LU# 1 - Residential: Pro West Site Total area (ac): 8.500
1 - Roofs 1: 1.190 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.610 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.790 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.230 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 1.010 ac. Intermediate Street Length = 0.768 curb-mi Street Width (assuming two curb-mi per street mile) = 21.69922 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 4.180 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.490 ac. Source Area PSD File:

LU# 2 - Residential: Pro East Site Total area (ac): 18.700
1 - Roofs 1: 3.390 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 1.740 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 2.260 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.150 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 2.870 ac. Intermediate Street Length = 1.713 curb-mi Street Width (assuming two curb-mi per street mile) = 27.64448 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 7.390 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.900 ac. Source Area PSD File:

LU# 3 - Residential: South Directly Offsite Total area (ac): 6.600
1 - Roofs 1: 0.050 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.030 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.620 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 0.040 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 15 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 5.860 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: East Directly Offsite Total area (ac): 2.500
31 - Sidewalks 1: 0.240 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
37 - Streets 1: 0.070 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 26.25 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 2.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: North Offsite Total area (ac): 2.900
45 - Large Landscaped Areas 1: 2.900 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - West Det Pond
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 6
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:

- Outlet type: Orifice 1
1. Orifice diameter (ft): 0.33
 2. Number of orifices: 1
 3. Invert elevation above datum (ft): 6
- Outlet type: Broad Crested Weir
1. Weir crest length (ft): 30
 2. Weir crest width (ft): 10
 3. Height from datum to bottom of weir opening: 7.75
- Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 4
 2. Stand pipe height above datum (ft): 7

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.10	0.0195	0.00	0.00
2	1.00	0.0344	0.00	0.00
3	2.00	0.0569	0.00	0.00
4	3.00	0.0894	0.00	0.00
5	4.00	0.1220	0.00	0.00
6	5.00	0.1560	0.00	0.00
7	6.00	0.3550	0.00	0.00
8	7.00	0.4490	0.00	0.00
9	8.00	0.5470	0.00	0.00
10	9.00	0.6460	0.00	0.00
11	10.00	0.7480	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - West Infiltration Basin

1. Top area (square feet) = 10466
2. Bottom area (square feet) = 3624
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

- Outlet type: Broad Crested Weir
1. Weir crest length (ft): 5
 2. Weir crest width (ft): 10
 3. Height of datum to bottom of weir opening: 4
- Outlet type: Surface Discharge Pipe
1. Surface discharge pipe outlet diameter (ft): 1.25
 2. Pipe invert elevation above datum (ft): 1
 3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - East Det Pond

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

- Outlet type: Orifice 1
1. Orifice diameter (ft): 0.67
 2. Number of orifices: 1
 3. Invert elevation above datum (ft): 6
- Outlet type: Broad Crested Weir
1. Weir crest length (ft): 20
 2. Weir crest width (ft): 10
 3. Height from datum to bottom of weir opening: 8.75
- Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 4
 2. Stand pipe height above datum (ft): 8

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.10	0.2030	0.00	0.00
2	1.00	0.2380	0.00	0.00
3	2.00	0.2750	0.00	0.00
4	3.00	0.3130	0.00	0.00
5	4.00	0.3520	0.00	0.00
6	5.00	0.3900	0.00	0.00
7	6.00	0.7100	0.00	0.00
8	7.00	0.8190	0.00	0.00
9	8.00	0.9310	0.00	0.00
10	9.00	1.0440	0.00	0.00
11	10.00	1.1610	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - DS Biofilters # 2

1. Top area (square feet) = 19855
2. Bottom area (square feet) = 8400
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.5
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Control Practice 5: Other Device CP# 1 (DS) - DS Other Device # 1

- Fraction of drainage area served by device (ac) = 1.00
 Particulate Concentration reduction fraction = 1.00
 Filterable Concentration reduction fraction = 0.00
 Runoff volume reduction fraction = 0

Output Sediment Reduction:

File Name:
U:\User\1904113\Engineering\Sw\MP\Sed Pro Utterback Slamm.mdb

Outfall Output Summary

	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	1.130E+06		0.25	135.9	9588	
Outfall Total with Controls	488981	56.73 %	0.11	51.62	1576	83.56 %
Current File Output: Annualized Total After Outfall Controls	490324	Years in Model Run:	1.00		1580	

Total Area Modeled (ac)
39.200

Total Control Practice Costs

Capital Cost	N/A
Land Cost	N/A
Annual Maintenance Cost	N/A
Present Value of All Costs	N/A
Annualized Value of All Costs	N/A

Receiving Water Impacts Due To Stormwater Runoff

(CWP Impervious Cover Model)

	Calculated Rv	Approximate Urban Stream Classification
Without Controls	0.25	Poor
With Controls	0.11	Good

Total site sediment reduction in developed conditions = 83.56%

Data File:	U:\User\1904113\Eng\slamm.mdb						
Rain File:	WisReg - Madison WI						
Date:	04-02-20	Time:	4:43:38 PM				
Site Description:							
Col. #:	2	4	5	6	7	8	9
Control Practice No.	Control Practice Type	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction
1	Wet Detention Pond	310884	311720	-0.269	2521	332.0	86.83
2	Biofilter	311720	115685	62.89	332.0	152.1	54.19
3	Wet Detention Pond	750693	752823	-0.284	5899	1091	81.51
4	Biofilter	752823	304609	59.54	1091	513.1	52.97
5	Other Device	18203	18203	0	258.0	0	100.0

The chart above shows that over 60% sediment reduction will occur prior to the infiltration basins.

APPENDIX C

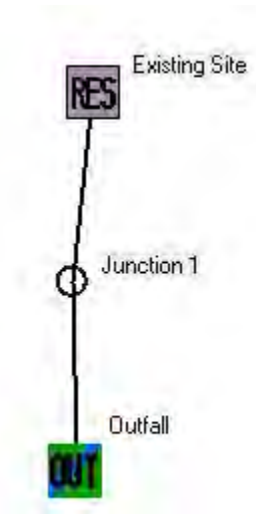
INFILTRATION DESIGN

INFILTRATION SIZING FOR THE PROPOSED PLAT

Methodology: To meet infiltration requirements, the following will show that the infiltration design will meet stayon requirements for the site. To establish the infiltration requirements, the site was modeled using WinSLAMM in existing conditions to establish an existing stayon value first. A target stayon value was established as 90% of the existing value per the ordinance. As shown in the following calculations; The site will meet the required infiltration performance standard in developed conditions

WinSLAMM Model to Establish Stayon Requirements

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Ex Utterback Slamm.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdpx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 04-02-2020 Time: 16:48:49
Site information:

LU# 1 - Residential: Existing Site Total area (ac): 36.300
45 - Large Landscaped Areas 1: 36.300 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Output Existing Stayon From Plat:

Data File: U:\User\1904113\Engineering\SW\MP\Ex Utterback Slamm.mdb					
Rain File: WisReg - Madison WI 1981.RAN					
Date: 04-02-20 Time: 4:50:34 PM					
Site Description:					
Runoff Volume Total (cf) at the Outfall					
Rain Number	Start Date	Rain Total (in)	Outfall Total (cf)	Rv	Total Losses (in.)
73	08/28/81	0.04	0	0.000	0.04
74	08/31/81	0.03	0	0.000	0.03
75	08/31/81	1.52	10760	0.054	1.44
76	09/07/81	0.89	5048	0.043	0.85
77	09/11/81	0.08	0	0.000	0.08
78	09/16/81	0.03	0	0.000	0.03
79	09/21/81	0.45	1398	0.024	0.44
80	09/24/81	0.90	5117	0.043	0.86
81	09/26/81	0.12	0	0.000	0.12
82	09/28/81	0.10	0	0.000	0.10
83	09/29/81	0.16	0	0.000	0.16
84	09/30/81	0.36	825.6	0.017	0.35
85	10/01/81	0.01	0	0.000	0.01
86	10/04/81	0.15	0	0.000	0.15
87	10/05/81	0.04	0	0.000	0.04
88	10/05/81	0.02	0	0.000	0.02
89	10/09/81	0.14	0	0.000	0.14
90	10/13/81	1.20	8238	0.052	1.14
91	10/15/81	0.02	0	0.000	0.02
92	10/17/81	0.95	5464	0.044	0.91
93	10/18/81	0.06	0	0.000	0.06
94	10/21/81	0.06	0	0.000	0.06
95	10/21/81	0.01	0	0.000	0.01
96	10/24/81	0.01	0	0.000	0.01
97	10/31/81	0.01	0	0.000	0.01
98	11/05/81	0.04	0	0.000	0.04
99	11/15/81	0.07	0	0.000	0.07
100	11/18/81	0.05	0	0.000	0.05
101	11/19/81	0.26	230.8	0.007	0.26
102	11/23/81	0.18	0	0.000	0.18
103	11/25/81	0.89	5048	0.043	0.85
104	11/30/81	0.37	900.6	0.018	0.36
105	12/03/81	-	-	-	-
106	12/14/81	-	-	-	-
107	12/20/81	-	-	-	-
108	12/26/81	-	-	-	-
109	12/31/81	-	-	-	-
Minimum:		0.00	0	0.000	0.01
Maximum:		2.59	68256	0.200	2.07
Average:		0.26	2090	0.012	0.25
Total:		28.81	227858		27.09

The plat has **27.09** inches of stayon in existing conditions. 90% of 27.09 inches = **24.4 inches of stayon required** to meet stayon requirements for the plat.

Proposed Infiltration Design:

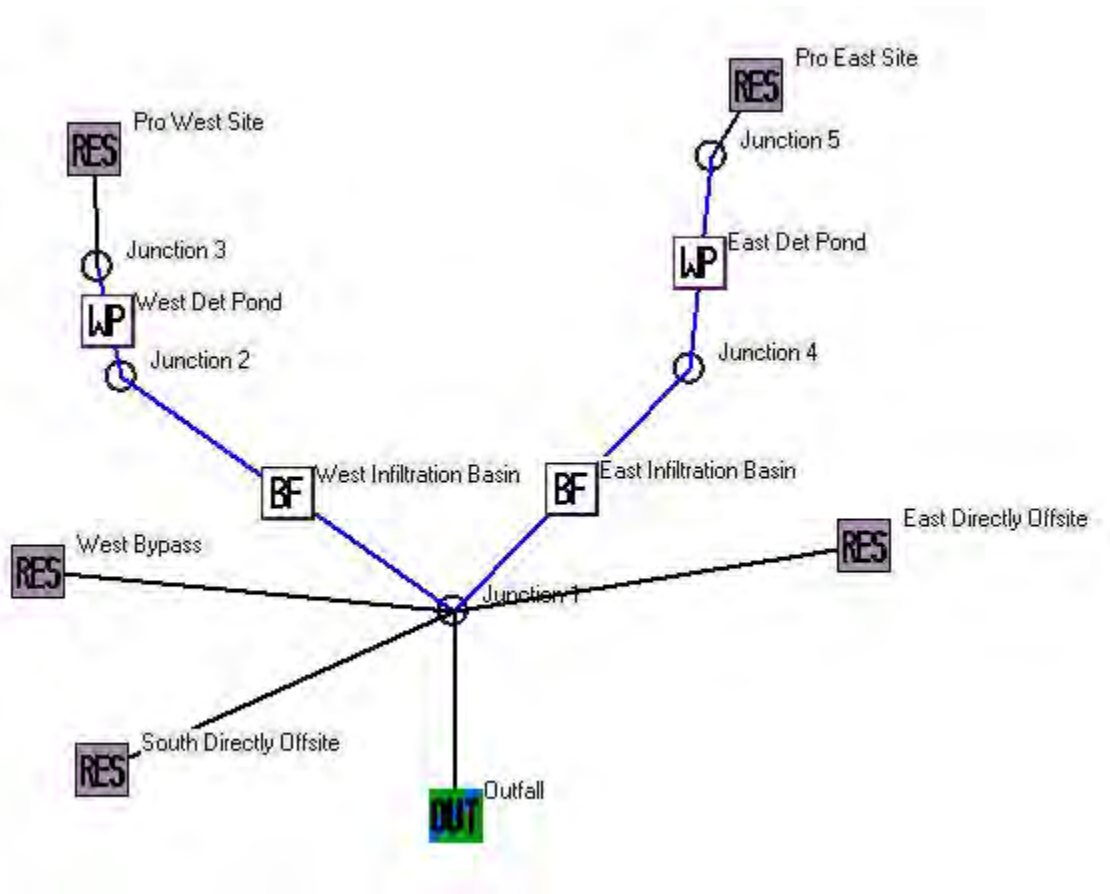
Proposed Site Infiltration Design:

Stayon Required = 24.4 inches

Note: Assume 0.5 in/hr infiltration can be attained

WinSlamm Design

Model Schematic:



Model Input Information:

Data file name: U:\User\1904113\Engineering\SWMP\Pro Utterback Slamm.mdb

WinSLAMM Version 10.4.1

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

Seed for random number generator: -42
 Study period starting date: 01/01/81 Study period ending date: 12/31/81
 Start of Winter Season: 12/02 End of Winter Season: 03/12
 Date: 04-02-2020 Time: 16:56:40
 Site information:

LU# 1 - Residential: Pro West Site Total area (ac): 7.400

1 - Roofs 1: 1.190 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 0.610 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 25 - Driveways 1: 0.790 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.120 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 1.010 ac. Intermediate Street Length = 0.768 curb-mi Street Width (assuming two curb-mi per street mile) = 21.69922 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 3.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 70 - Water Body Areas: 0.490 ac. Source Area PSD File:

LU# 2 - Residential: Pro East Site Total area (ac): 18.700

1 - Roofs 1: 3.390 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 1.740 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 25 - Driveways 1: 2.260 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.150 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 2.870 ac. Intermediate Street Length = 1.713 curb-mi Street Width (assuming two curb-mi per street mile) = 27.64448 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 7.390 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 70 - Water Body Areas: 0.900 ac. Source Area PSD File:

LU# 3 - Residential: South Directly Offsite Total area (ac): 6.600

1 - Roofs 1: 0.050 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 2 - Roofs 2: 0.030 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 31 - Sidewalks 1: 0.620 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 0.040 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 15 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 5.860 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: East Directly Offsite Total area (ac): 2.500

31 - Sidewalks 1: 0.240 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 37 - Streets 1: 0.070 ac. Intermediate Street Length = 0.044 curb-mi Street Width (assuming two curb-mi per street mile) = 26.25 ft
 Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 2.190 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential: West Bypass Total area (ac): 1.100

31 - Sidewalks 1: 0.110 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 0.990 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - West Det Pond

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.33

2. Number of orifices: 1

3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 30

2. Weir crest width (ft): 10

3. Height from datum to bottom of weir opening: 7.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4

2. Stand pipe height above datum (ft): 7

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.10	0.0190	0.00	0.00
2	1.00	0.0340	0.00	0.00

3	2.00	0.0560	0.00	0.00
4	3.00	0.0890	0.00	0.00
5	4.00	0.1220	0.00	0.00
6	5.00	0.1560	0.00	0.00
7	6.00	0.3550	0.00	0.00
8	7.00	0.4490	0.00	0.00
9	8.00	0.5470	0.00	0.00
10	9.00	0.6460	0.00	0.00
11	10.00	0.7480	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - West Infiltration Basin

1. Top area (square feet) = 10466
2. Bottom area (square feet) = 3624
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 5
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.25
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - East Det Pond

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 6

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.67
2. Number of orifices: 1
3. Invert elevation above datum (ft): 6

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 20
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 8.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 8

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.10	0.2030	0.00	0.00
2	1.00	0.2380	0.00	0.00
3	2.00	0.2750	0.00	0.00
4	3.00	0.3130	0.00	0.00
5	4.00	0.3520	0.00	0.00
6	5.00	0.3900	0.00	0.00
7	6.00	0.7100	0.00	0.00
8	7.00	0.8190	0.00	0.00
9	8.00	0.9310	0.00	0.00
10	9.00	1.0440	0.00	0.00
11	10.00	1.1610	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - East Infiltration Basin

1. Top area (square feet) = 19855
2. Bottom area (square feet) = 8400
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.5
2. Pipe invert elevation above datum (ft): 1
3. Number of surface pipe outlets: 1

Proposed Infiltration Design:

Data File: U:\User\1904113\Engineering\SWMP\Pro Utterback Slamm.mdb					
Rain File: WisReg - Madison WI 1981.RAN					
Date: 04-02-20 Time: 4:59:15 PM					
Site Description:					
Runoff Volume Total (cf) at the Outfall					
Rain Number	Start Date	Rain Total (in)	Outfall Total (cf)	Rv	Total Losses (in.)
73	08/28/81	0.04	99.17	0.019	0.04
74	08/31/81	0.03	0.6224	0.000	0.03
75	08/31/81	1.52	34950	0.174	1.25
76	09/07/81	0.89	11971	0.102	0.80
77	09/11/81	0.08	21.02	0.002	0.08
78	09/16/81	0.03	0.6224	0.000	0.03
79	09/21/81	0.45	575.2	0.010	0.45
80	09/24/81	0.90	7729	0.065	0.84
81	09/26/81	0.12	40.53	0.003	0.12
82	09/28/81	0.10	30.18	0.002	0.10
83	09/29/81	0.16	55.90	0.003	0.16
84	09/30/81	0.36	370.6	0.008	0.36
85	10/01/81	0.01	0.06915	0.000	0.01
86	10/04/81	0.15	51.97	0.003	0.15
87	10/05/81	0.04	7.682	0.001	0.04
88	10/05/81	0.02	0.2766	0.000	0.02
89	10/09/81	0.14	48.10	0.003	0.14
90	10/13/81	1.20	27507	0.174	0.99
91	10/15/81	0.02	0.2766	0.000	0.02
92	10/17/81	0.95	19095	0.153	0.81
93	10/18/81	0.06	526.3	0.067	0.06
94	10/21/81	0.06	13.64	0.002	0.06
95	10/21/81	0.01	0.06915	0.000	0.01
96	10/24/81	0.01	0.06915	0.000	0.01
97	10/31/81	0.01	0.06915	0.000	0.01
98	11/05/81	0.04	7.682	0.001	0.04
99	11/15/81	0.07	17.14	0.002	0.07
100	11/18/81	0.05	10.48	0.002	0.05
101	11/19/81	0.26	161.0	0.005	0.26
102	11/23/81	0.18	63.94	0.003	0.18
103	11/25/81	0.89	7125	0.061	0.84
104	11/30/81	0.37	396.0	0.008	0.37
105	12/03/81	-	-	-	-
106	12/14/81	-	-	-	-
107	12/20/81	-	-	-	-
108	12/26/81	-	-	-	-
109	12/31/81	-	-	-	-
Minimum:		0.00	0	0.000	0.01
Maximum:		2.59	114005	0.334	1.72
Average:		0.26	4344	0.026	0.23
Total:		28.81	473485		25.23

25.2 inches of stayon attained on the site in proposed conditions. This exceeds 24.4 inches required in developed conditions

Note: DNR conservation practice standard 1003 states that ponding depth must infiltrate within the maximum allowable draw down period of 24 hours. From the DNR's technical note for sizing infiltration basins, drawdown time is calculated as a function of depression zone vs. infiltration rate.

Depth/kd = Drawdown Time

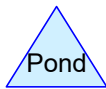
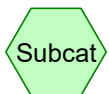
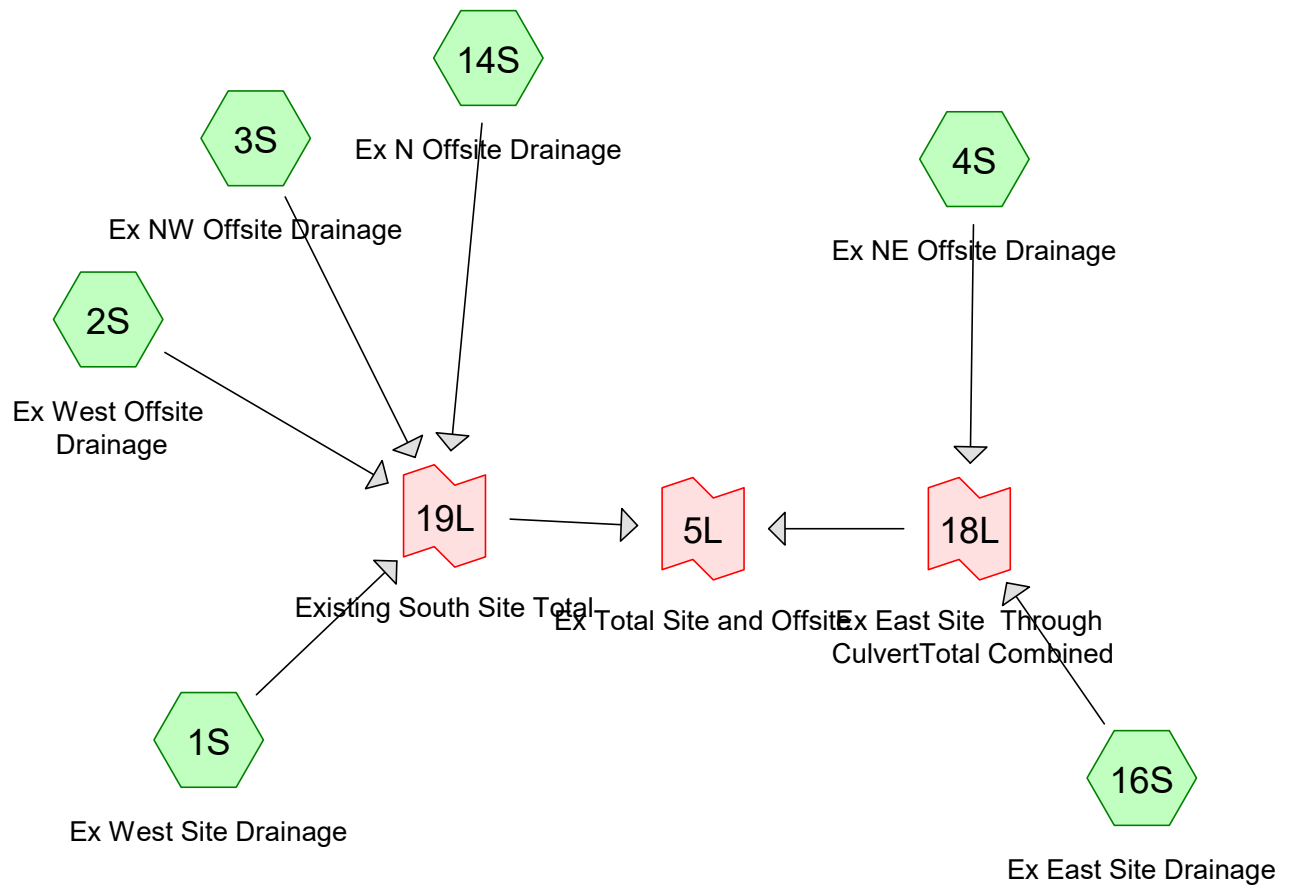
12" is maximum depression zone, and 0.5in/hr is the minimum infiltration rate within the infiltration basin.

12" depression zone/0.50 in/hr = 24 hours is the maximum drawdown after rainfall event.

APPENDIX D

HYDROCAD OUTPUT

Existing Hydrocad



Routing Diagram for 1904113 prelim SWMP
 Prepared by HP Inc., Printed 4/2/2020
 HydroCAD® 10.00-25 s/n 02063 © 2019 HydroCAD Software Solutions LLC

1904113 prelim SWMP

Prepared by HP Inc.

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Printed 4/2/2020

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 1.12 cfs @ 12.65 hrs, Volume= 0.292 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 0.40 cfs @ 12.62 hrs, Volume= 0.111 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

1904113 prelim SWMP

Prepared by HP Inc.

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Printed 4/2/2020

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 1.34 cfs @ 12.85 hrs, Volume= 0.432 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 0.86 cfs @ 12.31 hrs, Volume= 0.122 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 0.59 cfs @ 12.40 hrs, Volume= 0.078 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 0.84 cfs @ 12.54 hrs, Volume= 0.185 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.15" for 1yr 24hr event
Inflow = 4.35 cfs @ 12.63 hrs, Volume= 1.221 af
Primary = 4.35 cfs @ 12.63 hrs, Volume= 1.221 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.19" for 1yr 24hr event
Inflow = 1.53 cfs @ 12.45 hrs, Volume= 0.308 af
Primary = 1.53 cfs @ 12.45 hrs, Volume= 0.308 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event
Inflow = 3.09 cfs @ 12.71 hrs, Volume= 0.914 af
Primary = 3.09 cfs @ 12.71 hrs, Volume= 0.914 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 2.56 cfs @ 12.53 hrs, Volume= 0.486 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 0.97 cfs @ 12.49 hrs, Volume= 0.191 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 3.20 cfs @ 12.70 hrs, Volume= 0.740 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 1.72 cfs @ 12.28 hrs, Volume= 0.187 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 1.00 cfs @ 12.37 hrs, Volume= 0.114 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 1.85 cfs @ 12.43 hrs, Volume= 0.301 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.25" for 2yr 24hr event
Inflow = 9.71 cfs @ 12.54 hrs, Volume= 2.019 af
Primary = 9.71 cfs @ 12.54 hrs, Volume= 2.019 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.31" for 2yr 24hr event
Inflow = 3.22 cfs @ 12.37 hrs, Volume= 0.488 af
Primary = 3.22 cfs @ 12.37 hrs, Volume= 0.488 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
Inflow = 7.09 cfs @ 12.60 hrs, Volume= 1.531 af
Primary = 7.09 cfs @ 12.60 hrs, Volume= 1.531 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 12.44 cfs @ 12.42 hrs, Volume= 1.467 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 5.42 cfs @ 12.36 hrs, Volume= 0.600 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 16.34 cfs @ 12.56 hrs, Volume= 2.330 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 6.22 cfs @ 12.24 hrs, Volume= 0.492 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 2.96 cfs @ 12.34 hrs, Volume= 0.276 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 8.43 cfs @ 12.35 hrs, Volume= 0.874 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 0.76" for 10yr 24hr event
Inflow = 45.73 cfs @ 12.42 hrs, Volume= 6.038 af
Primary = 45.73 cfs @ 12.42 hrs, Volume= 6.038 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 0.86" for 10yr 24hr event
Inflow = 13.70 cfs @ 12.30 hrs, Volume= 1.365 af
Primary = 13.70 cfs @ 12.30 hrs, Volume= 1.365 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 0.74" for 10yr 24hr event
Inflow = 34.57 cfs @ 12.46 hrs, Volume= 4.673 af
Primary = 34.57 cfs @ 12.46 hrs, Volume= 4.673 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 22.79 cfs @ 12.40 hrs, Volume= 2.408 af, Depth= 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 10.27 cfs @ 12.34 hrs, Volume= 0.998 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 30.61 cfs @ 12.53 hrs, Volume= 3.875 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 10.39 cfs @ 12.23 hrs, Volume= 0.770 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 4.70 cfs @ 12.33 hrs, Volume= 0.419 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 15.08 cfs @ 12.33 hrs, Volume= 1.416 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 1.25" for 25yr 24hr event
Inflow = 83.98 cfs @ 12.40 hrs, Volume= 9.886 af
Primary = 83.98 cfs @ 12.40 hrs, Volume= 9.886 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 1.37" for 25yr 24hr event
Inflow = 24.07 cfs @ 12.29 hrs, Volume= 2.186 af
Primary = 24.07 cfs @ 12.29 hrs, Volume= 2.186 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 1.22" for 25yr 24hr event
Inflow = 64.14 cfs @ 12.43 hrs, Volume= 7.700 af
Primary = 64.14 cfs @ 12.43 hrs, Volume= 7.700 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 1S: Ex West Site Drainage

Runoff = 45.16 cfs @ 12.38 hrs, Volume= 4.413 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 21.400	58	Type B Soils
* 1.900	71	Type C Soils
23.300	59	Weighted Average
23.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
9.4	1,000	0.0140	1.77		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.1	300	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
24.9	1,600	Total			

Summary for Subcatchment 2S: Ex West Offsite Drainage

Runoff = 20.81 cfs @ 12.32 hrs, Volume= 1.854 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Summary for Subcatchment 3S: Ex NW Offsite Drainage

Runoff = 61.96 cfs @ 12.50 hrs, Volume= 7.198 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 4S: Ex NE Offsite Drainage

Runoff = 18.89 cfs @ 12.23 hrs, Volume= 1.347 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 14S: Ex N Offsite Drainage

Runoff = 8.21 cfs @ 12.32 hrs, Volume= 0.710 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 16S: Ex East Site Drainage

Runoff = 29.14 cfs @ 12.32 hrs, Volume= 2.563 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 11.400	58	Type B Soils
* 1.600	71	Type C Soils
13.000	60	Weighted Average
13.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	300	0.0733	0.38		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
6.6	700	0.0140	1.77		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
0.7	200	0.0100	4.71	94.24	Channel Flow, Channel
					Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.6	1,200	Total			

Summary for Link 5L: Ex Total Site and Offsite

Inflow Area = 95.100 ac, 0.00% Impervious, Inflow Depth = 2.28" for 100yr 24hr event
Inflow = 166.65 cfs @ 12.38 hrs, Volume= 18.085 af
Primary = 166.65 cfs @ 12.38 hrs, Volume= 18.085 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 18L: Ex East Site Through CulvertTotal Combined

Inflow Area = 19.100 ac, 0.00% Impervious, Inflow Depth = 2.46" for 100yr 24hr event
Inflow = 45.72 cfs @ 12.28 hrs, Volume= 3.910 af
Primary = 45.72 cfs @ 12.28 hrs, Volume= 3.910 af, Atten= 0%, Lag= 0.0 min

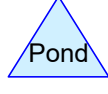
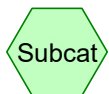
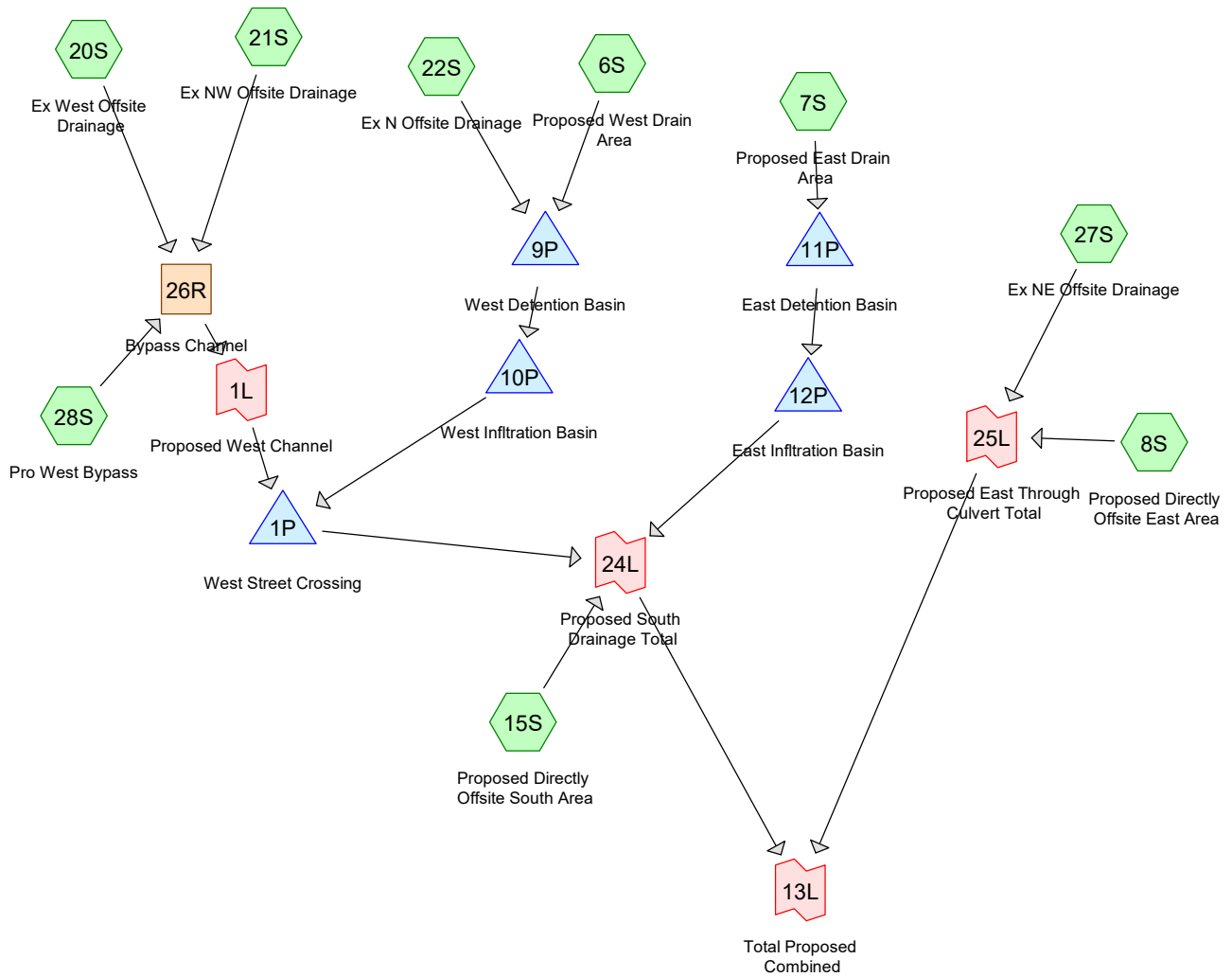
Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 19L: Existing South Site Total

Inflow Area = 76.000 ac, 0.00% Impervious, Inflow Depth = 2.24" for 100yr 24hr event
Inflow = 128.47 cfs @ 12.41 hrs, Volume= 14.176 af
Primary = 128.47 cfs @ 12.41 hrs, Volume= 14.176 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Proposed Hydrocad



Routing Diagram for 1904113 prelim SWMP

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 13.63 cfs @ 12.14 hrs, Volume= 0.722 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 6.000	87	55% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 33.13 cfs @ 12.18 hrs, Volume= 2.030 af, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 0.29 cfs @ 12.49 hrs, Volume= 0.050 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 0.66 cfs @ 12.64 hrs, Volume= 0.132 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 0.40 cfs @ 12.62 hrs, Volume= 0.111 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 1.34 cfs @ 12.85 hrs, Volume= 0.432 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 0.59 cfs @ 12.40 hrs, Volume= 0.078 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 0.86 cfs @ 12.31 hrs, Volume= 0.122 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 1yr 24hr Rainfall=2.49"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 1.00 cfs @ 12.14 hrs, Volume= 0.055 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 1yr 24hr Rainfall=2.49"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event

Inflow = 1.82 cfs @ 12.81 hrs, Volume= 0.599 af

Outflow = 1.76 cfs @ 12.98 hrs, Volume= 0.599 af, Atten= 3%, Lag= 10.1 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Max. Velocity= 0.86 fps, Min. Travel Time= 10.6 min

Avg. Velocity = 0.42 fps, Avg. Travel Time= 21.6 min

Peak Storage= 1,121 cf @ 12.98 hrs

Average Depth at Peak Storage= 0.19'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 121.18 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 '/' Top Width= 26.00'

Length= 550.0' Slope= 0.0055 '/'

Inlet Invert= 869.00', Outlet Invert= 866.00'



Summary for Pond 1P: West Street Crossing

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth = 0.21" for 1yr 24hr event
 Inflow = 1.76 cfs @ 12.98 hrs, Volume= 1.063 af
 Outflow = 1.75 cfs @ 13.06 hrs, Volume= 1.063 af, Atten= 1%, Lag= 5.3 min
 Primary = 1.75 cfs @ 13.06 hrs, Volume= 1.063 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 866.34' @ 13.06 hrs Surf.Area= 2,432 sf Storage= 663 cf

Plug-Flow detention time= 10.8 min calculated for 1.062 af (100% of inflow)
 Center-of-Mass det. time= 10.3 min (1,243.0 - 1,232.6)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	22,843 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	1,479	0	0
867.00	4,287	2,883	2,883
868.00	9,984	7,136	10,019
869.00	15,664	12,824	22,843

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	36.0" Round Culvert X 2.00 L= 110.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 865.00' S= 0.0091 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=1.75 cfs @ 13.06 hrs HW=866.34' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Culvert** (Inlet Controls 1.75 cfs @ 1.98 fps)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 0.93" for 1yr 24hr event
 Inflow = 13.72 cfs @ 12.14 hrs, Volume= 0.800 af
 Outflow = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af, Atten= 97%, Lag= 180.2 min
 Primary = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 868.26' @ 15.14 hrs Surf.Area= 20,686 sf Storage= 22,708 cf

Plug-Flow detention time= 669.3 min calculated for 0.756 af (94% of inflow)
 Center-of-Mass det. time= 642.1 min (1,473.4 - 831.3)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.44 cfs @ 15.14 hrs HW=868.26' TW=866.96' (Dynamic Tailwater)

- 1=Culvert (Passes 0.44 cfs of 7.94 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.44 cfs @ 5.03 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 0.88" for 1yr 24hr event
 Inflow = 0.44 cfs @ 15.14 hrs, Volume= 0.756 af
 Outflow = 0.41 cfs @ 18.56 hrs, Volume= 0.661 af, Atten= 8%, Lag= 205.4 min
 Discarded = 0.07 cfs @ 18.56 hrs, Volume= 0.197 af
 Primary = 0.34 cfs @ 18.56 hrs, Volume= 0.464 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 867.27' @ 18.56 hrs Surf.Area= 5,085 sf Storage= 5,517 cf

Plug-Flow detention time= 288.3 min calculated for 0.661 af (87% of inflow)

Center-of-Mass det. time= 155.9 min (1,629.3 - 1,473.4)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

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Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.07 cfs @ 18.56 hrs HW=867.27' (Free Discharge)↑**1=Exfiltration** (Controls 0.07 cfs)**Primary OutFlow** Max=0.34 cfs @ 18.56 hrs HW=867.27' TW=866.23' (Dynamic Tailwater)↑**2=Culvert** (Barrel Controls 0.34 cfs @ 2.59 fps)↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond 11P: East Detention Basin**

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 1.30" for 1yr 24hr event
 Inflow = 33.13 cfs @ 12.18 hrs, Volume= 2.030 af
 Outflow = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af, Atten= 94%, Lag= 89.0 min
 Primary = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 863.55' @ 13.66 hrs Surf.Area= 38,370 sf Storage= 53,718 cf

Plug-Flow detention time= 447.3 min calculated for 1.953 af (96% of inflow)
 Center-of-Mass det. time= 427.0 min (1,246.9 - 819.9)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

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#4 Primary 864.75' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.85 cfs @ 13.66 hrs HW=863.55' TW=861.97' (Dynamic Tailwater)

1=Culvert (Passes 1.85 cfs of 13.93 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 1.85 cfs @ 5.31 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 1.25" for 1yr 24hr event
 Inflow = 1.85 cfs @ 13.66 hrs, Volume= 1.953 af
 Outflow = 1.56 cfs @ 16.50 hrs, Volume= 1.778 af, Atten= 16%, Lag= 170.3 min
 Discarded = 0.16 cfs @ 16.50 hrs, Volume= 0.447 af
 Primary = 1.39 cfs @ 16.50 hrs, Volume= 1.331 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 862.54' @ 16.50 hrs Surf.Area= 11,691 sf Storage= 15,484 cf

Plug-Flow detention time= 254.6 min calculated for 1.777 af (91% of inflow)
 Center-of-Mass det. time= 161.8 min (1,408.7 - 1,246.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.16 cfs @ 16.50 hrs HW=862.54' (Free Discharge)

↑**1=Exfiltration** (Controls 0.16 cfs)

Primary OutFlow Max=1.39 cfs @ 16.50 hrs HW=862.54' TW=0.00' (Dynamic Tailwater)

↑**2=Culvert** (Barrel Controls 1.39 cfs @ 3.58 fps)

↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: Proposed West Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.14" for 1yr 24hr event
Inflow = 1.76 cfs @ 12.98 hrs, Volume= 0.599 af
Primary = 1.76 cfs @ 12.98 hrs, Volume= 0.599 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 0.34" for 1yr 24hr event
Inflow = 2.75 cfs @ 12.92 hrs, Volume= 2.699 af
Primary = 2.75 cfs @ 12.92 hrs, Volume= 2.699 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 0.35" for 1yr 24hr event
Inflow = 2.29 cfs @ 17.08 hrs, Volume= 2.526 af
Primary = 2.29 cfs @ 17.08 hrs, Volume= 2.526 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.24" for 1yr 24hr event
Inflow = 1.07 cfs @ 12.35 hrs, Volume= 0.173 af
Primary = 1.07 cfs @ 12.35 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 16.92 cfs @ 12.14 hrs, Volume= 0.897 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 6.000	87	55% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 40.59 cfs @ 12.18 hrs, Volume= 2.494 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 0.55 cfs @ 12.44 hrs, Volume= 0.077 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 1.22 cfs @ 12.59 hrs, Volume= 0.202 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 0.97 cfs @ 12.49 hrs, Volume= 0.191 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 3.20 cfs @ 12.70 hrs, Volume= 0.740 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 1.00 cfs @ 12.37 hrs, Volume= 0.114 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 1.72 cfs @ 12.28 hrs, Volume= 0.187 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 2yr 24hr Rainfall=2.84"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 1.38 cfs @ 12.14 hrs, Volume= 0.074 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 2yr 24hr Rainfall=2.84"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

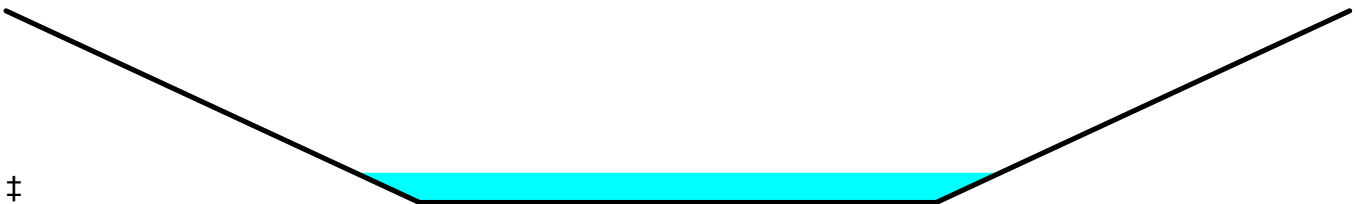
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 26R: Bypass ChannelInflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
Inflow = 4.22 cfs @ 12.66 hrs, Volume= 1.005 af
Outflow = 4.07 cfs @ 12.76 hrs, Volume= 1.005 af, Atten= 4%, Lag= 5.7 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 1.17 fps, Min. Travel Time= 7.8 min
Avg. Velocity = 0.49 fps, Avg. Travel Time= 18.9 min

Peak Storage= 1,916 cf @ 12.76 hrs

Average Depth at Peak Storage= 0.31'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 121.18 cfs

10.00' x 2.00' deep channel, n= 0.040
Side Slope Z-value= 4.0 '/' Top Width= 26.00'
Length= 550.0' Slope= 0.0055 '/'
Inlet Invert= 869.00', Outlet Invert= 866.00'

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Summary for Pond 1P: West Street Crossing

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.32" for 2yr 24hr event
 Inflow = 4.07 cfs @ 12.76 hrs, Volume= 1.651 af
 Outflow = 4.02 cfs @ 12.82 hrs, Volume= 1.649 af, Atten= 1%, Lag= 3.8 min
 Primary = 4.02 cfs @ 12.82 hrs, Volume= 1.649 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 866.52' @ 12.82 hrs Surf.Area= 2,938 sf Storage= 1,147 cf

Plug-Flow detention time= 9.1 min calculated for 1.648 af (100% of inflow)
 Center-of-Mass det. time= 7.6 min (1,224.1 - 1,216.4)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	22,843 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	1,479	0	0
867.00	4,287	2,883	2,883
868.00	9,984	7,136	10,019
869.00	15,664	12,824	22,843

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	36.0" Round Culvert X 2.00 L= 110.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 865.00' S= 0.0091 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=4.02 cfs @ 12.82 hrs HW=866.52' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Culvert** (Inlet Controls 4.02 cfs @ 2.45 fps)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 1.18" for 2yr 24hr event
 Inflow = 17.15 cfs @ 12.14 hrs, Volume= 1.011 af
 Outflow = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af, Atten= 97%, Lag= 184.5 min
 Primary = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 868.58' @ 15.21 hrs Surf.Area= 22,045 sf Storage= 29,569 cf

Plug-Flow detention time= 742.3 min calculated for 0.950 af (94% of inflow)
 Center-of-Mass det. time= 711.9 min (1,538.3 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.50 cfs @ 15.21 hrs HW=868.58' TW=867.12' (Dynamic Tailwater)

- 1=Culvert (Passes 0.50 cfs of 9.48 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.50 cfs @ 5.72 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 1.11" for 2yr 24hr event
 Inflow = 0.50 cfs @ 15.21 hrs, Volume= 0.950 af
 Outflow = 0.47 cfs @ 18.20 hrs, Volume= 0.847 af, Atten= 6%, Lag= 179.1 min
 Discarded = 0.07 cfs @ 18.20 hrs, Volume= 0.201 af
 Primary = 0.40 cfs @ 18.20 hrs, Volume= 0.645 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 867.30' @ 18.20 hrs Surf.Area= 5,117 sf Storage= 5,645 cf

Plug-Flow detention time= 250.6 min calculated for 0.846 af (89% of inflow)

Center-of-Mass det. time= 129.0 min (1,667.3 - 1,538.3)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

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Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.07 cfs @ 18.20 hrs HW=867.30' (Free Discharge)↑**1=Exfiltration** (Controls 0.07 cfs)**Primary OutFlow** Max=0.40 cfs @ 18.20 hrs HW=867.30' TW=866.27' (Dynamic Tailwater)↑**2=Culvert** (Barrel Controls 0.40 cfs @ 2.71 fps)↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond 11P: East Detention Basin**

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 1.60" for 2yr 24hr event
 Inflow = 40.59 cfs @ 12.18 hrs, Volume= 2.494 af
 Outflow = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af, Atten= 95%, Lag= 90.3 min
 Primary = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 863.90' @ 13.68 hrs Surf.Area= 40,085 sf Storage= 67,574 cf

Plug-Flow detention time= 476.8 min calculated for 2.407 af (97% of inflow)
 Center-of-Mass det. time= 459.0 min (1,274.0 - 815.0)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

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#4 Primary 864.75' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.11 cfs @ 13.68 hrs HW=863.90' TW=862.15' (Dynamic Tailwater)

1=Culvert (Passes 2.11 cfs of 16.45 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.11 cfs @ 6.03 fps)
 3=Orifice/Grate (Controls 0.00 cfs)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 1.55" for 2yr 24hr event
 Inflow = 2.11 cfs @ 13.68 hrs, Volume= 2.409 af
 Outflow = 1.82 cfs @ 16.32 hrs, Volume= 2.216 af, Atten= 14%, Lag= 158.3 min
 Discarded = 0.17 cfs @ 16.32 hrs, Volume= 0.458 af
 Primary = 1.65 cfs @ 16.32 hrs, Volume= 1.759 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 862.60' @ 16.32 hrs Surf.Area= 11,811 sf Storage= 16,128 cf

Plug-Flow detention time= 219.2 min calculated for 2.215 af (92% of inflow)
 Center-of-Mass det. time= 135.0 min (1,409.0 - 1,274.0)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.17 cfs @ 16.32 hrs HW=862.60' (Free Discharge)

↑**1=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=1.65 cfs @ 16.32 hrs HW=862.60' TW=0.00' (Dynamic Tailwater)

↑**2=Culvert** (Barrel Controls 1.65 cfs @ 3.72 fps)

↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: Proposed West Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.24" for 2yr 24hr event
Inflow = 4.07 cfs @ 12.76 hrs, Volume= 1.005 af
Primary = 4.07 cfs @ 12.76 hrs, Volume= 1.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 0.49" for 2yr 24hr event
Inflow = 6.00 cfs @ 12.73 hrs, Volume= 3.874 af
Primary = 6.00 cfs @ 12.73 hrs, Volume= 3.874 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 0.50" for 2yr 24hr event
Inflow = 5.03 cfs @ 12.78 hrs, Volume= 3.610 af
Primary = 5.03 cfs @ 12.78 hrs, Volume= 3.610 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.37" for 2yr 24hr event
Inflow = 2.09 cfs @ 12.30 hrs, Volume= 0.264 af
Primary = 2.09 cfs @ 12.30 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 29.12 cfs @ 12.14 hrs, Volume= 1.565 af, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 6.000	87	55% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 67.99 cfs @ 12.17 hrs, Volume= 4.238 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 1.94 cfs @ 12.38 hrs, Volume= 0.201 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 4.24 cfs @ 12.51 hrs, Volume= 0.532 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 5.42 cfs @ 12.36 hrs, Volume= 0.600 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 16.34 cfs @ 12.56 hrs, Volume= 2.330 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 2.96 cfs @ 12.34 hrs, Volume= 0.276 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 6.22 cfs @ 12.24 hrs, Volume= 0.492 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 2.94 cfs @ 12.13 hrs, Volume= 0.152 af, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 10yr 24hr Rainfall=4.09"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 26R: Bypass ChannelInflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.73" for 10yr 24hr event
Inflow = 20.89 cfs @ 12.52 hrs, Volume= 3.083 af
Outflow = 20.54 cfs @ 12.58 hrs, Volume= 3.083 af, Atten= 2%, Lag= 3.3 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 2.00 fps, Min. Travel Time= 4.6 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 14.3 min

Peak Storage= 5,640 cf @ 12.58 hrs

Average Depth at Peak Storage= 0.78'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 121.18 cfs

10.00' x 2.00' deep channel, n= 0.040
Side Slope Z-value= 4.0 '/' Top Width= 26.00'
Length= 550.0' Slope= 0.0055 '/'
Inlet Invert= 869.00', Outlet Invert= 866.00'

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Summary for Pond 1P: West Street Crossing

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 0.88" for 10yr 24hr event
 Inflow = 20.54 cfs @ 12.58 hrs, Volume= 4.473 af
 Outflow = 20.19 cfs @ 12.63 hrs, Volume= 4.469 af, Atten= 2%, Lag= 3.3 min
 Primary = 20.19 cfs @ 12.63 hrs, Volume= 4.469 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 867.23' @ 12.63 hrs Surf.Area= 5,580 sf Storage= 4,002 cf

Plug-Flow detention time= 5.7 min calculated for 4.466 af (100% of inflow)
 Center-of-Mass det. time= 4.3 min (1,069.0 - 1,064.7)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	22,843 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	1,479	0	0
867.00	4,287	2,883	2,883
868.00	9,984	7,136	10,019
869.00	15,664	12,824	22,843

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	36.0" Round Culvert X 2.00 L= 110.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 865.00' S= 0.0091 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=20.17 cfs @ 12.63 hrs HW=867.23' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Culvert** (Barrel Controls 20.17 cfs @ 5.49 fps)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 2.14" for 10yr 24hr event
 Inflow = 30.36 cfs @ 12.14 hrs, Volume= 1.841 af
 Outflow = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af, Atten= 87%, Lag= 37.8 min
 Primary = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 869.19' @ 12.78 hrs Surf.Area= 24,665 sf Storage= 43,914 cf

Plug-Flow detention time= 616.5 min calculated for 1.718 af (93% of inflow)
 Center-of-Mass det. time= 583.2 min (1,397.0 - 813.8)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.06 cfs @ 12.77 hrs HW=869.19' TW=867.17' (Dynamic Tailwater)

- 1=Culvert (Passes 4.06 cfs of 11.87 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.60 cfs @ 6.84 fps)
 3=Orifice/Grate (Weir Controls 3.47 cfs @ 1.43 fps)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 2.00" for 10yr 24hr event
 Inflow = 4.06 cfs @ 12.77 hrs, Volume= 1.718 af
 Outflow = 2.86 cfs @ 13.45 hrs, Volume= 1.604 af, Atten= 30%, Lag= 41.1 min
 Discarded = 0.08 cfs @ 13.45 hrs, Volume= 0.214 af
 Primary = 2.78 cfs @ 13.45 hrs, Volume= 1.390 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 867.88' @ 13.45 hrs Surf.Area= 5,851 sf Storage= 8,855 cf

Plug-Flow detention time= 159.8 min calculated for 1.603 af (93% of inflow)

Center-of-Mass det. time= 68.8 min (1,465.8 - 1,397.0)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

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MSE 24-hr 4 10yr 24hr Rainfall=4.09"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.08 cfs @ 13.45 hrs HW=867.88' (Free Discharge)↑ **1=Exfiltration** (Controls 0.08 cfs)**Primary OutFlow** Max=2.78 cfs @ 13.45 hrs HW=867.88' TW=866.87' (Dynamic Tailwater)↑ **2=Culvert** (Barrel Controls 2.78 cfs @ 4.21 fps)↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond 11P: East Detention Basin**

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 2.72" for 10yr 24hr event
 Inflow = 67.99 cfs @ 12.17 hrs, Volume= 4.238 af
 Outflow = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af, Atten= 75%, Lag= 18.8 min
 Primary = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 864.50' @ 12.50 hrs Surf.Area= 43,015 sf Storage= 92,201 cf

Plug-Flow detention time= 360.7 min calculated for 4.139 af (98% of inflow)

Center-of-Mass det. time= 348.4 min (1,150.9 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

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#4 Primary 864.75' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=16.75 cfs @ 12.49 hrs HW=864.50' TW=862.49' (Dynamic Tailwater)

1=Culvert (Passes 16.75 cfs of 21.17 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 2.38 cfs @ 6.81 fps)
 3=Orifice/Grate (Weir Controls 14.37 cfs @ 2.30 fps)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 2.66" for 10yr 24hr event
 Inflow = 16.76 cfs @ 12.49 hrs, Volume= 4.142 af
 Outflow = 8.24 cfs @ 13.21 hrs, Volume= 3.934 af, Atten= 51%, Lag= 43.4 min
 Discarded = 0.22 cfs @ 13.21 hrs, Volume= 0.489 af
 Primary = 8.02 cfs @ 13.21 hrs, Volume= 3.445 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 863.64' @ 13.21 hrs Surf.Area= 14,163 sf Storage= 29,692 cf

Plug-Flow detention time= 147.0 min calculated for 3.934 af (95% of inflow)
 Center-of-Mass det. time= 85.2 min (1,236.1 - 1,150.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.22 cfs @ 13.21 hrs HW=863.64' (Free Discharge)

↑ **1=Exfiltration** (Controls 0.22 cfs)

Primary OutFlow Max=8.02 cfs @ 13.21 hrs HW=863.64' TW=0.00' (Dynamic Tailwater)

↑ **2=Culvert** (Barrel Controls 8.02 cfs @ 5.16 fps)

↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: Proposed West Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 0.73" for 10yr 24hr event
Inflow = 20.54 cfs @ 12.58 hrs, Volume= 3.083 af
Primary = 20.54 cfs @ 12.58 hrs, Volume= 3.083 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 1.15" for 10yr 24hr event
Inflow = 31.79 cfs @ 12.65 hrs, Volume= 9.139 af
Primary = 31.79 cfs @ 12.65 hrs, Volume= 9.139 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 1.17" for 10yr 24hr event
Inflow = 28.75 cfs @ 12.68 hrs, Volume= 8.446 af
Primary = 28.75 cfs @ 12.68 hrs, Volume= 8.446 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 0.97" for 10yr 24hr event
Inflow = 7.66 cfs @ 12.26 hrs, Volume= 0.693 af
Primary = 7.66 cfs @ 12.26 hrs, Volume= 0.693 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 38.28 cfs @ 12.13 hrs, Volume= 2.083 af, Depth= 3.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 6.000	87	55% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 88.35 cfs @ 12.17 hrs, Volume= 5.574 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 3.24 cfs @ 12.37 hrs, Volume= 0.316 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 7.11 cfs @ 12.50 hrs, Volume= 0.833 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 10.27 cfs @ 12.34 hrs, Volume= 0.998 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 30.61 cfs @ 12.53 hrs, Volume= 3.875 af, Depth= 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 4.70 cfs @ 12.33 hrs, Volume= 0.419 af, Depth= 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 10.39 cfs @ 12.23 hrs, Volume= 0.770 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 4.21 cfs @ 12.13 hrs, Volume= 0.217 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 25yr 24hr Rainfall=5.01"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 26R: Bypass ChannelInflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 1.20" for 25yr 24hr event
Inflow = 39.04 cfs @ 12.48 hrs, Volume= 5.091 af
Outflow = 38.53 cfs @ 12.53 hrs, Volume= 5.091 af, Atten= 1%, Lag= 3.3 minRouting by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
Max. Velocity= 2.43 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.72 fps, Avg. Travel Time= 12.8 min

Peak Storage= 8,733 cf @ 12.53 hrs

Average Depth at Peak Storage= 1.10'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 121.18 cfs

10.00' x 2.00' deep channel, n= 0.040
Side Slope Z-value= 4.0 '/' Top Width= 26.00'
Length= 550.0' Slope= 0.0055 '/'
Inlet Invert= 869.00', Outlet Invert= 866.00'

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Summary for Pond 1P: West Street Crossing

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 1.40" for 25yr 24hr event
 Inflow = 42.31 cfs @ 12.56 hrs, Volume= 7.121 af
 Outflow = 41.13 cfs @ 12.64 hrs, Volume= 7.118 af, Atten= 3%, Lag= 4.3 min
 Primary = 41.13 cfs @ 12.64 hrs, Volume= 7.118 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 867.87' @ 12.64 hrs Surf.Area= 9,241 sf Storage= 8,765 cf

Plug-Flow detention time= 4.9 min calculated for 7.113 af (100% of inflow)
 Center-of-Mass det. time= 3.9 min (994.4 - 990.5)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	22,843 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	1,479	0	0
867.00	4,287	2,883	2,883
868.00	9,984	7,136	10,019
869.00	15,664	12,824	22,843

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	36.0" Round Culvert X 2.00 L= 110.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 865.00' S= 0.0091 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=41.11 cfs @ 12.64 hrs HW=867.87' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Culvert** (Barrel Controls 41.11 cfs @ 6.34 fps)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 2.91" for 25yr 24hr event
 Inflow = 40.49 cfs @ 12.14 hrs, Volume= 2.502 af
 Outflow = 11.59 cfs @ 12.38 hrs, Volume= 2.367 af, Atten= 71%, Lag= 14.5 min
 Primary = 11.59 cfs @ 12.38 hrs, Volume= 2.367 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 869.44' @ 12.53 hrs Surf.Area= 25,744 sf Storage= 50,194 cf

Plug-Flow detention time= 467.6 min calculated for 2.367 af (95% of inflow)
 Center-of-Mass det. time= 439.8 min (1,247.2 - 807.3)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=11.66 cfs @ 12.38 hrs HW=869.42' TW=867.48' (Dynamic Tailwater)

- 1=Culvert (Passes 11.66 cfs of 11.85 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.59 cfs @ 6.71 fps)
 3=Orifice/Grate (Weir Controls 11.08 cfs @ 2.11 fps)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 2.76" for 25yr 24hr event
 Inflow = 11.59 cfs @ 12.38 hrs, Volume= 2.367 af
 Outflow = 6.21 cfs @ 13.11 hrs, Volume= 2.252 af, Atten= 46%, Lag= 44.1 min
 Discarded = 0.11 cfs @ 13.11 hrs, Volume= 0.222 af
 Primary = 6.10 cfs @ 13.11 hrs, Volume= 2.030 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 868.77' @ 13.11 hrs Surf.Area= 7,071 sf Storage= 14,605 cf

Plug-Flow detention time= 122.7 min calculated for 2.252 af (95% of inflow)

Center-of-Mass det. time= 49.3 min (1,296.5 - 1,247.2)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

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MSE 24-hr 4 25yr 24hr Rainfall=5.01"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.11 cfs @ 13.11 hrs HW=868.77' (Free Discharge)↑**1=Exfiltration** (Controls 0.11 cfs)**Primary OutFlow** Max=6.10 cfs @ 13.11 hrs HW=868.77' TW=867.38' (Dynamic Tailwater)↑**2=Culvert** (Barrel Controls 6.10 cfs @ 4.97 fps)↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond 11P: East Detention Basin**

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 3.58" for 25yr 24hr event
 Inflow = 88.35 cfs @ 12.17 hrs, Volume= 5.574 af
 Outflow = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af, Atten= 71%, Lag= 11.1 min
 Primary = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 864.97' @ 12.47 hrs Surf.Area= 45,376 sf Storage= 113,247 cf

Plug-Flow detention time= 308.2 min calculated for 5.472 af (98% of inflow)
 Center-of-Mass det. time= 297.5 min (1,093.5 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

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#4 Primary 864.75' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=25.38 cfs @ 12.36 hrs HW=864.93' TW=862.91' (Dynamic Tailwater)

1=Culvert (Inlet Controls 21.53 cfs @ 6.85 fps)
 2=Orifice/Grate (Passes < 2.39 cfs potential flow)
 3=Orifice/Grate (Passes < 36.93 cfs potential flow)
 4=Broad-Crested Rectangular Weir (Weir Controls 3.84 cfs @ 1.06 fps)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 3.51" for 25yr 24hr event
 Inflow = 25.39 cfs @ 12.36 hrs, Volume= 5.472 af
 Outflow = 10.85 cfs @ 13.10 hrs, Volume= 5.259 af, Atten= 57%, Lag= 44.7 min
 Discarded = 0.26 cfs @ 13.10 hrs, Volume= 0.511 af
 Primary = 10.59 cfs @ 13.10 hrs, Volume= 4.748 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 864.35' @ 13.10 hrs Surf.Area= 15,806 sf Storage= 40,219 cf

Plug-Flow detention time= 122.9 min calculated for 5.255 af (96% of inflow)
 Center-of-Mass det. time= 72.3 min (1,165.8 - 1,093.5)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.26 cfs @ 13.10 hrs HW=864.35' (Free Discharge)

↑ **1=Exfiltration** (Controls 0.26 cfs)

Primary OutFlow Max=10.59 cfs @ 13.10 hrs HW=864.35' TW=0.00' (Dynamic Tailwater)

↑ **2=Culvert** (Barrel Controls 10.59 cfs @ 5.99 fps)

↑ **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 1L: Proposed West Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 1.20" for 25yr 24hr event
 Inflow = 38.53 cfs @ 12.53 hrs, Volume= 5.091 af
 Primary = 38.53 cfs @ 12.53 hrs, Volume= 5.091 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 1.74" for 25yr 24hr event
 Inflow = 62.21 cfs @ 12.60 hrs, Volume= 13.785 af
 Primary = 62.21 cfs @ 12.60 hrs, Volume= 13.785 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 1.76" for 25yr 24hr event
 Inflow = 56.78 cfs @ 12.62 hrs, Volume= 12.699 af
 Primary = 56.78 cfs @ 12.62 hrs, Volume= 12.699 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 1.52" for 25yr 24hr event
 Inflow = 12.86 cfs @ 12.25 hrs, Volume= 1.086 af
 Primary = 12.86 cfs @ 12.25 hrs, Volume= 1.086 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Summary for Subcatchment 6S: Proposed West Drain Area

Runoff = 54.75 cfs @ 12.13 hrs, Volume= 3.039 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 6.000	87	55% Impervious Residential
* 1.200	74	10% Impervious OL Area
* 0.200	98	Wet Basin
7.400	85	Weighted Average
7.200		97.30% Pervious Area
0.200		2.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0800	0.31		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow
					Paved Kv= 20.3 fps
0.9	550	0.0180	9.66	30.35	Pipe Channel, Pipe
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.013
6.5	750	Total			

Summary for Subcatchment 7S: Proposed East Drain Area

Runoff = 124.79 cfs @ 12.17 hrs, Volume= 8.027 af, Depth= 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 12.900	87	60% Impervious Residential
* 3.600	90	70% Impervious Residential
* 1.500	74	10% Impervious OL
* 0.700	98	Wet Basin
18.700	87	Weighted Average
18.000		96.26% Pervious Area
0.700		3.74% Impervious Area

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	150	0.0800	0.34		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
0.3	100	0.0600	4.97		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
2.3	1,200	0.0150	8.82	27.71	Pipe Channel, Pipe 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
10.0	1,450	Total			

Summary for Subcatchment 8S: Proposed Directly Offsite East Area

Runoff = 5.94 cfs @ 12.35 hrs, Volume= 0.552 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 2.400	62	10% Impervious Lightly Disturbed/Restored
* 0.100	90	70% Imp ROW area
2.500	63	Weighted Average
2.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.3	200	0.0100	0.16		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.3	400	0.0200	2.87		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
23.6	600	Total			

Summary for Subcatchment 15S: Proposed Directly Offsite South Area

Runoff = 13.05 cfs @ 12.48 hrs, Volume= 1.457 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 6.200	62	10% Impervious Lightly Disturbed/Restored
* 0.200	82	40% Imp yard area
* 0.200	90	70% Imp ROW area
6.600	63	Weighted Average
6.600		100.00% Pervious Area

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.5	300	0.0100	0.17		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
3.3	400	0.0100	2.03		Shallow Concentrated Flow, Shallow Paved Kv= 20.3 fps
32.8	700	Total			

Summary for Subcatchment 20S: Ex West Offsite Drainage

Runoff = 20.81 cfs @ 12.32 hrs, Volume= 1.854 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 10.200	58	Type B Soils
10.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	300	0.0600	0.35		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
2.4	400	0.0350	2.81		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
3.9	1,100	0.0100	4.71	94.24	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.040
20.7	1,800	Total			

Summary for Subcatchment 21S: Ex NW Offsite Drainage

Runoff = 61.96 cfs @ 12.50 hrs, Volume= 7.198 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 39.300	58	Type B Soils
* 0.300	71	Type C Soils
39.600	58	Weighted Average
39.600		100.00% Pervious Area

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0	300	0.0167	0.21		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
8.3	1,000	0.0180	2.01		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
1.0	1,100	0.0100	18.85	376.98	Channel Flow, Channel Area= 20.0 sf Perim= 14.0' r= 1.43' n= 0.010
33.3	2,400	Total			

Summary for Subcatchment 22S: Ex N Offsite Drainage

Runoff = 8.21 cfs @ 12.32 hrs, Volume= 0.710 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.200	58	Type B Soils
* 1.700	71	Type C Soils
2.900	66	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	300	0.0267	0.25		Sheet Flow, Sheet Range n= 0.130 P2= 2.84"
1.1	200	0.0400	3.00		Shallow Concentrated Flow, Shallow Grassed Waterway Kv= 15.0 fps
21.0	500	Total			

Summary for Subcatchment 27S: Ex NE Offsite Drainage

Runoff = 18.89 cfs @ 12.23 hrs, Volume= 1.347 af, Depth= 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 3.600	58	Type B Soils
* 2.500	71	Type C Soils
6.100	63	Weighted Average
6.100		100.00% Pervious Area

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	300	0.1000	0.43		Sheet Flow, Sheet
					Range n= 0.130 P2= 2.84"
2.2	200	0.0100	1.50		Shallow Concentrated Flow, Shallow
					Grassed Waterway Kv= 15.0 fps
13.9	500	Total			

Summary for Subcatchment 28S: Pro West Bypass

Runoff = 6.60 cfs @ 12.13 hrs, Volume= 0.343 af, Depth= 3.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs
MSE 24-hr 4 100yr 24hr Rainfall=6.66"

Area (ac)	CN	Description
* 1.100	74	OL Area 10% Imp
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TC

Summary for Reach 26R: Bypass Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 2.21" for 100yr 24hr event

Inflow = 78.97 cfs @ 12.45 hrs, Volume= 9.395 af

Outflow = 78.16 cfs @ 12.49 hrs, Volume= 9.395 af, Atten= 1%, Lag= 2.4 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Max. Velocity= 2.98 fps, Min. Travel Time= 3.1 min

Avg. Velocity = 0.82 fps, Avg. Travel Time= 11.2 min

Peak Storage= 14,431 cf @ 12.49 hrs

Average Depth at Peak Storage= 1.60'

Bank-Full Depth= 2.00' Flow Area= 36.0 sf, Capacity= 121.18 cfs

10.00' x 2.00' deep channel, n= 0.040

Side Slope Z-value= 4.0 '/' Top Width= 26.00'

Length= 550.0' Slope= 0.0055 '/'

Inlet Invert= 869.00', Outlet Invert= 866.00'



Summary for Pond 1P: West Street Crossing

Inflow Area = 61.200 ac, 0.33% Impervious, Inflow Depth > 2.48" for 100yr 24hr event
 Inflow = 84.32 cfs @ 12.49 hrs, Volume= 12.645 af
 Outflow = 79.60 cfs @ 12.60 hrs, Volume= 12.641 af, Atten= 6%, Lag= 6.5 min
 Primary = 79.60 cfs @ 12.60 hrs, Volume= 12.641 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 868.91' @ 12.60 hrs Surf.Area= 15,142 sf Storage= 21,427 cf

Plug-Flow detention time= 4.4 min calculated for 12.633 af (100% of inflow)
 Center-of-Mass det. time= 3.9 min (937.4 - 933.5)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	22,843 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	1,479	0	0
867.00	4,287	2,883	2,883
868.00	9,984	7,136	10,019
869.00	15,664	12,824	22,843

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	36.0" Round Culvert X 2.00 L= 110.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 865.00' S= 0.0091 ' / Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=79.55 cfs @ 12.60 hrs HW=868.91' TW=0.00' (Dynamic Tailwater)
 ↑ **1=Culvert** (Barrel Controls 79.55 cfs @ 7.23 fps)

Summary for Pond 9P: West Detention Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth = 4.37" for 100yr 24hr event
 Inflow = 58.97 cfs @ 12.14 hrs, Volume= 3.749 af
 Outflow = 22.22 cfs @ 12.31 hrs, Volume= 3.603 af, Atten= 62%, Lag= 10.5 min
 Primary = 22.22 cfs @ 12.31 hrs, Volume= 3.603 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 870.12' @ 12.79 hrs Surf.Area= 28,716 sf Storage= 68,795 cf

Plug-Flow detention time= 338.2 min calculated for 3.603 af (96% of inflow)
 Center-of-Mass det. time= 317.1 min (1,115.9 - 798.8)

Volume	Invert	Avail.Storage	Storage Description
#1	867.00'	95,625 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
867.00	15,467	0	0
868.00	19,599	17,533	17,533
869.00	23,831	21,715	39,248
870.00	28,163	25,997	65,245
871.00	32,596	30,380	95,625

Device	Routing	Invert	Outlet Devices
#1	Primary	866.00'	18.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 866.00' / 866.00' S= 0.0000 ' S= 0.0000 ' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	867.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	869.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	869.75'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=22.22 cfs @ 12.31 hrs HW=870.05' TW=868.70' (Dynamic Tailwater)

- 1=Culvert (Inlet Controls 9.89 cfs @ 5.60 fps)
 2=Orifice/Grate (Passes < 0.49 cfs potential flow)
 3=Orifice/Grate (Passes < 44.09 cfs potential flow)
 4=Broad-Crested Rectangular Weir (Weir Controls 12.33 cfs @ 1.38 fps)

Summary for Pond 10P: West Infiltration Basin

Inflow Area = 10.300 ac, 1.94% Impervious, Inflow Depth > 4.20" for 100yr 24hr event
 Inflow = 22.22 cfs @ 12.31 hrs, Volume= 3.603 af
 Outflow = 9.09 cfs @ 13.33 hrs, Volume= 3.488 af, Atten= 59%, Lag= 61.1 min
 Discarded = 0.15 cfs @ 12.82 hrs, Volume= 0.238 af
 Primary = 8.94 cfs @ 13.33 hrs, Volume= 3.249 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2

Peak Elev= 870.10' @ 12.82 hrs Surf.Area= 9,034 sf Storage= 25,273 cf

Plug-Flow detention time= 93.5 min calculated for 3.488 af (97% of inflow)

Center-of-Mass det. time= 41.2 min (1,157.1 - 1,115.9)

Volume	Invert	Avail.Storage	Storage Description
#1	866.00'	34,052 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
866.00	3,624	0	0
867.00	4,745	4,185	4,185
868.00	6,000	5,373	9,557
869.00	7,386	6,693	16,250
870.00	8,876	8,131	24,381
871.00	10,466	9,671	34,052

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MSE 24-hr 4 100yr 24hr Rainfall=6.66"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	866.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 860.00'
#2	Primary	867.00'	15.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 867.00' / 866.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#3	Primary	870.00'	5.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.15 cfs @ 12.82 hrs HW=870.10' (Free Discharge)↑**1=Exfiltration** (Controls 0.15 cfs)**Primary OutFlow** Max=8.94 cfs @ 13.33 hrs HW=869.95' TW=867.66' (Dynamic Tailwater)↑**2=Culvert** (Inlet Controls 8.94 cfs @ 7.28 fps)↑**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Pond 11P: East Detention Basin**

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth = 5.15" for 100yr 24hr event
 Inflow = 124.79 cfs @ 12.17 hrs, Volume= 8.027 af
 Outflow = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af, Atten= 53%, Lag= 7.3 min
 Primary = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 865.63' @ 12.62 hrs Surf.Area= 48,684 sf Storage= 144,018 cf

Plug-Flow detention time= 253.7 min calculated for 7.919 af (99% of inflow)
 Center-of-Mass det. time= 245.5 min (1,033.0 - 787.5)

Volume	Invert	Avail.Storage	Storage Description
#1	862.00'	162,500 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
862.00	30,928	0	0
863.00	35,693	33,311	33,311
864.00	40,550	38,122	71,432
865.00	45,509	43,030	114,462
866.00	50,568	48,039	162,500

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	24.0" Round Culvert L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 861.00' S= 0.0000 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	862.00'	8.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	864.00'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

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#4 Primary 864.75' **20.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
 Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=58.59 cfs @ 12.29 hrs HW=865.58' TW=864.21' (Dynamic Tailwater)

1=Culvert (Inlet Controls 17.69 cfs @ 5.63 fps)
 2=Orifice/Grate (Passes < 1.97 cfs potential flow)
 3=Orifice/Grate (Passes < 70.78 cfs potential flow)
 4=Broad-Crested Rectangular Weir (Weir Controls 40.89 cfs @ 2.45 fps)

Summary for Pond 12P: East Infiltration Basin

Inflow Area = 18.700 ac, 3.74% Impervious, Inflow Depth > 5.08" for 100yr 24hr event
 Inflow = 58.85 cfs @ 12.29 hrs, Volume= 7.919 af
 Outflow = 19.36 cfs @ 12.67 hrs, Volume= 7.699 af, Atten= 67%, Lag= 22.4 min
 Discarded = 0.33 cfs @ 12.67 hrs, Volume= 0.550 af
 Primary = 19.04 cfs @ 12.67 hrs, Volume= 7.149 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs / 2
 Peak Elev= 865.58' @ 12.67 hrs Surf.Area= 18,806 sf Storage= 61,513 cf

Plug-Flow detention time= 101.8 min calculated for 7.699 af (97% of inflow)
 Center-of-Mass det. time= 63.1 min (1,096.2 - 1,033.0)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	69,661 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	8,400	0	0
862.00	10,501	9,451	9,451
863.00	12,689	11,595	21,046
864.00	14,977	13,833	34,879
865.00	17,366	16,172	51,050
866.00	19,855	18,611	69,661

Device	Routing	Invert	Outlet Devices
#1	Discarded	861.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 855.00'
#2	Primary	862.00'	18.0" Round Culvert L= 50.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 862.00' / 861.50' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#3	Primary	865.00'	4.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.33 cfs @ 12.67 hrs HW=865.58' (Free Discharge)

↑**1=Exfiltration** (Controls 0.33 cfs)

Primary OutFlow Max=19.03 cfs @ 12.67 hrs HW=865.58' TW=0.00' (Dynamic Tailwater)

↑**2=Culvert** (Inlet Controls 14.31 cfs @ 8.10 fps)

↑**3=Broad-Crested Rectangular Weir** (Weir Controls 4.72 cfs @ 2.04 fps)

Summary for Link 1L: Proposed West Channel

Inflow Area = 50.900 ac, 0.00% Impervious, Inflow Depth = 2.21" for 100yr 24hr event
Inflow = 78.16 cfs @ 12.49 hrs, Volume= 9.395 af
Primary = 78.16 cfs @ 12.49 hrs, Volume= 9.395 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 13L: Total Proposed Combined

Inflow Area = 95.100 ac, 0.95% Impervious, Inflow Depth > 2.92" for 100yr 24hr event
Inflow = 120.58 cfs @ 12.55 hrs, Volume= 23.145 af
Primary = 120.58 cfs @ 12.55 hrs, Volume= 23.145 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 24L: Proposed South Drainage Total

Inflow Area = 86.500 ac, 1.04% Impervious, Inflow Depth > 2.95" for 100yr 24hr event
Inflow = 110.42 cfs @ 12.59 hrs, Volume= 21.247 af
Primary = 110.42 cfs @ 12.59 hrs, Volume= 21.247 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

Summary for Link 25L: Proposed East Through Culvert Total

Inflow Area = 8.600 ac, 0.00% Impervious, Inflow Depth = 2.65" for 100yr 24hr event
Inflow = 23.52 cfs @ 12.24 hrs, Volume= 1.899 af
Primary = 23.52 cfs @ 12.24 hrs, Volume= 1.899 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-48.01 hrs, dt= 0.03 hrs

APPENDIX E

SOILS REPORT



Construction • Geotechnical
Consulting Engineering/Testing

January 6, 2020
C19482

Mr. Chris Ehlers
VH Acquisitions, LLC
6801 South Towne Drive
Madison, WI 53713

Re: Geotechnical Exploration Report
Proposed Residential Development
Utterback Property – CTH AB
Town of Dunn, Dane County, Wisconsin

Dear Mr. Ehlers:

Construction • Geotechnical Consultants, Inc. (CGC) has completed the subsurface exploration program for the above-referenced project. The purpose of this exploration program was to evaluate the subsurface conditions within proposed roadways and stormwater management areas and to provide geotechnical recommendations regarding site preparation, utility and pavement design/construction. Preliminary stormwater and residential foundation design recommendations are also included. We are sending you an electronic copy of this report, and we can mail a paper copy upon request. An electronic copy is also being sent to Mr. Dan Day at D'Onofrio Kottke and Associates.

PROJECT AND SITE DESCRIPTIONS

We understand a residential development is proposed for an approximately 54-acre site on the west side of CTH AB, about 1,500 ft south of the intersection with CTH MN, in the Town of Dunn, Dane County, Wisconsin. The project area, which is currently farmland, is to be annexed into the Village of McFarland. Based on publicly-available topographic data (DCiMap, 1-ft contour lines), existing site grades generally slope from north-central parts of the site down towards the southeast, with current ground surface elevations ranging from about EL 896 to 862 ft. The site is bounded by railroad tracks to the south, and a lowland area is present to the south of the tracks, with lowest ground surface elevations in that area near EL 859 to 860 ft, based on DCiMap 1-ft contour lines.

Although in the early planning stages, we understand the project will include the construction of roads, utilities, stormwater management areas and, ultimately, single family homes. Proposed site grading information was not available at the time of this evaluation.

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SUBSURFACE CONDITIONS

Subsurface conditions for this study were explored by drilling 17 Standard Penetration Test (SPT) soil borings to planned depths between 15 and 20 ft below current site grades at locations selected and field-staked by D'Onofrio Kottke personnel, who also surveyed the ground surface elevations at the boring locations. The borings were conducted on December 11 and 12, 2019 by GeoServe (under subcontract to CGC), using a track-mounted (ATV) Geoprobe 7822DT rotary drill rig equipped with hollow stem augers and an automatic SPT hammer. Note that auger and split-spoon refusal occurred in Boring 15 at about 12.5 ft below the ground surface on apparent bedrock. The specific procedures used for drilling and sampling are described in Appendix A, and the boring locations are shown in plan on the Soil Boring Location Exhibit presented in Appendix B.

The subsurface profiles at the boring locations varied to some degree across the site, but the following strata were generally encountered (in descending order):

- About 12 to 36 in. of *topsoil*; followed by
- About 2 to 5.5 ft of generally stiff to very stiff *lean clay* and *sandy lean clay*, typically softening somewhat with depth or grading to loose to medium dense *clayey sand*; over
- Very loose to very dense *sand and gravel* strata, containing variable amounts of fines and scattered cobbles/boulders, to the maximum depths explored in the majority of the borings; except where
- Loose to medium dense *silt* and *silty to clayey sand* or medium stiff to very stiff *lean to silty clay* layers were present towards the bottom of Borings 5, 15, 16 and 17; underlain by
- Very dense, *probable highly weathered to weathered sandy dolomite bedrock* to the level of auger/split-spoon refusal in Boring 15.

Natural moisture contents in representative samples from the shallow lean clay layers ranged from 22.9% to 29.8%, while sandier lean clay specimens were determined to have natural moisture contents of 12.0% to 18.2%. A sample obtained from the deeper cohesive/fine-grained soils encountered in Boring 15 was tested for its liquid and plastic (Atterberg) limits to aid in its classification, with a liquid limit of 17% and a plasticity index of 1 corresponding to USCS classification of low-plasticity silt (ML). Based on natural moisture contents, pocket penetrometer readings (q_p ; an estimate of the unconfined compressive strength of cohesive soils) and SPT blow counts (N-values), the on-site cohesive and fine-grained soils should generally be considered slightly to moderately compressible.

In addition, particle size distribution (gradation) was determined on a sand sample from Boring 13. With a P200 ('fines') content of 3.5%, the sample classifies as poorly-graded sand (SP) and fine sand (FS) per the USCS and USDA classification systems, respectively.

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Note that occasional organic seams were found to be interbedded with the sand soils in Borings 15 and 17.

As mentioned above, probable highly weathered to weathered sandy dolomite bedrock was encountered below a depth of about 10.5 ft in Boring 15 (corresponding to approximately EL 853.6 ft), extending to the level of auger and split-spoon refusal on probable harder/more competent bedrock at about 12.5 ft below the ground surface (corresponding to approximately EL 851.6 ft). In addition, the clay soils encountered in Boring 5 below a depth of about 19 ft and the clayey/silty sand below about 13 ft in Boring 17 were classified as possible highly weathered/decomposed bedrock. It must be noted that the sampling procedure can disturb/degrade weathered bedrock, making it difficult to determine the depth to bedrock in some areas.

Groundwater was encountered in the majority of the borings during and upon the completion of drilling at depths between about 4 and 13 ft, corresponding to approximately EL 855 to 863 ft, with the average groundwater level at about EL 859 ft. Groundwater levels were also measured in Borings 13, 16 and 17 about one day after the completion of drilling, at which point the water was observed about 2.0 to 6.0 ft below current site grades, corresponding to approximately EL 859.2 to 861.3 ft. Note that the average groundwater level observed during drilling and the longer-term groundwater readings in Borings 13, 16 and 17 correspond fairly well with ground surface elevations in the lowland area south of the railroad tracks. Water levels can be expected to fluctuate based on seasonal variations in precipitation, infiltration, evapotranspiration, the levels in nearby waterbodies, as well as other factors. A more detailed description of the site soil and groundwater conditions is presented on the boring logs attached in Appendix B, which also contain the laboratory test results (including Particle Size Distribution Test Report), and on the WDSPS Soil and Site Evaluation – Storm form contained in Appendix F.

According to the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) *Web Soil Survey*, eight soil series are identified within the development area. Two major soil series, which constitute about three-quarters of the site, are Kegonsa silt loam (KeB; approximately 42% of area) and Plano silt loam (PoB; approximately 33% of area). Minor soils include Dodge silt loam (DnB) in the north and northeast, Grays silt loam (GsB) in the east, Kidder soils (KrD2) in the north-central portions (near the high point), Sable silty clay loam (SaA) and Elburn silty loam (EgA) in the south to southwest as well as Colwood silt loam (Co) in an isolated area at the eastern perimeter of the development area.

The vast majority of the site's soils (Kegonsa, Plano, Dodge and Kidder) are described as well-drained soils that formed from loess over loamy and/or gravelly/sandy outwash on outwash plains, or from glacial till or loess over loamy till on drumlins and moraines. A typical profile involves finer-grained soils, such as clay loam, silty clay loam, sandy clay loam, silt loam and loam, followed by coarser-grained soils like sandy loam, gravelly sandy loam, stratified gravelly sand and gravelly coarse sand. As an exception, the soil series Grays silt loam, formed from silty alluvium over stratified silt and fine sand lacustrine deposits on lake plains, typically involves silt loam and silty

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clay loam over very fine sandy loam to silt loam. In areas mapped as Kegonsa silt loam, Plano silt loam, Dodge silt loam, Grays silt loam and Kidder soils, the seasonally high groundwater table is expected to remain more than 80 in. below the ground surface.

In contrast to the soils described in the previous paragraph, the soil series Sable silty clay loam, Elburn silt loam and Colwood silt loam, mapped in small southern to southwestern and eastern sections of the site, are described as somewhat poorly-drained to poorly-drained soils that formed from loess on swales, loess over sandy and gravelly outwash on till plains, and from loamy glaciolacustrine deposits over stratified silt and fine sand glaciolacustrine deposits on lakebeds. Fairly deep finer-grained deposits (silty clay loam and silt loam) are common in areas mapped as Sable silty clay loam, with silty clay loam, sandy clay loam and silt loam over stratified very fine sand to silt, sandy loam and very gravelly coarse sand typically encountered in areas mapped as Elburn silt loam and Colwood silt loam. Where Sable silty clay loam, Elburn silt loam and Colwood silt loam are present, the seasonally high groundwater table should generally be expected within 0 to 12 in. of the ground surface, and frequent ponding may occur in areas mapped as Sable silty clay loam and Colwood silt loam.

The Soil Map for this site, which was generated by the USDA-NRCS *Web Soil Survey*, is attached in Appendix B. The soil profiles in the borings were in general agreement with the profiles from the soil mapping.

DISCUSSION AND RECOMMENDATIONS

Subject to the limitations discussed below and based on the subsurface exploration program, it is our opinion that this site is generally suitable for construction. However, some excavation below subgrade (EBS or undercutting/replacement) will likely be required during site grading and roadway construction, based on the presence of near-surface clay soils. In addition, some undercutting/replacement of marginal clay and/or clayey sand may be required below residential floor slabs and foundations, as well as utility inverts/structures in some portions of the site depending on structure and utility grades. Furthermore, bedrock excavation could potentially also be required during utility construction and building excavations in isolated portions of the site depending on utility and structure grades. Additionally, shallow groundwater and/or perched zones may impact utility and basement excavations in portions of the site, and groundwater levels should be considered when establishing basement grades.

Our recommendations for site preparation, roadway and utility design/construction are presented in the following subsections, along with preliminary stormwater infiltration and residential building design and construction considerations. Additional information regarding the conclusions and recommendations presented in this report is discussed in Appendix C.

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1. Site Preparation

We recommend that topsoil and vegetation be stripped at least 10 ft beyond the construction limits in areas to receive fill and where building and roadway construction is planned. The topsoil can be stockpiled on-site and later re-used as fill in landscape areas. Topsoil thicknesses typically ranged between 12 and 36 in. in the borings, but variable topsoil thicknesses should be expected between and beyond boring locations due to past agricultural activities. Trees and root zones should be removed in conjunction with topsoil stripping.

After topsoil removal, the exposed soils are generally expected to consist of stiff to very stiff clay. Granular soils exposed in areas at-grade or requiring fill (if any) should be recompacted with a vibratory smooth-drum roller, and cohesive/fine-grained subgrade soils should be statically compacted (without vibration) and then proof-rolled with a piece of heavy rubber-tire construction equipment, such as a loaded scraper or tri-axle dump truck, to check for soft/yielding areas. If soft/unstable clay soils are encountered, an attempt could be made to dry/recompact the cohesive soils to develop a stable subgrade, which will likely be the most economical alternative to improve marginal subgrade soils, but this approach will likely require more time than other alternatives and is also highly weather dependent. Several cycles of discing, drying and recompaction may be required during extended periods of favorable weather (i.e., dry, warm and windy conditions) before a firm subgrade is developed. If drying/recompaction is not effective or the construction schedule or weather does not allow for drying/recompaction, the unsuitable soils can be undercut and replaced with suitable backfill compacted to at least 95% compaction based on modified Proctor methods (ASTM D1557). As an alternative, soft subgrade soils could be stabilized using coarse aggregate (e.g., 3-in. dense graded base, select crushed material, etc.) that is compacted into the subgrade until deflection ceases. Similarly, loose sands that do not improve with compaction should be undercut and replaced with suitable granular backfill. Note that some of the shallow clay soils encountered in the borings exhibited fairly high natural moisture contents, and zones of lower- to moderate strength clay and clayey sand were also encountered, so we anticipate that some undercutting/stabilization or discing/recompacting will be required, which could be fairly widespread depending on the time of the year when grading occurs. *We therefore recommend that the project budget include a generous contingency for undercutting/stabilization or discing/recompacting during site preparation (or roadway subgrade preparation if not addressed earlier in the project).*

After a stable subgrade has been developed, fill placement to establish site grades may then proceed. To the extent practical, we recommend using granular soils (i.e., sand and/or gravel, including on-site materials if selectively excavated and stockpiled) as fill in building areas, as well as within the upper several feet of roadways as these soils are generally easier to place and compact compared to cohesive/fine-grained soils, particularly in adverse weather conditions. It is our opinion that clay and silt soils excavated on-site are best used in landscaping, or potentially in lower portions of roadway embankments assuming that moisture conditioning will be completed to facilitate proper compaction. Moisture conditioning (drying) may require several cycles of discing and recompaction in order to develop adequate compaction, which could delay construction progress. Fill/backfill

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should be placed in accordance with the Recommended Compacted Fill Specifications presented in Appendix D. *Where placement of several feet of fill will be required to establish site grades (i.e., more than about 5 ft above existing), a time delay between fill placement and beginning roadway and/or residential construction should be considered to allow the slightly to moderately compressible cohesive and fine-grained soils generally encountered on this site to consolidate and settle under the weight of the new fill, with a delay time of about one to three months typically being adequate.* We can provide additional details once the grading plan is developed, if needed.

As discussed above, possible/probable bedrock was encountered in isolated borings, and the depth and consistency of bedrock should be expected to vary across the site. As a general “rule of thumb”, it has been our experience that excavation to the level of auger refusal in soil borings can typically be accomplished using conventional earthwork equipment and techniques, including a narrow bucket and ripping tooth. Excavations that extend below the level of auger refusal typically require special bedrock removal techniques, such as chiseling with an excavator-mounted rock chipper, blasting, etc. Rock excavation considerations are contained in Appendix E. *We recommend that a unit rate for rock excavation be established in the bidding documents. Note that rock excavation should be clearly defined in the project specifications.* It should also be noted that mass excavation with scrapers may not be able to extend into weathered bedrock to the same extent as using a large excavator (with appropriate bucket) and haul trucks. *Supplemental test pits are recommended to further explore the depth and consistency of the bedrock where deeper cuts are anticipated and the soil borings indicate the presence of bedrock.*

2. Roadway Pavement Design

The shallow cohesive soils encountered across the site are expected to control the pavement design, as we anticipate that the pavement subgrades (near existing site grades) will generally consist of stiff to very stiff clay soils, which could potentially also be used to raised site grades in some areas. Standard earthwork-related techniques that should be used during roadway construction after topsoil stripping include proof-rolling, undercutting/stabilization (excavation below subgrade – EBS) and compaction control of fill/backfill, as discussed in the Site Preparation section of this report.

Based on the borings, the shallow soil conditions in the borings generally appear suitable for pavement support. *However, because of the potential for shallow marginal clays (to clayey sands) at or below existing site grades/pavement subgrade levels, especially in southern, lower portions of the site, we recommend including a generous contingency for undercutting and stabilization with 3-in. dense graded base (or other coarse aggregate) in the project budget.* If long, continuous sections of soft/unstable soils are encountered, biaxial geogrid (e.g., Tensar Type 1 (BX 1100) or equivalent) or woven geotextile fabric (e.g., Mirafi 600X or equivalent) can be used to reduce the undercut depth and provide additional stabilization. It has been our experience that clay or silt soils with pocket penetrometer readings of less than about 1.5 tsf will likely require undercutting after proof-rolling, as described above. If roadway grades will be raised above existing grade, and well-compacted fill is

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placed above a firm subgrade during general site grading, the need for undercutting/stabilization will likely be reduced.

Based on the soil conditions encountered in the borings and assuming that on-site clays may be used to raise grade in some roadway areas, the pavement design will be controlled by the cohesive soils, and the following parameters should be used to develop the design pavement sections, which are based on a firm or adequately stabilized subgrade being developed:

USCS Soil Classification	CL
AASHTO Classification	A-6
Frost Group Index	F-3
Design Group Index	12
Soil Support Value	4.2
Subgrade Modulus, k (pci)	150

These design parameters are based on the following assumptions:

1. The subgrade has been closely monitored.
2. The subgrade has been thoroughly and adequately compacted.
3. Wet zones have been dried, drained or removed.
4. Pockets of dissimilar material have been removed, replaced or mixed to achieve a homogeneous subgrade.
5. Adequate subgrade drainage has been achieved.

(Reference: WisDOT *Geotechnical Manual*)

Assuming traffic volumes of up to 100 cars and less than 5 trucks per day per design lane (i.e., Traffic Class II according to Wisconsin Asphalt Pavement Association (WAPA) recommendations for low-volume roadways and subdivision streets), a typical pavement section per WDOT Standard Specifications and following WAPA recommendations is 3.5 to 4.0 in. of asphalt pavement over 8 to 12 in. of compacted aggregate base course. Alternative pavement designs for different traffic count data (e.g., if high truck traffic loads are expected) are also acceptable provided they are based on the given design parameters. *Note that if the upper (surface) asphalt layer will not be installed immediately after the lower (binder) asphalt layer and construction traffic will travel on only the lower layer, consideration should be given to increasing the lower asphalt layer thickness to improve the durability of the lower layer.*

3. Utility Construction

Based on the available soil and groundwater information, it appears that utility construction can proceed using traditional open-cut methods. Dewatering may be required in some portions of the site, especially where shallow groundwater was encountered in the borings (predominantly southern, lower parts of the site) and the soil mapping indicates that the seasonal high water table may be

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within 1 ft of the ground surface during wet periods (southern/southwestern and eastern areas). Rock excavation may potentially also be required in some areas, depending on utility locations and depths. It is expected that excavation sidewalls will be sloped back for relatively shallow installations (i.e., less than 4 ft in depth) and that a trench shield and/or internal bracing will be used for deeper excavations. The following are our recommendations regarding trench excavation, dewatering, and backfilling:

- Excavation: Open cuts should be sloped and/or braced in accordance with OSHA guidelines. The softer clays, sand and gravel with low “fines” content (denoted as SP/SP-SM and GP/GP-GM on the boring logs), as well as loose sands with higher silt content (SM and SC) are generally classified as OSHA “Type C” soils, and slopes of 1.5H:1V or flatter are expected to be at least temporarily stable. At least medium stiff clays and denser silty to clayey sand soils above the water table are generally classified as OSHA “Type B” soils where slopes of 1H:1V are expected to be temporarily stable. Note that flatter side slopes may also be required where perched water is present that destabilizes the side slopes. *The appropriate utility trench excavation side slopes should be determined by a competent person completing the earthwork in accordance with OSHA slope guidelines.* Due to the presence of weak and marginal clays, clayey to silty sand and sand strata in some of the borings, a stone stabilization layer consisting of 6 to 12 in. of compacted crushed stone may be required below the bedding layer in some areas to adequately support utility piping, depending on utility grades.
- Dewatering: Groundwater was encountered at depths between about 2 and 13 ft below existing site grades. In addition, the soil mapping indicates that seasonally elevated groundwater may be within 1 ft of the ground surface in some portions of the site. Therefore, depending on the location and depth of the utility, as well as the time of year construction occurs, some dewatering may be required. In general, groundwater drawdowns of less than about 1 to 2 ft can typically be achieved using submersible pumps operating from filtered sump pits, which can also be used to remove seepage or precipitation. If groundwater drawdowns exceed about 2 ft, dewatering with vacuum well points or deep wells may be required. Dewatering means and methods are the responsibility of the utility contractor.
- Rock Removal: Possible/probable bedrock was encountered in isolated borings, as previously discussed. The depth to bedrock should be expected to vary across the site. Although rock excavation considerations were included in the Site Preparation section of this report, bedrock removal in narrow utility trenches will likely be more difficult than in mass cut areas, as it may be more difficult to locate and exploit fractures and weak zones in the bedrock. Rock excavation considerations are contained in Appendix E, and we recommend that a unit rate for rock excavation be established in the bidding documents for utility excavations. Supplemental test pits

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are recommended to further explore the depth and consistency of the bedrock along proposed utility alignments where possible/probable bedrock was encountered in the soil borings.

- **Backfilling:** Excavation backfilling may proceed using the following guidelines:
 - Although clayey and silty excavation spoils may be used to backfill the utility trenches above the pipe and associated granular bedding material, to the extent possible, we recommend that granular soils be used as backfill below paved areas because sand/gravel soils are relatively easy to place and compact in most weather conditions compared to cohesive soils. Silt and clay soils will likely require moisture conditioning prior to placement and compaction, which could delay construction progress. Granular soils containing cobbles and boulders should not be used in direct contact with utility lines.
 - Backfill material should be placed in accordance with Appendix D guidelines or applicable municipal requirements.
 - Compaction recommendations:
 - Within 10 ft of buildings: 95% modified Proctor (ASTM D1557);
 - Depths greater than 3 ft below grade in pavement areas: 90% modified Proctor;
 - Final 3 ft in pavement areas: 95% modified Proctor; and
 - Landscape areas: 85% modified Proctor.

4. Preliminary Stormwater Infiltration Potential

We understand that stormwater management areas are currently being considered in southern portions of the site near Borings 13, 16 and 17.

The subsurface conditions encountered in the southernmost Borings B-16 and B-17 were fairly consistent and included about 12 in. of topsoil, followed by lower-permeability clay loam and sandy clay loam strata, which were underlain, below a depth of about 6.5 ft, by more permeable fine sand and sand layers. However, groundwater was encountered during drilling at the bottom of the lower-permeability soils, and the shallow clay soils generally exhibited redoximorphic features (redox or mottling) and low-chroma/high-value (gray) dominant color, indicating the level of past saturation from perched water, periodically infiltrating surface water or seasonally elevated groundwater. About one day after the completion of Borings B-16 and B-17, the groundwater had stabilized at about 2.0 to 2.5 ft below current site grades in these boreholes. Therefore, it is our opinion that the area near Borings B-16 and B-17 is not suitable for infiltrating significant quantities of stormwater.

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In Boring B-13, performed slightly further north and at a higher elevation, the shallow topsoil was underlain by lower-permeability sandy clay loam to a depth of about 3 ft, followed by more permeable granular strata to the maximum depth explored. Groundwater in this boring was encountered at a depth of about 8 ft during drilling and about 6 ft below the ground surface upon the completion of drilling. Provided the bottom of the infiltration system near B-13 extends through the lower-permeability soils (or lower-permeability soils are undercut below the bottom of the infiltration system and replaced with appropriate sandier soils) and adequate separation from groundwater can be achieved, it is our opinion that some stormwater infiltration in this area may potentially be feasible.

A gradation performed on a representative sand sample obtained above the apparent groundwater table in Boring B-13 showed a P200 content of 3.5%, and the particle size distribution test report is included in Appendix B. Per NR151, it may be necessary to include at least a 3-ft soil layer with a minimum of 20% fines or a 5-ft thick layer with a minimum of 10% fines below the bottom of the infiltration system to act as a filtering layer before the infiltrating stormwater reaches the groundwater table. *The inclusion of a filtering layer with higher fines content may control the infiltration rate of the infiltration system.*

As the soil conditions vary across the site, the Boring Logs and WDSPS Soil and Site Evaluation – Storm form attached in Appendices B and F, respectively, should be consulted for a description of the soil conditions at each boring location. Variability in the soil conditions should be expected across the site and within stormwater basins that could result in a wide range of undercut depths to reach soil suitable for the design infiltration rate.

Infiltration Potential: The following is a *preliminary* summary of the estimated infiltration rates for the soils encountered in Borings B-13, B-16 and B-17, per Table 2 of the WDNR Conservation Practice Standard 1002, *Site Evaluation for Storm Water Infiltration*. The estimated infiltration rates are as follows:

• Clay loam (CL)	0.03 in./hr
• Silty clay loam (SiCL)	0.04 in./hr
• Sandy clay loam (SCL)	0.11 in./hr
• Silt loam (SiL)	0.13 in./hr
• Fine sandy loam (FSL)	0.50 in./hr
• Gravelly sandy loam (GRSL)	0.50 in./hr
• Fine sand (FS)	0.50 in./hr
• Sand (S)	3.60 in./hr
• Extremely gravelly sand (XGRS)	3.60 in./hr

Note that the infiltration rates should be considered very approximate since they are merely based on soil texture and do not account for in-place soil density and other factors, which will affect the infiltration rate. We recommend that the soils at and

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several feet below the bottom of stormwater management systems be checked by a geotechnical engineer or certified soil tester *in conjunction with the basin designer* to document that the soils are appropriate for the design infiltration rate or recommend remedial measures, if necessary. The Wisconsin Department of Safety and Professional Services Soil and Site Evaluation – Storm form for Borings B-13, B-16 and B-17 is contained in Appendix F.

It must be cautioned that the results of the soil borings have limitations with regard to the evaluation of the on-site stormwater infiltration potential as actual soil horizon transitions may vary from those shown on the boring logs and infiltration form. The reviewing agency may require test pits be excavated at a later date prior to finalizing the stormwater design. *The results of the test pits may require revisions to the stormwater management design if the design has been based solely on the soil borings.*

Groundwater: Groundwater was encountered in the southernmost Stormwater Borings B-16 and B-17, about one day after the completion of drilling, at about 2.0 to 2.5 ft. In addition, the soil mapping indicates that the seasonally high groundwater table may be within 1 ft of the ground surface in southern to southwestern (and isolated eastern) portions of the site. Furthermore, redoximorphic features and low-chroma/high-value dominant color, which are indicative of the level of previous saturation from perched water, periodically infiltrating surface water or seasonally elevated groundwater, were generally noted in the cohesive soils. Slightly deeper groundwater levels were observed in Boring B-13, performed further north and at a higher ground surface elevation compared to B-16 and B-17. At the completion of B-13, the groundwater level was observed at about 6 ft below the ground surface.

Bedrock: Apparent bedrock was not encountered in the Stormwater Borings B-13 and B-16, but the soils below a depth of about 13 ft in B-17 were classified as possible highly weathered bedrock, and possible/probable bedrock was also encountered in isolated other borings performed on this site. The depth of bedrock should therefore be expected to vary across the site.

During construction, appropriate erosion control should be provided to prevent eroded soil from contaminating the stormwater management areas. Where appropriate, the stormwater system design should include pretreatment to remove fine-grained soils (silt/clay) and clogging materials (oils/greases) from stormwater prior to entering the infiltration areas. Additionally, a regular maintenance plan should be developed to remove silt/clay soils and clogging materials that may accumulate in the bottom of the stormwater management area over time. Failure to adequately control fine-grained soils and clogging materials from entering the infiltration area or failure to regularly remove fine-grained soils and clogging materials that accumulate at the base of the stormwater infiltration system will likely cause the stormwater management system to fail.

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Additionally, it is important that the soils in the bottom of the infiltration systems do not become compacted during construction or measures are taken to mitigate soils that are compacted during construction. Refer to WDNR Conservation Practice Standards 1002, 1003 and 1004, as well as NR151 for additional information.

5. Preliminary Foundation Design

Depending on building elevations, a combination of cohesive, fine-grained and granular soils could be encountered at foundation grades. If site grades are raised, footings may also bear on compacted granular fill, in which case it is important that the existing soils be carefully checked (including shallow test pits) to document the existing soils are suitable for building support prior to new fill placement. Bedrock excavation may potentially also be required for footing and basement excavations in isolated locations, depending on building grades.

It is our opinion that residential structures can generally be supported on conventional spread footing foundations bearing on suitable natural soils and engineered fill. Based on the range of soil conditions encountered, a bearing pressure in the range of 1,000 psf to 3,000 psf appears to be applicable over most of the site. However, depending on building locations and grades, some undercutting below footings (and floor slabs) due to lower-strength and marginal soils should generally be expected. The soil conditions in southern portions of the site generally appear to be the weakest and most compressible, which may potentially be problematic for building support, but fairly shallow undercutting will likely also be required in other portions of the site to develop suitable foundation and floor slab subgrades. There were also areas where denser sand/silt and harder clay were encountered, and higher bearing pressures could potentially be used.

Since residential structure loads are generally light, for preliminary design purposes, we recommend assuming an allowable bearing pressure of 1,500 psf, with the understanding that undercutting below footings could be required in various locations, depending on building and foundation grades. *Note that dewatering may potentially be required during basement, undercutting and backfilling operations, depending on building location and elevations, as well as the time of year construction occurs. We recommend that careful consideration be given to establishing basement grades where groundwater was encountered. Longer-term water level readings in monitoring wells may prove helpful in this determination. To the extent possible, we recommend establishing basement grade several feet above the seasonal high groundwater level to reduce the potential for dewatering being required below basements.*

The following parameters should be used for *preliminary* foundation design:

- Maximum net allowable bearing pressure: 1,500 psf
- Minimum foundation widths:
 - Continuous wall footings: 18 in.

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Page 13

- Column pad footings: 30 in.
- Minimum footing depths:
 - Exterior/perimeter footings: 4 ft
 - Interior footings: no minimum requirement

Undercutting below footing grade will be required where loose or disturbed sand/silt soils or clay with q_p -readings of less than 0.75 tsf are encountered at or slightly below footing grade. As discussed above, some undercutting below footing grade should be expected, and an allowance for this operation should be included in the project budget. *Where medium stiff clays (i.e., pocket penetrometer readings of less than 1 tsf) are encountered that are especially susceptible to disturbance from construction traffic or weather, we recommend placing a 6-in. layer of clear stone below the footings immediately after excavation to act as a working platform.* Where undercutting is required, the base of the undercut excavation should be widened beyond the footing edges at least 0.5 ft in each direction for each foot of undercut depth for stress distribution purposes. Foundation grades above the water table can be restored with granular backfill compacted to at least 95% compaction (modified Proctor – ASTM D1557) or 3-in. dense graded base that is placed in maximum loose lifts of 12 in. and thoroughly compacted with a large vibratory compactor until deflection ceases. Below the water table, undercut excavations should be backfilled with crushed clear stone that is placed in loose lifts of 12 in. or less, which are subsequently compacted with a large vibratory plate compactor or excavator-mounted hoe-pack until deflection ceases. Where the total clear stone layer thickness exceeds 12 in., the clear stone should be wrapped in non-woven geotextile fabric (e.g. Mirafi 160N or equivalent) to prevent migration of fines into the void spaces of the clear stone.

Since the subsurface conditions vary across the site, CGC should be present during footing excavations to check whether subgrades are satisfactory for the design bearing pressure and to advise on corrective measures, where necessary. We recommend using a smooth-edged backhoe bucket for footing and undercut excavations in soil. A bucket with teeth is acceptable where excavation occurs in weathered bedrock, provided loosened rock is removed from the bottom of the excavation. Additionally, granular soils exposed at footing grade that are above the water table and not susceptible to disturbance from vibrations should be recompacted with a large vibratory plate compactor or an excavator-mounted hoe-pack prior to formwork/concrete placement to densify soils loosened during the excavation process. Soils potentially susceptible to disturbance from compaction (e.g., silty or clayey soils or granular soils close to or below the water table) should be hand trimmed and/or stabilized with clear stone, as appropriate. Provided the foundation design/construction recommendations discussed above are followed, we estimate that total and differential settlements should be on the order of 1.0 and 0.5 in., respectively.

Based on groundwater observations in the soil borings and indications in the soil mapping that shallow groundwater may be encountered in some portions of the site, a sub-floor dewatering system with sump pump may potentially be required for some residential structures to prevent groundwater

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from entering the lower level depending on the location and elevation. Depending on basement grades, seasonal dewatering could be fairly significant, and we recommend that careful consideration be given to establishing basement grades where groundwater was encountered. To the extent possible, we recommend establishing basement grade several feet above the seasonal high groundwater level to reduce the potential for dewatering being required below basements. Longer-term water level readings in monitoring wells may prove helpful in determining seasonally high groundwater levels, and we can provide additional information and recommendations if needed.

CONSTRUCTION CONSIDERATIONS

Due to variations in weather, construction methods and other factors, specific construction problems are difficult to predict. Soil related difficulties that could be encountered on the site are discussed below:

- Earthwork construction during the late fall through early spring could be complicated as a result of wet weather and freezing temperatures. During cold weather, exposed subgrades should be protected from freezing before and after footing construction. Fill should never be placed while frozen or on frozen ground.
- If the construction schedule requires that construction proceed during adverse weather, typically encountered during fall through spring, the contingency for undercutting disturbed soils should be increased.
- To the extent practical, traffic should be avoided on prepared subgrades to minimize further disturbance.
- Excavations extending greater than 4 ft in depth below the existing ground surface should be sloped or braced in accordance with current OSHA standards.
- Based on the soil mapping and water observations in the soil borings, groundwater infiltration into some utility, basement and footing excavations may occur, especially during wet seasons. Dewatering using submersible pumps operating from filtered sump pits, vacuum well points or deep wells may be required for groundwater control, as previously discussed, which should be evaluated by the contractor.
- The depth to bedrock is expected to vary across the site. In addition to potential bedrock removal during building excavations, some bedrock excavation may be required during utility construction. Supplemental test pits can be excavated to better determine if bedrock excavation may be required. See the Site Preparation and Utility Construction sections of the report, as well as Appendix E for additional information regarding rock excavation.

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RECOMMENDED CONSTRUCTION MONITORING

The quality of the residential building pads and pavement subgrades will largely be determined by the level of care exercised during site development. To check that earthwork and foundation construction proceeds in accordance with our recommendations, the following operations should be monitored by CGC:

- Topsoil stripping/removal and subgrade proof-rolling;
- Fill/backfill placement and compaction;
- Foundation excavation and subgrade preparation; and
- Concrete placement.

FOLLOW-UP EXPLORATION PROGRAMS

The exploration program described in this report is preliminary in nature and is not intended to provide sufficient detail on subsurface conditions for each individual lot or stormwater management area. Due to the variability in soil and bedrock conditions, especially the potential for undercutting of soft/loose soils below footing grade of some residential structures, shallow groundwater as well as possible bedrock excavation during utility and residential building construction, follow-up exploration by test pits or borings is recommended to provide lot-specific geotechnical recommendations. *Note that stormwater infiltration potential estimations based on soil borings are considered preliminary, and test pits will likely need to be performed in proposed stormwater management areas to develop final design infiltration rates. If the stormwater design is based on the soil borings performed during the subsurface exploration program summarized in this report, revisions to the design may be required depending on the findings in the test pits.* We can provide specific recommendations and a proposal for the additional geotechnical work at the appropriate time.

* * * * *



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VH Acquisitions, LLC
January 6, 2020
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It has been a pleasure to serve you on this project. If you have any questions or need additional consultation, please contact us.

Sincerely,

CGC, Inc.

A blue ink signature of Tim F. Gassenheimer, written in a cursive style.

Tim F. Gassenheimer, EIT, CST
Staff Engineer

A blue ink signature of Ryan J. Portman, written in a cursive style.

Ryan J. Portman, PE, CST
Consulting Professional

Encl: Appendix A - Field Exploration
Appendix B - Soil Boring Location Exhibit
Logs of Test Borings (17)
Particle Size Distribution Test Report (1)
Log of Test Boring-General Notes
Unified Soil Classification System
Web Soil Survey Map and Legend (3 Pages)
Appendix C - Document Qualifications
Appendix D - Recommended Compacted Fill Specifications
Appendix E - Rock Excavation Considerations
Appendix F - WDSPS Soil and Site Evaluation – Storm Forms (3 Borings)

Cc: Mr. Dan Day, D'Onofrio Kottke and Associates

APPENDIX A
FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

Subsurface conditions for this study were explored by drilling 17 Standard Penetration Test (SPT) soil borings to planned depths between 15 and 20 ft below current site grades at locations selected and field-staked by D'Onofrio Kottke personnel, who also surveyed the ground surface elevations at the boring locations. The borings were conducted on December 11 and 12, 2019 by GeoServe (under subcontract to CGC), using a track-mounted (ATV) Geoprobe 7822DT rotary drill rig equipped with hollow stem augers and an automatic SPT hammer. Note that auger and split-spoon refusal occurred in Boring 15 at about 12.5 ft below the ground surface on apparent bedrock.

Soil samples were generally obtained at 2.5-foot intervals to a depth of 10 ft and at 5-ft intervals thereafter. As an exception, the borings located in or near proposed stormwater management areas were sampled at 2.5-foot intervals to the final depth. The soil samples were obtained in general accordance with specifications for standard penetration testing, ASTM D 1586. The specific procedures used for drilling and sampling are described below.

1. Boring Procedures between Samples

The boring is extended downward, between samples, by a hollow stem auger.

2. Standard Penetration Test and Split-Barrel Sampling of Soils
(ASTM Designation: D 1586)

This method consists of driving a 2-inch outside diameter split-barrel sampler using a 140-pound weight falling freely through a distance of 30 inches. The sampler is first seated 6 inches into the material to be sampled and then driven 12 inches. The number of blows required to drive the sampler the final 12 inches is recorded on the log of borings and is known as the Standard Penetration Resistance. Recovered samples are first classified as to texture by the driller.

During the field exploration, the driller visually classified the soil and prepared a field log. *Field screening of the soil samples for possible environmental contaminants was not conducted by the driller, as environmental site assessment activities is beyond CGC's work scope.* Water level observations were made in each boring during and after drilling and are shown at the bottom of each boring log. Upon completion of drilling, the boreholes were backfilled in accordance with WDNR regulations, and the soil samples were delivered to our laboratory for visual classification and laboratory testing. The soils were visually classified by a geotechnical engineer using the Unified Soil Classification System. The final logs prepared by the engineer, including the laboratory test results, along with a Soil Boring Location Exhibit and a description of the Unified Soil Classification System are presented in Appendix B.

APPENDIX B

SOIL BORING LOCATION EXHIBIT

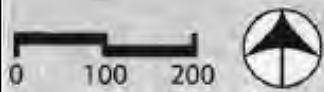
LOGS OF TEST BORINGS (17)

PARTICLE SIZE DISTRIBUTION TEST REPORT (1)

LOG OF TEST BORING-GENERAL NOTES

UNIFIED SOIL CLASSIFICATION SYSTEM

WEB SOIL SURVEY MAP AND LEGEND (3 PAGES)



Legend

 Denotes Soil Boring Location and Number

Notes

1. Borings were drilled by GeoServe on December 11 and 12, 2019.
2. Boring locations are approximate.
3. Base map was prepared by D'Onofrio Kottke and Associates.

Job No.:
C19482

Date:
12/2019

CGC, Inc.

SOIL BORING LOCATION EXHIBIT
Proposed Residential Development
Utterback Property – CTH AB
Town of Dunn, Dane County, Wisconsin
Page 323 of 379



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **1**
 Surface Elevation (ft) **872.72**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						12± in. TOPSOIL (OL)					
1		18	M	7		Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(2.5-3.25)	24.3			
2		18	M	4		Stiff, Brown Lean CLAY, Trace Sand (CL)	(1.0-1.75)	29.8			
3		18	M	29		Medium Dense to Very Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
4		18	M	60		Possible Cobble/Boulder near 9 ft					
						Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
5		8	W	16							
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 13.0' Upon Completion of Drilling 10 mins.
 Time After Drilling _____ NW ☒
 Depth to Water _____
 Depth to Cave in _____ 11.0'

Start 12/12/19 End 12/12/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **2**
 Surface Elevation (ft) **881.14**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
						12± in. TOPSOIL (OL)						
1		18	M	8		Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(2.5-4.0)	25.8				
2		4	M	10		Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5)					
					5	Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)						
3		18	M	12		Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)						
4		4	M	24								
					10							
						Medium Dense to Very Dense, Tan Fine to Medium SAND, Little to Some Gravel, Little Silt, Scattered Cobbles/Boulders (SP-SM)						
5		18	M	27								
					15							
6		12	M	102								
					20							
End of Boring at 20 ft												
Borehole Backfilled with Bentonite Chips												

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ NW Upon Completion of Drilling 10 mins.
 Time After Drilling NW
 Depth to Water 17.0'
 Depth to Cave in

Start 12/12/19 End 12/12/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **3**
Surface Elevation (ft) **869.74**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
						12± in. TOPSOIL (OL)						
1		18	M	10		Very Stiff, Brown/Gray (Lightly Mottled) Lean CLAY, Trace Sand (CL)	(3.0-3.25)	25.7				
2		18	M	6		Medium Stiff, Brown Sandy Lean CLAY, Trace Gravel (CL)	(0.75-1.0)	18.2				
3		12	M/W	7		Loose to Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)						
4		16	W	28								
5		10	W	13								
End of Boring at 15 ft												
Borehole Backfilled with Bentonite Chips												

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **8.0'** ∇
Depth to Cave in _____ **9.0'**

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief Eddie Rig Geoprobe**
Logger **Matt Editor TFG 7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **4**
Surface Elevation (ft) **867.88**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						12± in. TOPSOIL (OL)					
1		16	M	6		Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5-2.75)	24.4			
2		18	M	20							
					5	Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
3		18	W	22	▽	Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
					▼						
4		12	W	18		Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
					10						
						Medium Dense, Tan/Reddish Brown (Laminated) Silty Fine SAND to Sandy SILT (SM/ML)					
5		16	W	16							
					15						
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					
					20						

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **8.0'** ∇
Depth to Cave in _____ **8.0'**

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

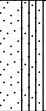


LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **5**
Surface Elevation (ft) **871.59**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.5-2.75)	23.3			
2		18	M	6			Stiff, Brown Sandy Lean CLAY, Little Gravel (CL)	(1.0-2.0)				
					5		Loose, Brown Fine to Medium SAND, Little to Some Silt, Trace Gravel (SP-SM/SM)					
3		12	M	24			Medium Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM)					
4		12	W	7			Loose to Very Dense, Brown Fine to Medium SAND, Some Silt, Little to Some Gravel, Scattered Cobbles/Boulders (SM)					
					10							
												
5		16	W	81			Probable Cobble/Boulder near 14 ft					
					15							
							Medium Dense to Very Dense, Tan Fine SAND, Trace to Little Silt (SP/SP-SM)					
6		18	W	95			Very Stiff, Reddish Brown Lean to Silty CLAY, Trace Gravel (CL/CL-ML - Possible Highly Weathered/Decomposed Bedrock)	(2.75-3.5)				
					20		End of Boring at 20 ft					
						Borehole Backfilled with Bentonite Chips						

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **8.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **11.0'** ∇
Depth to Cave in _____ **14.0'**

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **6**
Surface Elevation (ft) **866.29**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	q _u (q _a) (tsf)	W	LL	PL
						12± in. TOPSOIL (OL)					
1		12	M	6		Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.0-2.5)	23.0			
2		16	M/W	3		Very Loose, Brown Fine to Medium SAND, Some Silt, Trace Gravel (SM)					
					5						
3		18	W	12	▼	Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
					▽						
4		18	W	6		Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
					10						
						Medium Dense, Grayish Brown Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
5		18	W	12							
					15						
End of Boring at 15 ft											
Borehole Backfilled with Bentonite Chips											
					20						

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **6.0'** ∇
Depth to Cave in _____ **7.0'**

Start **12/12/19** End **12/12/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **7**
Surface Elevation (ft) **866.34**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
						12± in. TOPSOIL (OL)						
1		16	M	6		Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.25-2.5)	24.0				
2		10	M/W	4		Soft, Brown Sandy Lean CLAY, Trace Gravel (CL)	(0.25-0.5)	17.5				
					5							
3		12	W	3		Very Loose, Brown Fine to Medium SAND, Little Silt, Trace Gravel (SP-SM)						
4		12	W	5		Loose, Tan Fine SAND, Little to Some Silt (SP-SM/SM)						
					10							
						Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)						
5		12	W	24								
					15	End of Boring at 15 ft						
						Borehole Backfilled with Bentonite Chips						
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **6.0'** ∇
Depth to Cave in _____ **7.0'**

Start **12/11/19** End **12/11/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **8**
 Surface Elevation (ft) **865.92**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M	4			Stiff to Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.0)	25.9			
2		16	M	5			Stiff to Very Stiff, Gray/Brown (Mottled) Lean CLAY, Trace Sand (CL)	(1.75-3.0)	26.7			
					5							
3		12	W	20			Medium Dense, Tan Gravelly Fine to Coarse SAND, Trace Silt, Scattered Cobbles/Boulders (SP)					
4		12	W	15			Medium Dense, Tan Fine to Medium SAND, Some Gravel, Trace to Little Silt (SP/SP-SM)					
					10							
							Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
5		16	W	12								
					15							
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

While Drilling ☒ **6.5'** Upon Completion of Drilling **10 mins.**
 Time After Drilling **6.0'**
 Depth to Water **7.0'**
 Depth to Cave in

GENERAL NOTES

Start **12/12/19** End **12/12/19**
 Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
 Logger **Matt** Editor **TFG** **7822DT**
 Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **9**
 Surface Elevation (ft) **870.51**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		16	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(3.25-3.5)	23.4			
2		18	M	18			Medium Dense, Tan Fine to Coarse SAND, Some Gravel, Trace Silt, Scattered Cobbles/Boulders (SP)					
3		18	M	90			Dense to Very Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered to Numerous Cobbles/Boulders (SP/SP-SM/GP/GP-GM) Probable Cobble/Boulder near 6.5 ft					
4		0	M	34			No Recovery from 8.5 to 10 ft (Sample 4) - Sample Collected from Drill Cuttings					
5		12	W	10			Medium Dense to Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
6		18	W	45			Possible Cobble/Boulder near 19 ft					
							End of Boring at 20 ft					
							Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 13.0' Upon Completion of Drilling _____
 Time After Drilling _____ 10 mins.
 Depth to Water _____ 11.0' ☒
 Depth to Cave in _____ 11.0'

Start 12/12/19 End 12/12/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **10**
Surface Elevation (ft) **868.32**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		18	M	8			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.75-3.0)	23.7			
2		18	M	9								
					5		Loose, Tan Fine to Coarse SAND, Some Gravel, Trace Silt, Scattered Cobbles/Boulders (SP)					
3		18	M	40			Medium Dense to Dense, Tan Fine to Coarse SAND and GRAVEL, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM/GP/GP-GM) Possible Cobble/Boulder near 6.5 ft					
												
4		18	W	18								
					10		Loose to Medium Dense, Tan Fine to Coarse SAND, Trace Silt and Gravel (SP)					
5		12	W	10								
					15		End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

While Drilling ☒ 8.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins. _____
Depth to Water _____ 8.0' ☒
Depth to Cave in _____ 8.0' _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 12/12/19 End 12/12/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **11**
 Surface Elevation (ft) **862.88**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		6	M	6			Stiff, Brown/Gray (Lightly Mottled) Sandy Lean CLAY (CL)	(1.75-2.0)	12.0			
							Loose to Medium Dense, Brown Clayey Fine to Medium SAND (SC)					
2		12	M/W	18								
							Medium Dense, Tan Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
					5							
3		16	W	17			Medium Dense, Grayish Brown Gravelly Fine to Coarse SAND, Trace to Little Silt, Scattered Cobbles/Boulders (SP/SP-SM)					
4		10	W	10			Loose, Gray to Brown Fine to Coarse SAND, Little Gravel, Trace Silt (SP)					
					10							
5		18	W	9								
					15							
End of Boring at 15 ft												
Borehole Backfilled with Bentonite Chips												
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 6.0' Upon Completion of Drilling 10 mins.
 Time After Drilling _____
 Depth to Water _____
 Depth to Cave in _____

Start 12/11/19 End 12/11/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **12**
Surface Elevation (ft) **863.41**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL
						18± in. TOPSOIL (OL)					
1		18	M	5		Stiff, Gray/Brown (Lightly Mottled) Lean CLAY, Trace to Little Sand (CL)	(1.0-1.25)	28.2			
2		18	M	7	▼	Stiff, Light Gray/Brown (Mottled) Lean CLAY, Little Sand (CL)	(1.25-1.75)				
3		18	W	4	▽	Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
4		18	W	36		Dense, Grayish Brown Gravelly Fine to Coarse SAND, Little Silt, Scattered Cobbles/Boulders (SP-SM)					
5		12	W	19		Medium Dense, Brown Fine to Medium SAND, Some Silt and Gravel, Scattered Cobbles/Boulders (SM)					
						End of Boring at 15 ft					
						Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ∇ **6.5'** Upon Completion of Drilling _____
Time After Drilling _____ **10 mins.**
Depth to Water _____ **4.0'** ∇
Depth to Cave in _____ **8.0'**

Start **12/11/19** End **12/11/19**
Driller **GeoServe Chief** **Eddie** Rig **Geoprobe**
Logger **Matt** Editor **TFG** **7822DT**
Drill Method **2.25" HSA; Autohammer**

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **13**
Surface Elevation (ft) **867.25**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M	5			Stiff/Loose, Brown to Yellowish Brown Sandy Lean CLAY to Clayey Fine SAND, Trace Gravel (CL/SC) <i>USDA: 10YR 5/3, 5/4 Sandy Clay Loam</i>	(1.0-1.5)	14.7			
2		16	M	12			Medium Dense, Very Pale Brown Fine to Medium SAND, Trace Silt and Gravel (SP) <i>USDA: 10YR 7/3 Fine Sand</i>		4.5			
					5		P200 (Sample 2 - 3.5 to 5 ft): 3.5%					
3		18	M/W	19			Medium Dense, Pale Brown Sandy Fine to Coarse GRAVEL, Trace Silt, Scattered Cobbles/Boulders (GP) <i>USDA: 10YR 6/3 Extremely Gravelly Sand</i>					
4		16	W	4			Very Loose to Loose, Pale Brown Fine to Medium SAND, Little Gravel, Trace Silt (SP) <i>USDA: 10YR 6/3 Sand</i>					
					10							
5		18	W	11			Medium Dense, Pale Brown Silty Fine SAND, Trace Gravel (SM) <i>USDA: 10YR 6/3 Fine Sandy Loam</i>					
6		18	W	15			Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel, Scattered Silt Seams (SP) <i>USDA: 10YR 6/3 Fine Sand, Silt Loam Seams</i>					
					15		End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 8.0' Upon Completion of Drilling _____
Time After Drilling _____ 1 Day _____ 10 mins. _____
Depth to Water _____ NW _____ 6.0' ☒
Depth to Cave in _____ 6.0' _____ 6.0' _____

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

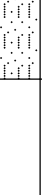


LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **14**
 Surface Elevation (ft) **866.81**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		14	M	7			Very Stiff, Brown Lean CLAY, Trace Sand (CL)	(2.75-3.0)	24.0			
2		18	M/W	3								
					5		Very Loose, Brown Fine to Medium SAND, Little to Some Silt, Trace Gravel (SP-SM/SM)					
3		12	W	5			Loose, Grayish Brown Gravelly Fine to Coarse SAND, Little Silt, Scattered Cobbles/Boulders (SP-SM)					
4		12	W	3			Very Loose, Brown Fine to Medium SAND, Trace Silt and Gravel (SP)					
					10							
							Loose to Medium Dense, Tan Silty Fine SAND, Scattered Lean Clay Seams (SM)					
5		18	W	10								
					15		End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 7.0' Upon Completion of Drilling _____
 Time After Drilling _____ 10 mins. _____
 Depth to Water _____ 6.0' ☒
 Depth to Cave in _____ 6.0' _____

Start 12/11/19 End 12/11/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **15**
Surface Elevation (ft) **864.13**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
					12± in. TOPSOIL (OL)					
1		18	M	6	Stiff, Brown Lean CLAY, Trace Sand (CL)	(1.75-2.0)	25.6			
2		12	M	4	Soft, Gray/Brown (Mottled) Lean CLAY to Sandy Lean CLAY, Trace Gravel (CL)	(0.25-0.5)	22.9			
3		18	M/W	23	Medium Dense, Tan Fine to Medium SAND, Little Gravel, Trace Silt, Scattered Organic Seams (SP)					
4		18	W	5	Loose, Brown SILT to Clayey SILT, Trace to Little Sand (ML)	(0.5-1.5)	21.3	17	16	
5		4	W	99/4"	Very Dense, Brown to Gray Clayey to Silty Fine to Coarse SAND, Some Gravel (SC/SM - Probable Highly Weathered to Weathered Sandy Dolomite Bedrock)					
6		0	-	99/0"	End of Boring/Auger and Split-Spoon Refusal on Apparent Sandy Dolomite Bedrock at 12.5 ft Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 7.0' Upon Completion of Drilling _____
Time After Drilling _____ 10 mins.
Depth to Water _____ 6.0' ▼
Depth to Cave in _____ 6.0'

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **16**
Surface Elevation (ft) **861.45**
Job No. **C19482**
Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks		SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N			Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
							12± in. TOPSOIL (OL)					
1		12	M/W	3			Medium Stiff to Stiff, Black to Very Dark Grayish Brown Organic to Silty CLAY, Little to Some Sand (OL/CL-ML - Probable Lower Horizon Topsoil in Upper Part of Layer)	(0.75-1.25)				
2		18	M	6			USDA: 10YR 2/1 to 3/2 Clay Loam Stiff, Gray/Light Olive Brown (Mottled) Sandy Lean CLAY, Trace Gravel (CL)	(1.5-1.75)				
					5		USDA: 2.5Y 5/1 (Redox: c2d 2.5Y 5/3) Sandy Clay Loam					
3		18	W	12			Medium Dense, Pale Brown Fine to Medium SAND, Little Gravel, Trace Silt (SP)					
							USDA: 10YR 6/3 Sand					
4		18	W	18			Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel (SP)					
					10		USDA: 10YR 6/3 Fine Sand					
5		18	W	11			Medium Dense, Fine Layers of Light Yellowish Brown Silty Fine SAND, Light Brown SILT and Brown Lean CLAY (SM/ML/CL)					
							USDA: Stratified 10YR 6/4 Fine Sandy Loam, 7.5YR 6/3 Silt Loam and 7.5YR 5/4 Silty Clay Loam					
6		18	W	11			Medium Stiff to Very Stiff, Light Brown Lean to Silty CLAY, Trace Sand (CL/CL-ML)	(0.75-2.5)				
					15		USDA: 7.5YR 6/3 Silty Clay Loam					
							End of Boring at 15 ft					
							Borehole Backfilled with Bentonite Chips					
					20							

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling ☒ 6.5' Upon Completion of Drilling _____
Time After Drilling _____ 1 Day _____ 10 mins. _____
Depth to Water _____ 2.0' _____ 6.0' ☒
Depth to Cave in _____ 4.0' _____ 6.0' _____

Start 12/11/19 End 12/11/19
Driller GeoServe Chief Eddie Rig Geoprobe
Logger Matt Editor TFG 7822DT
Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.



LOG OF TEST BORING

Project **Proposed Residential Development**
Utterback Property - CTH AB
 Location **Town of Dunn, Dane County, Wisconsin**

Boring No. **17**
 Surface Elevation (ft) **861.70**
 Job No. **C19482**
 Sheet **1** of **1**

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	qu (qa) (tsf)	W	LL	PL	LI
					12± in. TOPSOIL (OL)					
1		18	M	5	Stiff, Gray/Brown (Lightly Mottled) Sandy Lean CLAY, Trace Gravel (CL) USDA: 10YR 5/1 (Redox: c1f 10YR 5/3) Sandy Clay Loam	(1.25-1.5)				
2		18	M	4	Medium Stiff to Stiff, Gray/Yellowish Brown (Mottled) Lean CLAY, Trace to Little Sand (CL) USDA: 5Y 6/1 (Redox: c2d 10YR 5/4) Clay Loam	(0.75-1.5)				
3		18	W	11	Medium Dense, Pale Brown Fine Sand, Trace Silt and Gravel, Scattered Silt and Organic to Silty Clay Seams (SP) USDA: 10YR 6/3 Fine Sand, Silt Loam and Silty Clay Loam Seams					
4		18	W	17	Stiff to Very Stiff, Light Brown/Brown (Laminated) Lean to Silty CLAY, Trace Sand (CL/CL-ML) USDA: 7.5YR 6/3, 5/4 Silty Clay Loam	(1.25-2.5)				
5		18	W	5	Very Dense, Gray Clayey to Silty Fine to Coarse SAND, Some Gravel, Scattered Cobbles/Boulders (SC/SM - Possible Highly Weathered Bedrock) USDA: 7.5YR 6/1 Gravelly Sandy Loam					
6		8	W	50/2"	Probable Cobble/Boulder near 14 ft End of Boring at 15 ft Borehole Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

While Drilling ☒ 6.5' Upon Completion of Drilling _____
 Time After Drilling _____ 1 Day _____ 10 mins. _____
 Depth to Water _____ 2.5' _____ 6.0' ☒
 Depth to Cave in _____ 5.0' _____ 7.0' _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 12/11/19 End 12/11/19
 Driller GeoServe Chief Eddie Rig Geoprobe
 Logger Matt Editor TFG 7822DT
 Drill Method 2.25" HSA; Autohammer

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.9	5.3	89.8	3.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.5		
#8	98.8		
#10	98.6		
#16	97.9		
#30	96.7		
#40	93.3		
#50	77.8		
#80	16.4		
#100	8.0		
#200	3.5		

* (no specification provided)

Material Description
Brown Fine to Medium Sand, Trace Silt and Gravel

Atterberg Limits
 PL= LL= PI=

Coefficients
 D₉₀= 0.3687 D₈₅= 0.3303 D₆₀= 0.2573
 D₅₀= 0.2391 D₃₀= 0.2057 D₁₅= 0.1764
 D₁₀= 0.1599 C_u= 1.61 C_c= 1.03

Classification
 USCS= SP AASHTO=

Remarks
 USDA: Fine Sand

Sample Number: Boring 13

Depth: 3.5 to 5 ft

Date: 12/27/19



Client: VH Acquisitions, LLC
 Project: Utterback Property Residential Development

Project No: C19482

Figure

Tested By: DRW

Checked By: TFG

LOG OF TEST BORING General Notes

DESCRIPTIVE SOIL CLASSIFICATION

Grain Size Terminology

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders	Larger than 12"	Larger than 12"
Cobbles	3" to 12"	3" to 12"
Gravel: Coarse.....	¾" to 3"	¾" to 3"
Fine	4.76 mm to ¾"	#4 to ¾"
Sand: Coarse.....	2.00 mm to 4.76 mm.....	#10 to #4
Medium	0.42 to mm to 2.00 mm	#40 to #10
Fine	0.074 mm to 0.42 mm.....	#200 to #40
Silt.....	0.005 mm to 0.074 mm.....	Smaller than #200
Clay.....	Smaller than 0.005 mm.....	Smaller than #200

Plasticity characteristics differentiate between silt and clay.

General Terminology

Physical Characteristics
Color, moisture, grain shape, fineness, etc.
Major Constituents
Clay, silt, sand, gravel
Structure
Laminated, varved, fibrous, stratified,
cemented, fissured, etc.
Geologic Origin
Glacial, alluvial, eolian, residual, etc.

Relative Density

Term	"N" Value
Very Loose.....	0 - 4
Loose.....	4 - 10
Medium Dense.....	10 - 30
Dense.....	30 - 50
Very Dense.....	Over 50

Relative Proportions Of Cohesionless Soils

Proportional Term	Defining Range by Percentage of Weight
Trace.....	0% - 5%
Little	5% - 12%
Some.....	12% - 35%
And	35% - 50%

Consistency

Term	q _u -tons/sq. ft
Very Soft.....	0.0 to 0.25
Soft.....	0.25 to 0.50
Medium.....	0.50 to 1.0
Stiff.....	1.0 to 2.0
Very Stiff.....	2.0 to 4.0
Hard.....	Over 4.0

Organic Content by Combustion Method

Soil Description	Loss on Ignition
Non Organic.....	Less than 4%
Organic Silt/Clay.....	4 - 12%
Sedimentary Peat.....	12% - 50%
Fibrous and Woody Peat...	More than 50%

Plasticity

Term	Plastic Index
None to Slight.....	0 - 4
Slight.....	5 - 7
Medium.....	8 - 22
High to Very High ..	Over 22

The penetration resistance, N, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split-barrel sampler. The sampler is driven with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test.

SYMBOLS

Drilling and Sampling

CS – Continuous Sampling
RC – Rock Coring: Size AW, BW, NW, 2"W
RQD – Rock Quality Designation
RB – Rock Bit/Roller Bit
FT – Fish Tail
DC – Drove Casing
C – Casing: Size 2 ½", NW, 4", HW
CW – Clear Water
DM – Drilling Mud
HSA – Hollow Stem Auger
FA – Flight Auger
HA – Hand Auger
COA – Clean-Out Auger
SS – 2" Dia. Split-Barrel Sample
2ST – 2" Dia. Thin-Walled Tube Sample
3ST – 3" Dia. Thin-Walled Tube Sample
PT – 3" Dia. Piston Tube Sample
AS – Auger Sample
WS – Wash Sample
PTS – Peat Sample
PS – Pitcher Sample
NR – No Recovery
S – Sounding
PMT – Borehole Pressuremeter Test
VS – Vane Shear Test
WPT – Water Pressure Test

Laboratory Tests

q_a – Penetrometer Reading, tons/sq ft
q_a – Unconfined Strength, tons/sq ft
W – Moisture Content, %
LL – Liquid Limit, %
PL – Plastic Limit, %
SL – Shrinkage Limit, %
LI – Loss on Ignition
D – Dry Unit Weight, lbs/cu ft
pH – Measure of Soil Alkalinity or Acidity
FS – Free Swell, %

Water Level Measurement

▽ - Water Level at Time Shown
NW – No Water Encountered
WD – While Drilling
BCR – Before Casing Removal
ACR – After Casing Removal
CW – Cave and Wet
CM – Caved and Moist

Note: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.

Unified Soil Classification System

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS

(more than 50% of material is larger than No. 200 sieve size)

GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)		
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)		
		SW	Well-graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)		
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures

FINE-GRAINED SOILS

(50% or more of material is smaller than No. 200 sieve size.)

SILTS AND CLAYS Liquid limit less than 50%		ML Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH Inorganic clays of high plasticity, fat clays
		OH Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA

GW $C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3

GP Not meeting all gradation requirements for GW

GM	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limits above "A" line or P.I. greater than 7	

SW $C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3

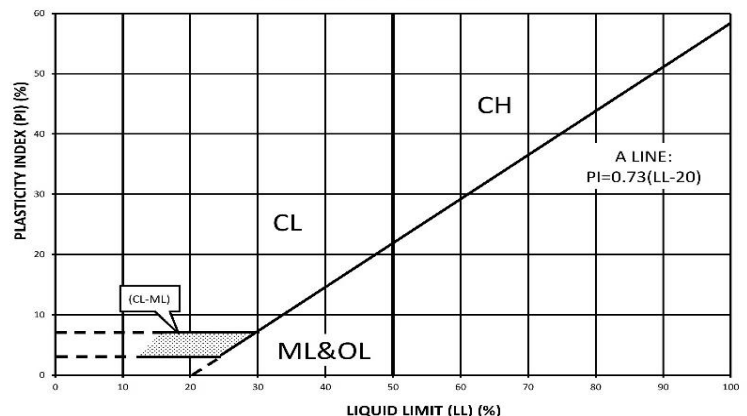
SP Not meeting all gradation requirements for GW

SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
SC	Atterberg limits above "A" line with P.I. greater than 7	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent GW, GP, SW, SP
More than 12 percent GM, GC, SM, SC
5 to 12 percent Borderline cases requiring dual symbols

PLASTICITY CHART



Soil Map—Dane County, Wisconsin
(Utterback Property)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin

Survey Area Data: Version 18, Sep 10, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Co	Colwood silt loam, 0 to 2 percent slopes	0.1	0.2%
DnB	Dodge silt loam, 2 to 6 percent slopes	4.4	11.3%
EgA	Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	0.3	0.9%
GsB	Grays silt loam, 2 to 6 percent slopes	3.4	8.7%
KeB	Kegonsa silt loam, 2 to 6 percent slopes	16.7	42.3%
KrD2	Kidder soils, 10 to 20 percent slopes, eroded	0.8	2.0%
PoB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	13.0	33.1%
SaA	Sable silty clay loam, 0 to 2 percent slopes	0.6	1.6%
Totals for Area of Interest		39.4	100.0%

APPENDIX C
DOCUMENT QUALIFICATIONS

APPENDIX C

DOCUMENT QUALIFICATIONS

I. GENERAL RECOMMENDATIONS/LIMITATIONS

CGC, Inc. should be provided the opportunity for a general review of the final design and specifications to confirm that earthwork and foundation requirements have been properly interpreted in the design and specifications. CGC should be retained to provide soil engineering services during excavation and subgrade preparation. This will allow us to observe that construction proceeds in compliance with the design concepts, specifications and recommendations, and also will allow design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction. CGC does not assume responsibility for compliance with the recommendations in this report unless we are retained to provide construction testing and observation services.

This report has been prepared in accordance with generally accepted soil and foundation engineering practices and no other warranties are expressed or implied. The opinions and recommendations submitted in this report are based on interpretation of the subsurface information revealed by the test borings indicated on the location plan. The report does not reflect potential variations in subsurface conditions between or beyond these borings. Therefore, variations in soil conditions can be expected between the boring locations and fluctuations of groundwater levels may occur with time. The nature and extent of the variations may not become evident until construction.

II. IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes. While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

READ THE FULL REPORT

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *CGC cannot accept responsibility or liability for problems that occur because our reports do not consider developments of which we were not informed.*

SUBSURFACE CONDITIONS CAN CHANGE

A geotechnical engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

MOST GEOTECHNICAL FINDINGS ARE PROFESSIONAL OPINION

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgement to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ - sometimes significantly - from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most

effective method of managing the risks associated with unanticipated conditions.

A REPORT'S RECOMMENDATIONS ARE NOT FINAL

Do not over-rely on the confirmation-dependent recommendations included in your report. *Those confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgement and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *CGC cannot assume responsibility or liability for the report's confirmation-dependent recommendations if we do not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical engineering report. Confront that risk by having CGC participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

DO NOT REDRAW THE ENGINEER'S LOGS

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

GIVE CONSTRUCTORS A COMPLETE REPORT AND GUIDANCE

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

READ RESPONSIBILITY PROVISIONS CLOSELY

Some clients, design professionals, and constructors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic

expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineer's responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

ENVIRONMENTAL CONCERNS ARE NOT COVERED

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

OBTAIN PROFESSIONAL ASSISTANCE TO DEAL WITH MOLD

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention.* *Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

RELY ON YOUR GEOTECHNICAL ENGINEER FOR ADDITIONAL ASSISTANCE

Membership in the Geotechnical Business Council (GBC) of Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with CGC, a member of GBC, for more information.

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Geotechnical Business Council
of the Geoprofessional Business Association
8811 Colesville Road, Suite G 106
Silver Spring, MD 20910

APPENDIX D

RECOMMENDED COMPACTED FILL SPECIFICATIONS

APPENDIX D

CGC, INC.

RECOMMENDED COMPACTED FILL SPECIFICATIONS

General Fill Materials

Proposed fill shall contain no vegetation, roots, topsoil, peat, ash, wood or any other non-soil material which by decomposition might cause settlement. Also, fill shall never be placed while frozen or on frozen surfaces. Rock, stone or broken concrete greater than 6 in. in the largest dimension shall not be placed within 10 ft of the building area. Fill used greater than 10 ft beyond the building limits shall not contain rock, boulders or concrete pieces greater than a 2 sq ft area and shall not be placed within the final 2 ft of finish subgrade or in designated utility construction areas. Fill containing rock, boulders or concrete pieces should include sufficient finer material to fill voids among the larger fragments.

Special Fill Materials

In certain cases, special fill materials may be required for specific purposes, such as stabilizing subgrades, backfilling undercut excavations or filling behind retaining walls. For reference, WisDOT gradation specifications for various types of granular fill are attached in Table 1.

Placement Method

The approved fill shall be placed, spread and leveled in layers generally not exceeding 10 in. in thickness before compaction. The fill shall be placed at moisture content capable of achieving the desired compaction level. For clay soils or granular soils containing an appreciable amount of cohesive fines, moisture conditioning will likely be required.

It is the Contractor's responsibility to provide all necessary compaction equipment and other grading equipment that may be required to attain the specified compaction. Hand-guided vibratory or tamping compactors will be required whenever fill is placed adjacent to walls, footings, columns or in confined areas.

Compaction Specifications

Maximum dry density and optimum moisture content of the fill soil shall be determined in accordance with modified Proctor methods (ASTM D1557). The recommended field compaction as a percentage of the maximum dry density is shown in Table 2. Note that these compaction guidelines would generally not apply to coarse gravel/stone fill. Instead, a method specification would apply (e.g., compact in thin lifts with a vibratory compactor until no further consolidation is evident).

Testing Procedures

Representative samples of proposed fill shall be submitted to CGC, Inc. for optimum moisture-maximum density determination (ASTM D1557) prior to the start of fill placement. The sample size should be approximately 50 lb.

CGC, Inc. shall be retained to perform field density tests to determine the level of compaction being achieved in the fill. The tests shall generally be conducted on each lift at the beginning of fill placement and at a frequency mutually agreed upon by the project team for the remainder of the project.

Table 1
Gradation of Special Fill Materials

Material	WisDOT Section 311	WisDOT Section 312	WisDOT Section 305			WisDOT Section 209		WisDOT Section 210
	Breaker Run	Select Crushed Material	3-in. Dense Graded Base	1 1/4-in. Dense Graded Base	3/4-in. Dense Graded Base	Grade 1 Granular Backfill	Grade 2 Granular Backfill	Structure Backfill
Sieve Size	Percent Passing by Weight							
6 in.	100							
5 in.		90-100						
3 in.			90-100					100
1 1/2 in.		20-50	60-85					
1 1/4 in.				95-100				
1 in.					100			
3/4 in.			40-65	70-93	95-100			
3/8 in.				42-80	50-90			
No. 4			15-40	25-63	35-70	100 (2)	100 (2)	25-100
No. 10		0-10	10-30	16-48	15-55			
No. 40			5-20	8-28	10-35	75 (2)		
No. 100						15 (2)	30 (2)	
No. 200			2-12	2-12	5-15	8 (2)	15 (2)	15 (2)

Notes:

1. Reference: Wisconsin Department of Transportation *Standard Specifications for Highway and Structure Construction*.
2. Percentage applies to the material passing the No. 4 sieve, not the entire sample.
3. Per WisDOT specifications, both breaker run and select crushed material can include concrete that is 'substantially free of steel, building materials and other deleterious material'.

Table 2
Compaction Guidelines

Area	Percent Compaction (1)	
	Clay/Silt	Sand/Gravel
<u>Within 10 ft of building lines</u>		
Footings bearing soils	93 - 95	95
Under floors, steps and walks		
- Lightly loaded floor slab	90	90
- Heavily loaded floor slab and thicker fill zones	92	95
<u>Beyond 10 ft of building lines</u>		
Under walks and pavements		
- Less than 2 ft below subgrade	92	95
- Greater than 2 ft below subgrade	90	90
Landscaping	85	90

Notes:

1. Based on Modified Proctor Dry Density (ASTM D 1557)

APPENDIX E

ROCK EXCAVATION CONSIDERATIONS

APPENDIX E

ROCK EXCAVATION CONSIDERATIONS

In order to minimize probable "rock" excavation expenses during construction, we suggest that project specifications incorporate the following:

- A. It is assumed that all excavations to levels and dimensions required by the Contract Documents are earth excavation. Earth excavation includes removal and disposal of all materials encountered except rock/sound bedrock which is defined as natural materials which:
 - 1. Cannot be excavated with a minimum 3/4 cubic yard capacity backhoe without drilling and blasting;
 - 2. Cannot be economically removed with a one-tooth ripper on a D8 cat (or equivalent);
 - 3. Requires the use of special equipment such as a pneumatic hammer;
 - 4. Requires the use of explosives (after obtaining written permission of the owner).
- B. Examples of material classified as rock are boulders 1/2 cubic yard or more in volume, bedrock, rock in ledges, and rock-hard cementitious aggregate deposits.
- C. Do not proceed with rock excavation work until architect, engineer and/or testing firm (i.e., CGC) has taken the necessary measures to determine quantity of rock excavation required to complete the work. Measurements will be taken after properly stripped of earth by the contractor. Contractor will be paid the difference between the cost of rock and earth excavation based on an agreed upon unit price established prior to starting rock excavation.

A statement should also be included in the specifications to the effect that: "Stated models of earth excavation equipment are merely for purposes of defining the various excavation categories and are not intended to indicate the brand or type of equipment that is to be used."

APPENDIX F

WISCONSIN DEPARTMENT OF SAFETY & PROFESSIONAL SERVICES SOIL AND SITE EVALUATION – STORM FORM (3 BORINGS)



Attachment 2:

SOIL AND SITE EVALUATION - STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Attach a complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent of slope, scale or dimensions, north arrow, and BM referenced to nearest road

Please print all information

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)]

County	Dane
Parcel I.D.	028/0610-024-8070-0
Reviewed by:	
Date:	

Property Owner Utterback LTD Partnership c/o Wayne Utterback	Property Location Govt. Lot NE 1/4 SE 1/4 S 02 T N 06 R 10 E	
Property Owner's Mail Address 4627 Prairie Fire Ct.	Lot # Block# Subd. Name or CSM #	
City State Zip Code Phone Number DeForest WI 53532	☐ City ☐ Village ☒ Town Dunn	Nearest Road CTH AB
Drainage area _____ ☐ sq ft ☐ acres	Hydraulic Application Test Method ☒ Morphological Evaluation ☐ Double Ring Infiltrometer ☐ Other: (specify) _____	Soil Moisture Date of soil borings: _____ USDA-NRCS WETS Value: ☐ Dry = 1; ☐ Normal = 2; ☐ Wet = 3.
Test site suitable for (check all that apply): ☐ Site not suitable; ☐ Bioretention; ☐ Subsurface Dispersal System; ☐ Reuse; ☐ Irrigation; ☐ Other _____		

B-13	#OBS. ☐ Pit ☒ Boring	Ground surface elevation 867.3 ft.	Elevation of limiting factor 861.3 ft. (Groundwater)							
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	Topsoil (not sampled)								
2	12-36	10YR 5/3, 5/4	none	SCL	2mabk	mfi		<5		0.11
3	36-66	10YR 7/3	none	FS	0sg	ml		1	4	0.50
4	66-96	10YR 6/3	none	XGRS	0sg	ml		65-75		3.60
5	96-126	10YR 6/3	none	S	0sg	ml		<10		3.60
6	126-156	10YR 6/3	none	FSL	2msbk	mfr		<5		0.50
7	156-180	10YR 6/3	none	FS, SiL	0sg	ml		<5		0.13-0.50
Comments: Groundwater was encountered at about 8 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 6 ft, with no groundwater present above this depth. Infiltration potential appears limited based on fairly shallow groundwater.										

B-16	#OBS. ☐ Pit ☒ Boring	Ground surface elevation 861.5 ft.	Elevation of limiting factor 859.5 ft. (Groundwater)							
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	Topsoil (not sampled)								
2	12-36	10YR 2/1 to 3/2	none	CL	0m	mfi		<5		0.03
3	36-78	2.5Y 5/1	c2d 2.5Y 5/3	SCL	0m	mfi		<5		0.11
4	78-102	10YR 6/3	none	S	0sg	ml		<10		3.60
5	102-126	10YR 6/3	none	FS	0sg	ml		<5		0.50
6	126-156	10YR 6/4, 7.5YR 6/3, 7.5YR 5/4	none	Strat. FSL, SiL, SiCL	variable			<5		0.04
7	156-180	7.5YR 6/3	none	SiCL	0m	mvfi		<5		0.04
Comments: Groundwater was encountered at about 6.5 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 4 ft, with groundwater observed at about 2 ft. Infiltration potential appears very limited based on shallow groundwater.										

Name (Please Print)	Tim F. Gassenheimer	Signature		Credential Number	SP-011900004
Address	129 Milky Way, Madison, WI 53718	Date Evaluation Conducted	December 11, 2019	Telephone Number	(608) 288-4100

B-17

#OBS.

☐ Pit☒ Boring

Ground surface elevation

861.7 ft.

Elevation of limiting factor

860.7 ft. (Redox)

859.2 ft. (Groundwater)

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frgs.	% Fines	Hydraulic App Rate Inches/Hr
1	0-12	Topsoil (not sampled)								
2	12-36	10YR 5/1	c1f 10YR 5/3	SCL	0m	mfi		<5		0.11
3	36-78	5Y 6/1	c2d 10YR 5/4	CL	0m	mfi		<5		0.03
4	78-126	10YR 6/3	none	FS, SiL/SiCL	0sg	ml		<5		0.04-0.50
5	126-156	7.5YR 6/3, 5/4	none	SiCL	0m	mvfi		<5		0.04
6	156-180	7.5YR 6/1	none	GRSL ⁽¹⁾	1cabk	mfr		20-30		0.50

Comments: Groundwater was encountered at about 6.5 ft during drilling and at about 6 ft shortly after the completion of drilling. About one day after the completion of drilling, the borehole had caved-in at about 5 ft, with groundwater observed at about 2.5 ft.

Infiltration potential appears very limited based on shallow low-chroma/high-value dominant color and redox, as well as groundwater.

⁽¹⁾ Horizon 6 was classified as possible bedrock.

Overall Site Comments: See Comments above and Stormwater Infiltration Potential section in Geotechnical Exploration Report.

APPENDIX F

WETLAND REPORT



Assured Wetland Delineation Report

Utterback Property North

Town of Dunn, Dane County, Wisconsin

December 20, 2019

Project Number: 20190239

Utterback Property North

Town of Bucky, Dane County, Wisconsin

December 20, 2019

Prepared for:

Mr. Chris Ehlers

VH Acquisitions LLC

6801 South Towne Drive

Madison, WI 53713

Prepared by:

Heartland Ecological Group, Inc.

506 Springdale Street

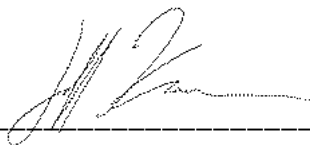
Mount Horeb, WI 53572

608-490-2450

www.heartlandecological.com



Scott Fuchs, Environmental Technician



Jeff Kraemer, Principal

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Appendix C | Wetland Determination Data Sheets

Appendix D | Site Photographs

Appendix E | Delineator Qualifications

Appendix F | NAIP Aerial Imagery



1.0 Introduction

Heartland Ecological Group, Inc. (“Heartland”) completed an assured wetland determination and delineation on the Utterback Property North site on September 16, 2019 at the request of VH Acquisitions LLC. Fieldwork was completed by Jeff Kraemer, an assured delineator qualified via the Wisconsin Department of Natural Resources (WDNR) Wetland Delineation Assurance Program (Appendix E, Qualifications). The 39.80-acre site (the “Study Area”) is east of the ends of Tuscobia Trail and Prairie Wood Drive, and west of County Highway AB, in the southeast $\frac{1}{4}$ of Section 2, T6N, R10E, Town of Dunn, Dane County, WI (Figure 1, Appendix A). The purpose of the wetland delineation was to determine the location and extent of wetlands within the Study Area.

One (1) wetland area totaling approximately 1.20 acres was delineated and mapped within the Study Area (Figure 6, Appendix A). Wetlands discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and local zoning authorities. Heartland recommends this report be submitted to local authorities, the WDNR, and USACE for final jurisdictional review and concurrence.



2.0 Methods

2.1 Wetlands

Wetlands were determined and delineated using the criteria and methods described in the USACE Wetlands Delineation Manual, T.R. Y-87-1 ("1987 Corps Manual") and the applicable *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*. In addition, the *Guidance for Submittal of Delineation Reports to the St. Paul District USACE and the WDNR* (WDNR, 2015) was followed in completing the wetland delineation and report.

Determinations and delineations utilized available resources including the U.S. Geological Survey's (USGS) *WI 7.5 Minute Series (Topographic) Map* (Figure 2, Appendix A), the Natural Resource Conservation Service's (NRCS) Soil Survey Geographic Database (SSURGO), U.S. Department of Agriculture's (USDA) *Web Soil Survey* (Figure 3, Appendix A), the Wisconsin Department of Natural Resources' *Surface Water Data Viewer's* wetland indicator data layer (Figure 4, Appendix A), the WDNR's *Wisconsin Wetland Inventory* data layer (Figure 5, Appendix A), and aerial imagery available through the USDA Farm Service Agency's (FSA) National Agriculture Imagery Program (NAIP), Google Earth™, and Dane County's interactive mapping. The USGS *National Hydrography Dataset* is included on Figures 2 and 5, Appendix A.

Wetland determinations were completed on-site at sample points, often along transects, using the three (3) criteria (vegetation, soil, and hydrology) approach per the 1987 Corps Manual and the Regional Supplement. Procedures in these sources were followed to demonstrate that, under normal circumstances, wetlands were present or not present based on a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology.

Atypical conditions were encountered within the Study Area due to the presence of agricultural fields including row-cropping and hay fields. Therefore, procedures for managed plant communities in the *Problematic hydrophytic vegetation* section described in Chapter 5 (Difficult Wetland Situations) of the Regional Supplement were used. NAIP imagery were reviewed for evidence of crop stress, saturation, or inundation signatures. Sample point placements for the wetland delineation were partially determined based on such signatures.



Recent weather conditions influence the visibility or presence of certain wetland hydrology indicators. An assessment of recent precipitation patterns helps to determine if climatic/hydrologic conditions were typical when the field investigation was completed. Therefore, a review of the antecedent precipitation in the three (3) months leading up to the field investigation was completed. Using a WETS analysis developed by the NRCS, the amounts of precipitation in these three (3) months were compared to averages and standard deviation thresholds over the past 30 years to generally represent if conditions encountered during the investigation were normal, wet, or dry. Recent precipitation events in the week prior to the investigation were considered while interpreting wetland hydrology indicators. In some cases, the Palmer Drought Index was checked for long-term drought or moist conditions (NOAA, 2018).

The uppermost wetland boundary and sample points were identified and marked with wetland flagging and located with a Global Positioning System (GPS) capable of sub-meter accuracy. In some cases, wetland flagging was not utilized to mark the boundary and the location was only recorded with a GPS unit, particularly in active agricultural areas. The GPS data was then used to map the wetlands using ESRI ArcMap™ 10.6 software.

3.0 Results and Discussion

3.1 Desktop Review

Climatic Conditions

According to the WETS analysis using the previous three (3) months of precipitation data, conditions encountered at the time of the fieldwork were expected to be normal for the time of year (Appendix B). The Palmer Drought Index was checked on line and the long-term conditions at the time of the fieldwork were in the extremely moist range. Fieldwork was completed at the end of the dry-season based on long-term regional hydrology data utilized in the WebWIMP Climatic Water Balance web site.

General Topography and Land Use

The topography within the Study Area was rolling, with various hills, depressions, and slopes, but generally was sloping towards the railway which makes up the southern boundary of the site. A topographic high of approximately 895 feet above mean sea level



(msl) is present along the northern boundary of the site, and a topographic low of approximately 865 feet above msl is present within the depression in the southeast corner of the site (Figures 2 and 6, Appendix A). Land use within the Study Area consists of agricultural row cropping. Surrounding areas are primarily agricultural row cropping and residential homes. General drainage is to the south and east.

Soil Mapping

Soils mapped by the NRCS Soil Survey within the Study Area and their hydric status are summarized in Table 1. Wetlands identified during the field investigation are located primarily within areas mapped as hydric or partially hydric soils including wetland indicator soils (Figures 3 and 4, Appendix A).

Table 1. Summary of NRCS Mapped Soils within the Study Area

Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
Co: Colwood silt loam, 0 to 2 percent slopes	Colwood	80-90	Lakebeds (relict)	Yes
	Pella	5-10	Drainageways	Yes
	Palms	5-10	Depressions	Yes
DnB: Dodge silt loam, 2 to 6 percent slopes	Dodge	80-95	Drumlins	No
	St. Charles	3-10	Drumlins	No
	Mayville	2-7	Drumlins	No
	Lamartine	0-3	Drumlins	No
EgA: Elburn silt loam, gravelly substratum, 0 to 3 percent slopes	Elburn-Gravelly substratum	85-95	Till plains	No
	Sable	2-5	Drainageways	Yes
	Drummer	2-5	Drainageways	Yes
	Mahalasville	2-5	Drainageways	Yes
GsB: Grays silt loam, 2 to 6 percent slopes	Grays	100	Lake plains	No
KeB: Kegonsa silt loam, 2 to 6 percent slopes	Kegonsa	100	Outwash plains	No
KrD2: Kidder soils, 10 to 20 percent slopes, eroded	Kidder-Loam	60	Recessionial moraines, terminal moraines, drumlins	No



Soil symbol: Soil Unit Name	Soil Unit Component	Soil Unit Component Percentage	Landform	Hydric status
	Kidder-Sandy loam	30	Recessional moraines, terminal moraines, drumlins	No
PoB: Plano silt loam, gravelly substratum, 2 to 6 percent slopes	Plano-Gravelly substratum	80-90	Outwash plains	No
	Warsaw	5-10	Outwash plains	No
	Plano-Moderately wet gravelly substratum	5-10	Outwash plains	No
SaA: Sable silty clay loam, 0 to 2 percent slopes	Sable	85-100	Swales	Yes
	Muscature	0-6	Ground moraines	No
	Ipava	0-7	Ground moraines	No
	Buckhart	0-4	Knolls	No
	Elburn	0-3	Outwash plains	No

Wetland Mapping

The Wisconsin Wetlands Inventory (WWI) mapping (Figure 5, Appendix A) does not depict any wetlands within the Study Area.

Aerial Photography

A formal off-site analysis was not completed due to a lack of mapped hydric soils within the Study Area, however available NAIP imagery from 2004 through 2018 (Appendix F) were reviewed to assist in understanding the recent history of the Study Area and to evaluate for general wetland signatures. This imagery showed a consistent use of agricultural row cropping within the Study Area. A depression in the southeast corner of the Study Area featured consistent wetland signatures in the reviewed imagery.

3.2 Field Review

One (1) wetland was identified and delineated within the Study Area based on both the desktop review, including a review of aerial imagery, and a field reconnaissance. Wetland determination data sheets (Appendix C) were completed at two (2) sample points that were



representative of the wetland and upland conditions near the boundary and where potential wetlands may be present based on the desktop review and field reconnaissance. Appendix D provides photographs, typically at the sample point locations of the wetlands and adjacent uplands. The wetland boundary and sample point locations are shown on Figure 6 (Appendix A) and the wetlands are summarized in Table 2 and detailed in the following sections.

Table 2. Summary of Wetlands Identified within the Study Area

Wetland ID	Wetland Description	*Surface Water Connections	*NR151 Protective Area	Acreage (on-site)
W-1	Farmed Wet Meadow	Potentially Isolated	Less susceptible, 10-30 feet	1.20
<i>*Classification based on Heartland's professional opinion. Jurisdictional authority of wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities may have additional restrictions. USACE has authority for determining federal jurisdiction of wetlands and waterways.</i>				1.20

Wetland 1 (W-1)

Wetland 1 (W-1) is a 1.20-acre wet meadow with a history of being farmed and is located within a depression in the southeastern corner of the Study Area.

Dominant vegetation observed in W-1 included fall panic grass (*Panicum dichotomiflorum*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW).

The Depleted Matrix (F3) hydric soil indicator was observed within W-1, which is inconsistent with the NRCS-mapped Kegonsa silt loam soil type.

The primary wetland hydrology indicators of Surface Water (A1) and High Water Table (A2) were observed within W-1, while secondary indicators included Geomorphic Position (D2) and a positive FAC-Neutral Test (D5).

Wetland W-1 appears to be an isolated depression and its boundaries follow a moderately-defined topographic break. The boundaries were partially determined by the wetland signatures observed during the review of NAIP aerial imagery and located in the field.



3.3 Other Considerations

This report is limited to the identification and delineation of wetlands within the Study Area. Other regulated environmental resources that result in land use restrictions may be present within the Study Area that were not evaluated by Heartland (e.g. navigable waterways, floodplains, cultural resources, and threatened or endangered species).

Wisconsin Act 183 provides exemptions to permitting requirements for certain nonfederal wetlands. Nonfederal wetlands are wetlands that are not subject to federal jurisdiction. Exemptions apply to projects in urban areas with wetland impacts up to 1-acre per parcel. An urban area is defined as an incorporated area; an area within ½ mile of an incorporated area; or an area served by a sewerage system. Exemptions for nonfederal wetlands also apply to projects in rural areas with wetland impacts up to three (3) acres per parcel. Exemptions in rural areas only apply to structures with an agricultural purpose such as buildings, roads, and driveways. The determination of federal and nonfederal wetlands MUST be made by the USACE through an Approved Jurisdictional Determination (AJD). This report may be submitted to the USACE to assist with their determination.

Wis. Adm. Code NR 151 ("NR 151") requires that a "protective area" (buffer) be determined from the Ordinary High-Water Mark (OHWM) of lakes, streams and rivers, or at the delineated boundary of wetlands. Per NR 151.12, the protective area width for "less susceptible" wetlands is determined by using 10% of the average wetland width, no less than 10 feet or more than 30 feet. "Moderately susceptible" wetlands, lakes, and perennial and intermittent streams identified on recent mapping require a protective area width of 50 feet; while "highly susceptible wetlands" are associated with outstanding or exceptional resource waters in areas of special natural resource interest and require protective area width of 75 feet. Table 2 above lists the potential wetland buffers per NR 151 for each wetland identified based on Heartland's professional opinion. Please note that jurisdictional authority on wetland and waterway protective areas under NR 151 lies with the WDNR. Local zoning authorities and regional planning organizations may have additional land use restrictions within or adjacent to wetlands.



4.0 Conclusion

Heartland completed an assured wetland determination and delineation within the Utterback Property North site on September 16, 2019 at the request of VH Acquisitions LLC. Fieldwork was completed by Jeff Kraemer, an assured delineator qualified via the WDNR Wetland Delineation Assurance Program. The Study Area lies in Section 2, T6N, R10E, Town of Dunn, Dane County, WI.

One (1) wetland area was delineated and mapped within the 39.80-acre Study Area. The wetland, which may be classified as a farmed wet meadow, totals approximately 1.20 acres within the Study Area.

Wetlands and waterways discussed in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of the WDNR, and the local zoning authority. Heartland recommends this report be submitted to the USACE for final jurisdictional review and concurrence. Review by local authorities may be necessary for determination of any applicable zoning and setback restrictions.

Heartland recommends that all applicable regulatory agency reviews and permits are obtained prior to beginning work within the Study Area or within or adjacent to wetlands or waterways. Heartland can assist with evaluating the need for additional environmental reviews, surveys, or regulatory agency coordination in consideration of the proposed activity and land use as requested but is outside of the scope of the wetland delineation.

Experienced and qualified professionals completed the wetland determination and delineation using standard practices and professional judgment. Wetland boundaries may be affected by conditions present within the Study Area at the time of the fieldwork. All final decisions on wetlands and their boundaries are made by the USACE, the WDNR, and/or sometimes a local unit of government. Wetland determination and boundary reviews by regulatory agencies may result in modifications to the findings presented to the Client. These modifications may result from varying conditions between the time the wetland delineation was completed and the time of the review. Factors that may influence the findings may include but not limited to precipitation patterns, drainage modifications, changes or modification to vegetation, and the time of year.



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Utterback Property North
Project #: 20190239
December 20, 2019

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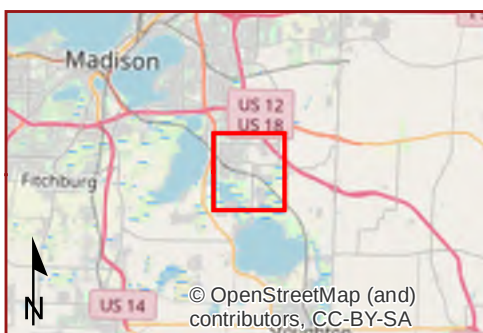
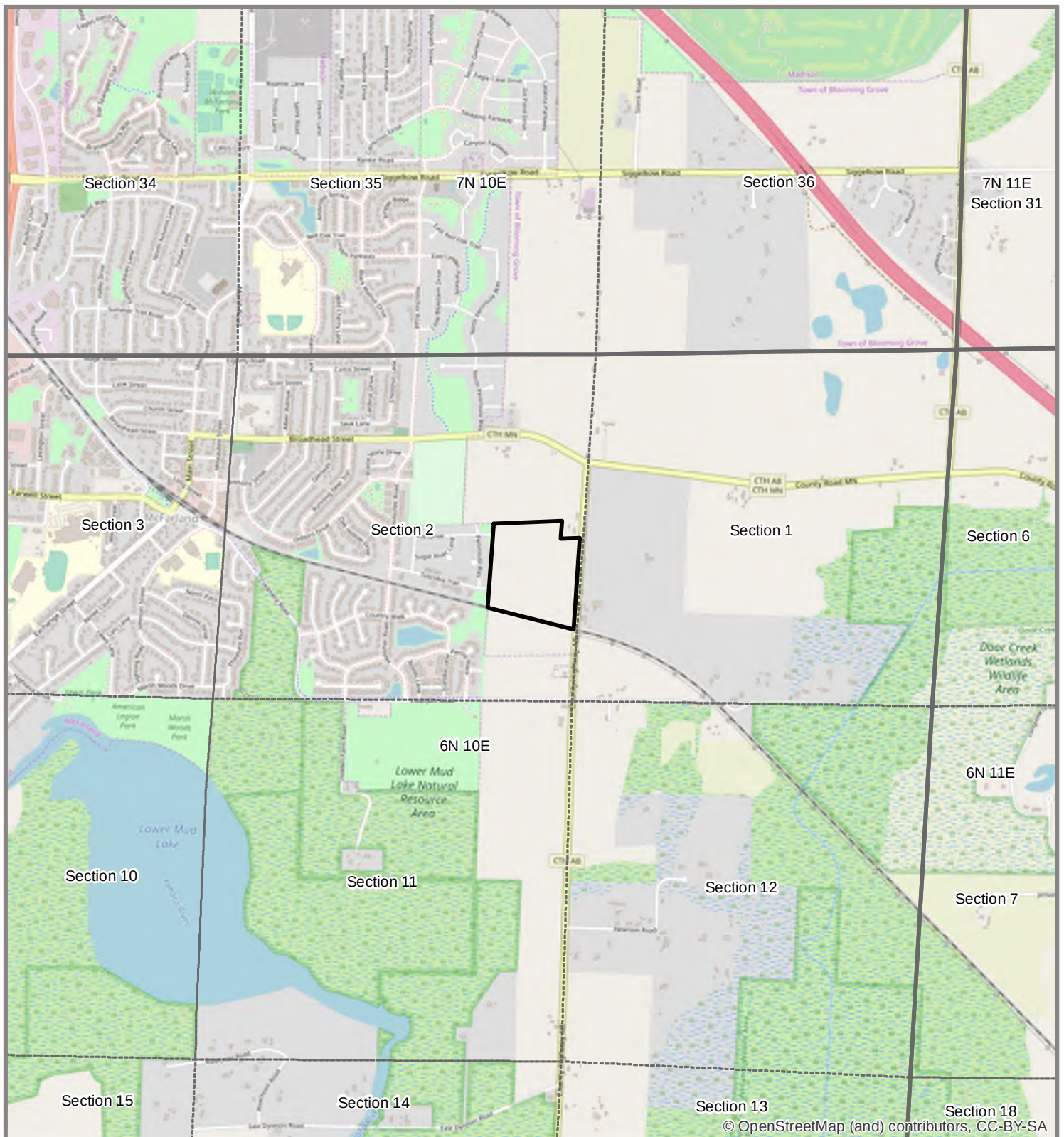
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VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix A | Figures



- Study Area (39.80 ac)
- Township
- Section

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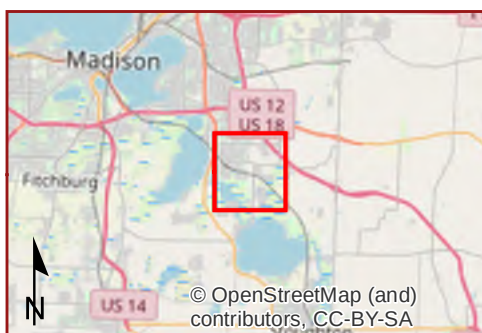
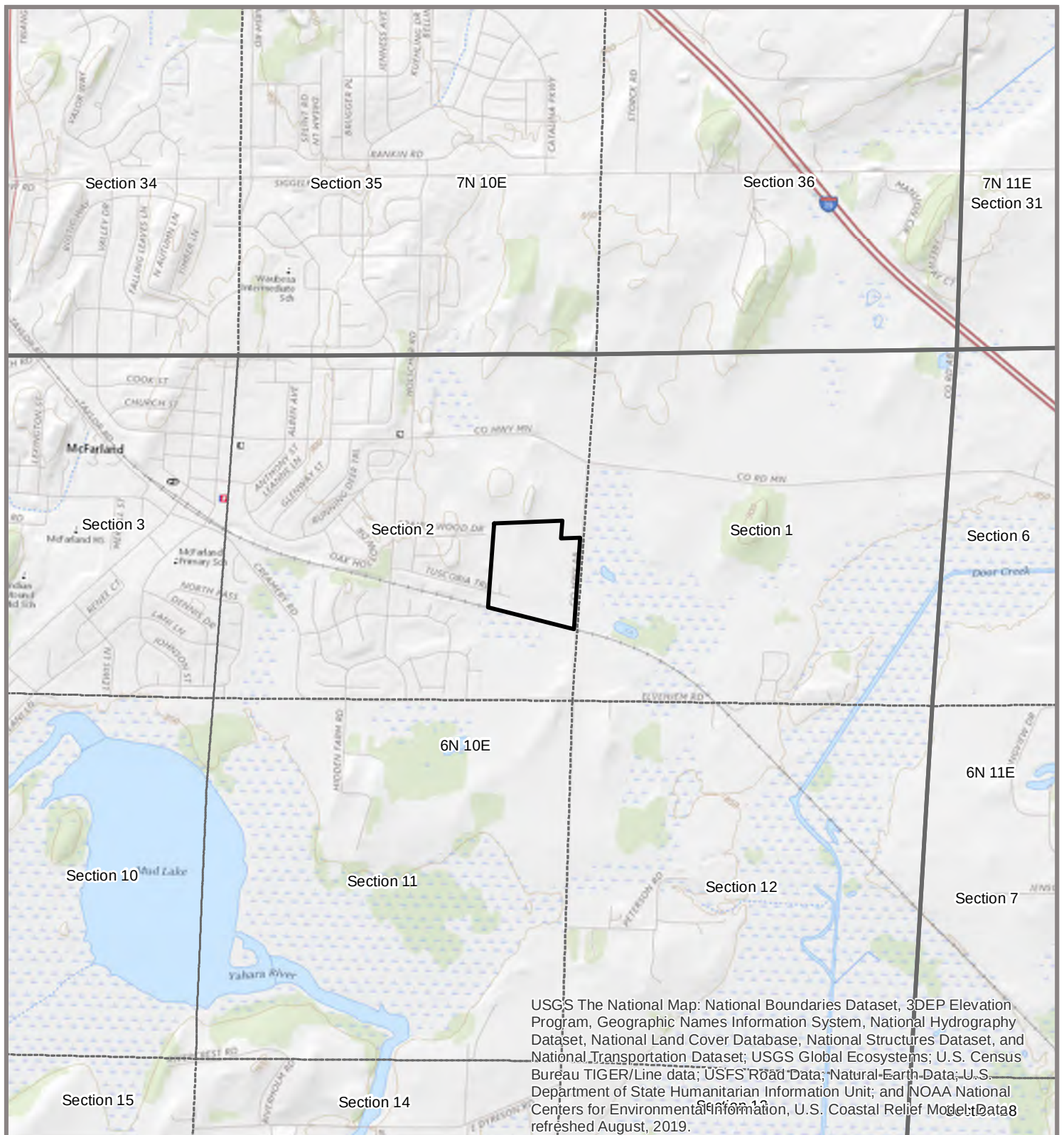
Heartland
ECOLOGICAL GROUP INC

Figure 1. Project Location

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

OpenStreetMap
Data: ESRI

12/17/2019



- Study Area (39.80 ac)
- Township
- Section

0 1,000 2,000
Ft

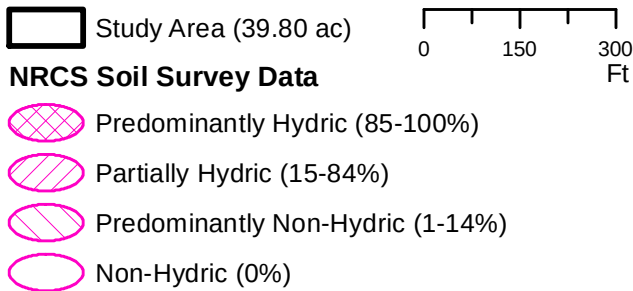
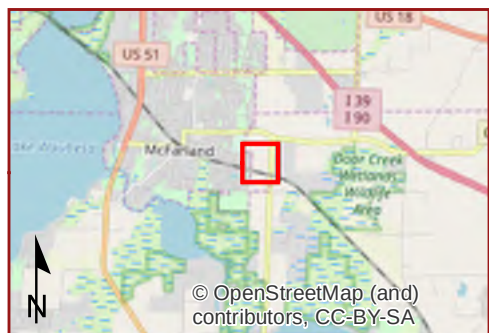
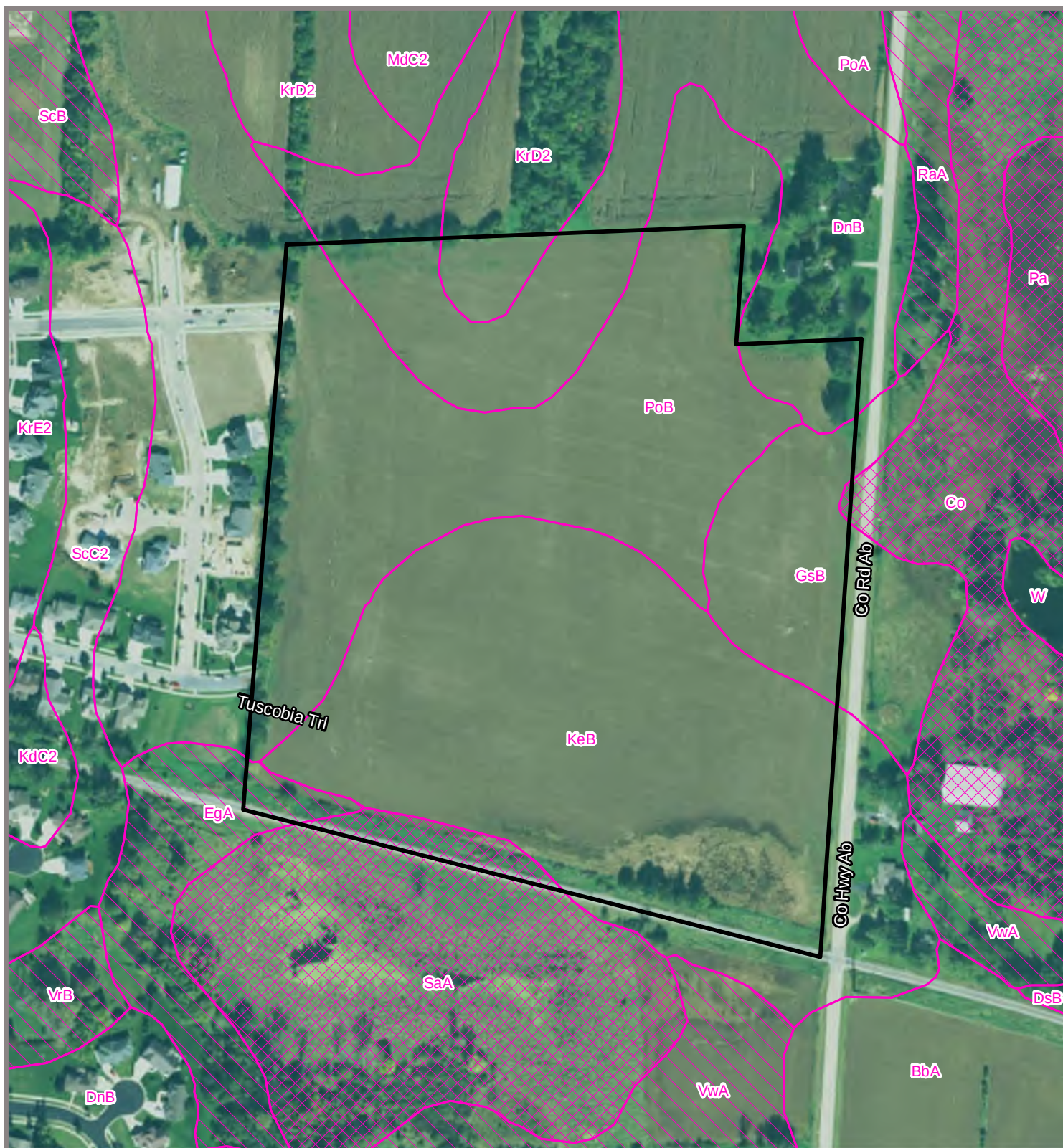
Heartland
ECOLOGICAL GROUP INC

Figure 2. USGS Topography

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

USGS Topo
Data: USGS

12/17/2019



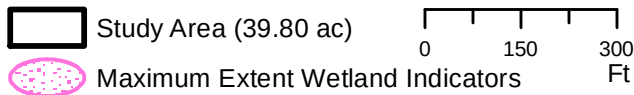
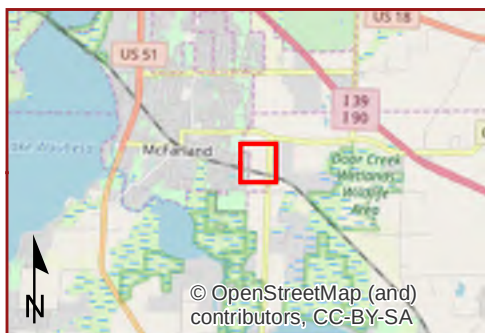
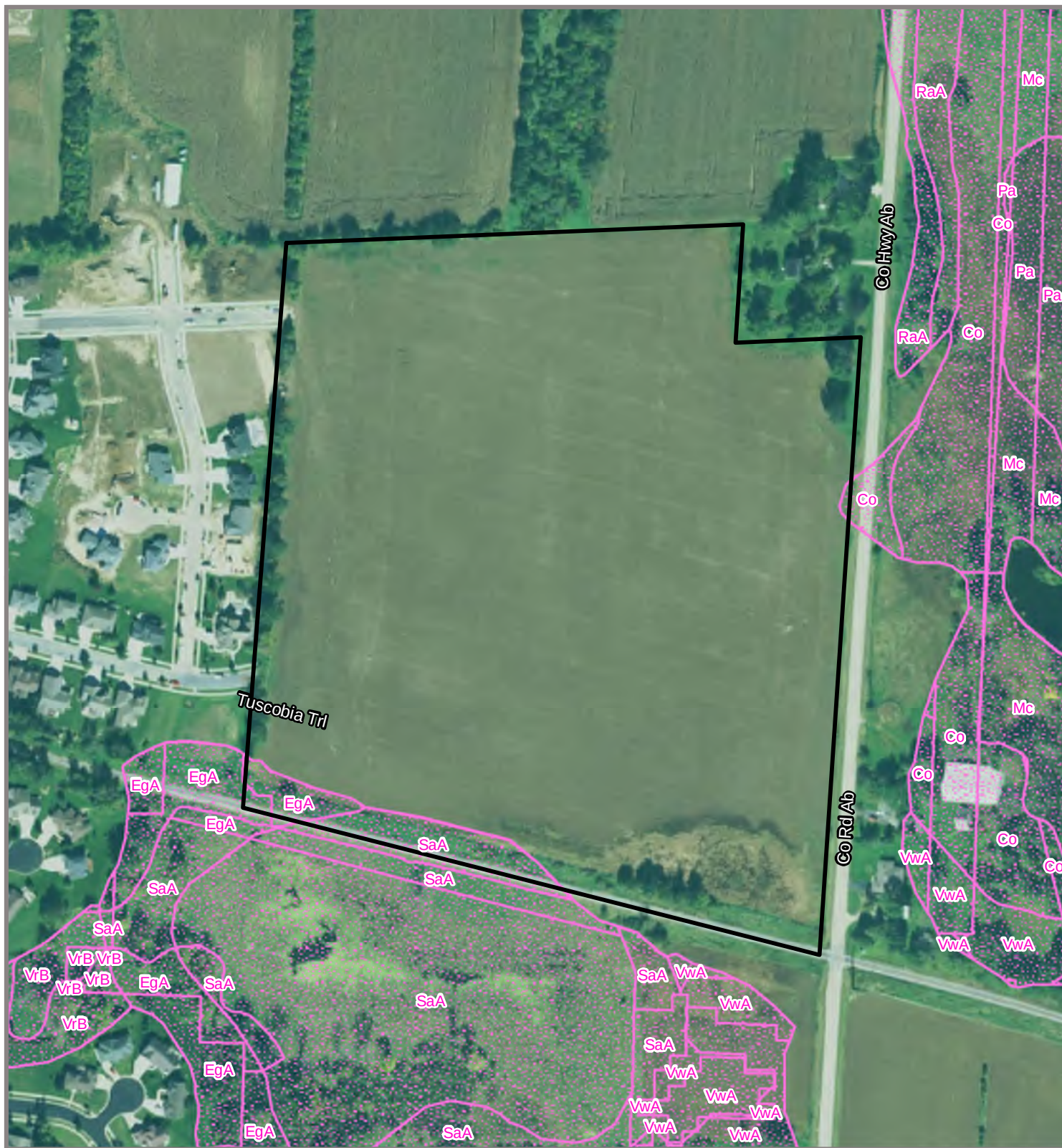
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**Figure 3. NRCS
Hydric Soils**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2018 NAIP
Data: NRCS

12/17/2019



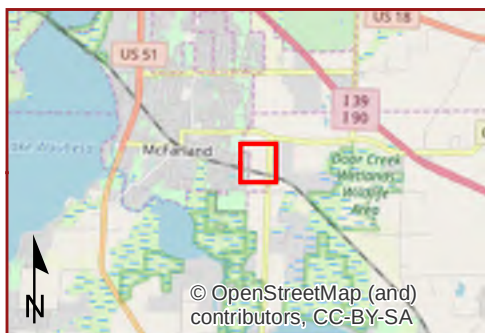
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**Figure 4. SWDV
Wetland Indicators**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2018 NAIP
Data: WDNR

12/17/2019



- Study Area (39.80 ac)
- WWI Wetlands
- NHD Waterway
- NHD Waterbody

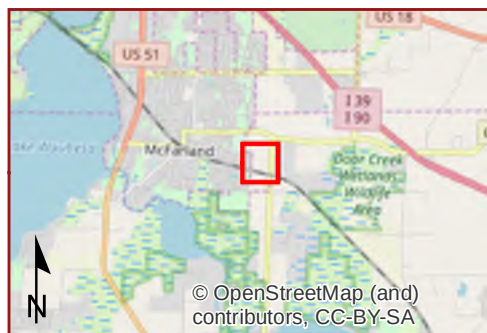
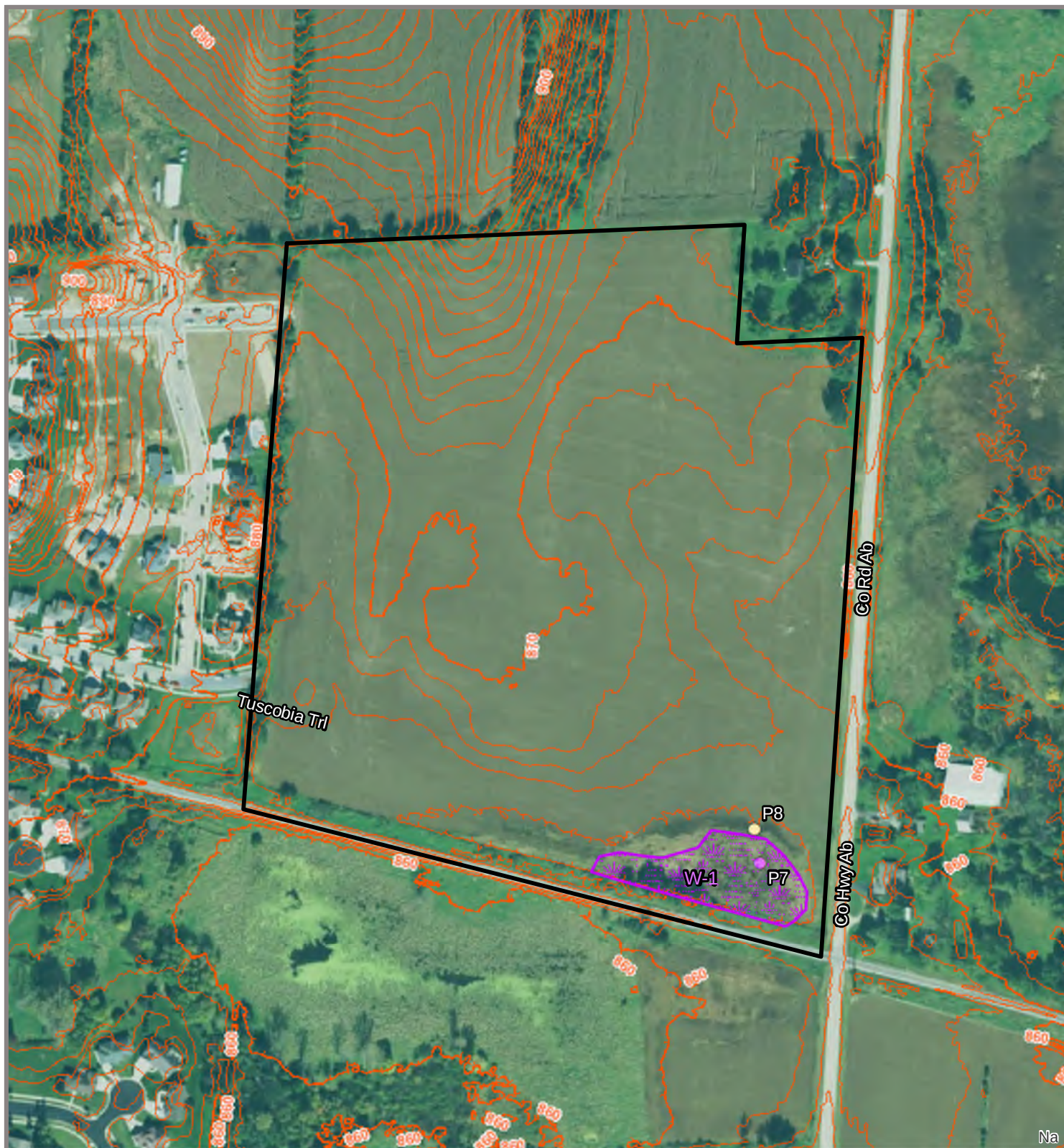
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Figure 5. Wisconsin Wetland Inventory

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2018 NAIP
Data: USGS, WDNR 12/17/2019



Heartland
ECOLOGICAL GROUP INC

Figure 6. Field Delineated Wetlands

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2018 NAIP
Data: Dane Co

12/17/2019



VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix B | WETS Analysis

WETS Analysis Worksheet

Project Name: Utterback Parcel
 Project Number: 20190239
 Period of interest: June - August 2019
 Station: Dane County Regional Airport
 County: Dane County

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	August	2.61	4.27	5.17
2nd month prior:	July	3.20	4.34	5.10
3rd month prior:	June	3.21	5.27	6.38
Sum =		13.88		

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
2.85	Normal	2	3	6
5.77	Wet	3	2	6
5.16	Normal	2	1	2
Sum =	13.78		Sum*** =	14

*Normal precipitation with 30% to 70% probability of occurrence

Determination: ☐ Wet
☐ Dry
☒ Normal

**Condition value:

Dry = 1
 Normal = 2
 Wet = 3

***If sum is:

6 to 9 then period has been drier than normal
 10 to 14 then period has been normal
 15 to 18 then period has been wetter than normal

Precipitation data source: Midwest Regional Climate Center, cli-MATE: MRCC Application Tools Environment

Reference: Donald E. Woodward, ed. 1997. *Hydrology Tools for Wetland Determination*, Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.



VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix C | Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utterback Property City/County: T Dunn/Dane Co Sampling Date: 9/16/2019
 Applicant/Owner: VH Acquisitions LLC State: WI Sampling Point: P7
 Investigator(s): Jeff Kraemer, Heartland Ecological Group Section, Township, Range: T6N, R10E, S02
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1 - 3
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Kegonsa silt loam (KeB) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS analysis was conducted and indicates that climate conditions were normal at the time of the field investigation. Sample point recorded within a farmed wetland depression north of the railway that traverses the Study Area.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☒ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☒ High Water Table (A2) ☐ Aquatic Fauna (B13) ☐ Saturation (A3) ☐ Marl Deposits (B15) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Depression is mostly inundated with 1-6 inches of water throughout.		

VEGETATION – Use scientific names of plants.

Sampling Point: P7

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>205</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.16</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>95</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>2.16</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>90</u>	x 2 = <u>180</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>95</u> (A)	<u>205</u> (B)																			
Prevalence Index = B/A = <u>2.16</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Herb Stratum (Plot size: <u>5ft</u>)																				
1. <u>Panicum dichotomiflorum</u>	<u>65</u>	<u>Yes</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. <u>Phalaris arundinacea</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Zea mays</u>	<u>5</u>	<u>No</u>	<u>UPL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		95 =Total Cover																		
Woody Vine Stratum (Plot size: <u>30ft</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

No crops present / crops not planted this year. The depression appears to not have been farmed for a few years and reed canary grass has become established.

SOIL

Sampling Point P7

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utterback Property City/County: T Dunn/Dane Co Sampling Date: 9/16/2019
 Applicant/Owner: VH Acquisitions LLC State: WI Sampling Point: P8
 Investigator(s): Jeff Kraemer, Heartland Ecological Group Section, Township, Range: T6N, R10E, S02
 Landform (hillside, terrace, etc.): Sideslope Local relief (concave, convex, none): None Slope %: 1 - 3
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Kegonsa silt loam (KeB) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) A WETS analysis was conducted and indicates that climate conditions were normal at the time of the field investigation. Sample point recorded within an upland agricultural field planted to corn - not normal circumstances.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No wetland hydrology indicators observed.		

VEGETATION – Use scientific names of plants.

Sampling Point: P8

Tree Stratum (Plot size: <u>30ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>3</u> (A)</td> <td><u>6</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>3</u> (A)	<u>6</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>3</u>	x 2 = <u>6</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>3</u> (A)	<u>6</u> (B)																			
Prevalence Index = B/A = <u>2.00</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15ft</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		=Total Cover																		
Herb Stratum (Plot size: <u>5ft</u>)																				
1. <u>Panicum dichotomiflorum</u>	<u>3</u>	<u>Yes</u>	<u>FACW</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		=Total Cover																		
Woody Vine Stratum (Plot size: <u>30ft</u>)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

The agricultural field is planted with corn, no apparent stress, 85% cover. Few to no agricultural weeds present.

SOIL

Sampling Point P8

[illegible]



VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix D | Site Photographs



Photo #1 Sample Point P7

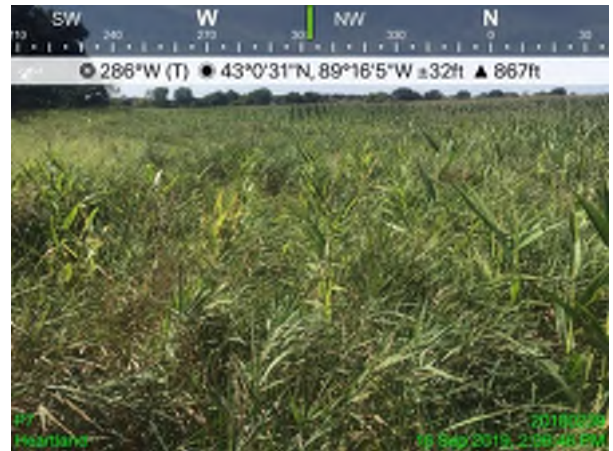


Photo #2 Sample Point P7

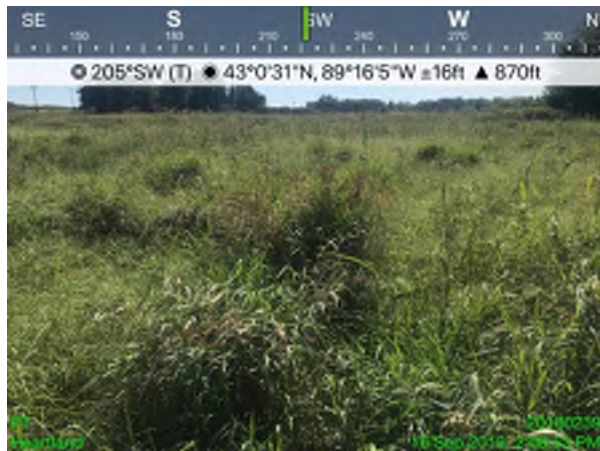


Photo #3 Sample Point P7



Photo #4 Sample Point P7



Photo #5 Sample Point P8



Photo #6 Sample Point P8



Photo #7 Sample Point P8



VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix E | Delineator Qualifications



Jeff Kraemer

Principal Scientist

506 Springdale Street

Mount Horeb, WI 53572

jeff@heartlandecological.com

(608) 490-2450

Jeff is the founder of Heartland Ecological Group, Inc. With over 16 years of experience as an environmental consultant, ecological and regulatory policy practitioner, and managing business leader, Jeff provides proven value to clients with his vast experience guiding often complex projects through environmental regulatory and technical challenges applied throughout a diversity of industry sectors. Jeff is recognized by the Wisconsin Department of Natural Resources Wetland Delineation Assurance Program and is the longest standing assured wetland delineator in the state of Wisconsin.

Jeff is a recognized expert in the field of wetland ecology and delineation; wetland restoration and mitigation banking; and regulatory policy and permitting associated with wetlands and waterways. His experience includes: Wetland Determination, Delineation & Functional Assessment; Wetland Restoration, Mitigation, Banking & Monitoring; Botanical / Biological Surveys & Natural Resource Inventories; Rare Species Surveys, Conservation Plans & Monitoring; Habitat Restoration, Wildlife Surveys, SCAT surveys, Environmental Assessments; Local, state, federal permit applications; Expert Witness testimony; and Regulatory permit compliance.

Education

MS, Biological Sciences (Emphasis in Wetland Ecology), University of Wisconsin – Milwaukee, WI, 2003

BS, Biological Sciences (Emphasis in Aquatic Biology) University of Wisconsin – La Crosse, WI, 1999

Regional Supplement Field Practicum
Wetland Training Institute (WTI)
Portage, WI, 2017

Basic and Advanced Wetland Delineation
Training, Continuing Education and Extension,
UW-La Crosse, WI, 2001

Identification of Sedges Workshop,
UW-Milwaukee, Saukville, WI, 2001

Vegetation of Wisconsin Workshop,
UW-Milwaukee, Saukville, WI 2000

Environmental Corridor Delineation Workshop,
Southeastern Wisconsin Regional Planning
Commission (SEWRPC), 2004

Wetland Soils and Hydrology Workshop,
Wetland Training Institute, Toledo, OH, 2003

Critical Methods in Wetland Delineation
University of Wisconsin - La Crosse Continuing
Education and Extension
Madison, WI, 2006 - 2018

Federal Wetland Regulatory Policy Course
Wetlands Training Institute (WTI)
Cottage Grove, WI, 2010

Registrations

Professionally Assured Wetland Delineator,
Wisconsin Department of Natural Resources
(2005-Present)

Wetland Professional in Training (WPIT),
Society of Wetland Scientists Certification
Programs



Project Experience

Energy

Ameren Corporation Transmission Line Projects: LaSalle-Ottawa, LaSalle Co., IL; Wood River Refinery, Madison Co., IL; Rockwood-Big River, Jefferson Co., MO; Saddle Creek 73, Franklin Co., MO.; Havana Rebuild, Mason Co., IL*

Managed support for environmental and GIS services to gain regulatory approvals for various new transmission lines. Provided project support for: transmission line siting; critical issues analysis; route matrices; GIS data acquisition and mapping services, coordination of regulatory agency meetings, completion of field wetland delineations; threatened and endangered species; biological assessment and Section 404 permitting, CPCN approvals; community advisory and public workshop support, and expert witness testimony.

Alliant Energy, Nelson Dewey Power Generation Facility Expansion Project, Cassville, WI

Completed field evaluations and delineations of wetlands in preparation of the National Environmental Policy Act (NEPA) documentation for a proposed expansion of the facility.

Enbridge, Inc., Southern Access Expansion Project, Crude Petroleum Pipeline Project, WI

Completed wetland delineations and habitat assessments along a 343-mile proposed crude petroleum pipeline corridor through Wisconsin as part of Enbridge Energy's Southern Access Expansion Program.

American Transmission Company, Arrowhead to Weston, WI, 345 kV Transmission Line Project

Completed wetland delineations, threatened and endangered plant surveys, and habitat assessments along a 208-mile proposed new electric transmission line.

Midwest Generation, Waukegan Power Generation Facility Expansion Project, Lake County, IL

Completed field evaluations of wetlands and threatened and endangered species in coordination with Section 404 permitting requirements for expansion of the power generation facility.

Commonwealth Edison Co. (ComEd), Prairie Program, Greater Chicago Area, IL

Managed ComEd's Prairie Program for over 10 years that involved nearly 200 acres of prairie restoration and management within their transmission line rights-of-way throughout the greater Chicago area.

Alliant Energy, Hydroelectric Dam, Prairie Du Sac, WI

Conducted purple loosestrife surveys on Lake Wisconsin shorelines and wetlands to develop a purple loosestrife management plan in support of the hydroelectric facility FERC licensing.

Alliant Energy, Edgewater Generation Facility, Sheboygan, WI

Managed and coordinated environmental regulatory process for expansion of existing fly ash disposal facility which required approvals from the USACE and WDNR for wetland impacts associated with the project.

Guardian, Pipeline Wetland Mitigation, Winnebago County, WI

Managed and lead the site selection, design, construction oversight, and long-term monitoring and management of a 30-acre wetland mitigation project consisting of prairie, wetland, and forested wetland restoration. The mitigation successfully compensated for wetland impacts associated with the Guardian gas pipeline construction.



Transportation

Canadian National Railroad, Stanberry Subdivision, Douglas County, WI

Supported CN with gaining approval to construct an approximate 2.5-mile new railroad siding track in Douglas County, WI. Completed wetland delineations and threatened and endangered resources assessments. Completed permit applications and gained approval for approximately 2-acres of wetland impacts and construction of bridges over navigable waterways.

Canadian National Railroad, Hawthorne Hill Phase 2, Douglas County, WI

Supported CN with gaining approval to construct new railroad siding track in Douglas County, WI. Completed assured wetland delineations along six miles of existing track. Completed permit applications for wetland impacts.

Canadian National Railroad, Stone Lake to Big Foot, Washburn County, WI

Completed assured wetland delineations along three miles of existing track and associate wetland delineation reports.

Canadian National Railroad, Nestle to Burlington, Racine County, WI

Completed assured wetland delineations along three miles of existing track and associate wetland delineation reports.

Wisconsin Department of Transportation (WisDOT), Neptune Wetland Mitigation Monitoring, Richland County WI

Completed annual comprehensive vegetation surveys, mapping, performance evaluations, and reporting of a 50-acre wetland mitigation site.

WisDOT, Threatened Plant Species Consultation, Port Wing, WI

Completed comprehensive study of a threatened plant species population in support of STH 13 Reconstruction project including preparation of relocation and monitoring plan, physical relocation of plants, and follow-up annual monitoring.

WisDOT, Wildcat Mountain Wetland Mitigation Monitoring, Vernon County, WI

Completed comprehensive vegetation surveys, mapping, performance evaluations, and reporting of 38-acre wetland mitigation site.

WisDOT, World Dairy Center Wetland Mitigation Bank, Madison, WI

Led the baseline studies, design and approval of an approximate 200-acre compensatory wetland mitigation bank on behalf of the WisDOT. The project involved lengthy stakeholder coordination, detailed hydrology evaluations and assessments, complex wetland determinations. The mitigation plan consisted of restoration of farmed and drained organic soils utilizing drain tile valves to wet meadow, sedge meadow, shallow marsh and mesic prairie.

City of Stoughton, Academy Street Reconstruction, Stoughton, WI

Completed wetland assessments and delineations within the study area of the Academy Street reconstruction project.

City of Tomah, Gopher Avenue Reconstruction, Tomah, WI

Completed wetland assessments and delineations within the project area of the Gopher Avenue reconstruction project.

Residential & Commercial Development

Veridian Homes, Smiths Crossing, Sun Prairie, WI

Completed wetland delineations on the approximate 50-acre portion of the proposed residential development project. Completed wetland permit applications and gained approval for impacts to jurisdictional wetlands. Completed and gained approval for artificial wetland exemptions per WI Act 183.



Hovde Properties, Sprecher Road Property, Madison, WI

Completed wetland delineations on the approximate 100-acre property proposed for residential and commercial development. Completed and gained approval for artificial wetland exemptions per WI Act 183.

Ruedeusch Development and Construction, Packers Avenue Parcel, Madison, WI

Completed wetland delineations on the approximate 30-acre property proposed for development. Completed and gained approval for artificial wetland exemptions per WI Act 183.

Newport Development Corp., Briarwoods Condominiums, Caledonia, WI

Completed wetland delineations on the approximate 10-acre property proposed for development. Completed and gained approval for artificial wetland exemptions per WI Act 183.

William Ryan Homes, West Prairie Village, Sun Prairie, WI

Completed wetland delineations throughout the approximate 80-acre property proposed for development. Completed and gained approval for artificial wetland exemptions per WI Act 183 and NR103.06.

Bielinski Homes, Chapman Property, Mukwonago, WI

Completed wetland delineations throughout the approximate 65-acre property proposed for residential development.

Logistics Property Company, Nelson-Heckel Properties, Kenosha County, WI

Completed wetland delineations throughout the approximate 105-acre property proposed for commercial development.

Country View Estates Development Project, DeForest, WI

Completed wetland delineation/evaluation, wetland permitting, and mitigation planning in support of a 400-acre mixed residential/commercial/recreational development project.

Industrial, Manufacturing & Institutional Facilities

Berlon Industries Expansion Project, Hustisford, WI

Completed wetland delineation/evaluation, wetland permitting, and wetland mitigation planning in support of the expansion of the industrial facility.

Ashley Furniture Industries Expansion Project, Arcadia, WI

Developed and gained WDNR/USACE approval for 35-acre wetland mitigation plan in support of wetland impact application for expansion of the manufacturing facility; Managed the construction of the wetland bank and completed over 10 years of monitoring and management through project close-out.

AllEnergy Proposed Sand Mine, Trempealeau County, WI

Completed wetland delineations, wetland permitting support, and wetland mitigation support for a proposed sand mine in Trempealeau County. The project consisted of over 500 acres of wetland delineation and wetland and waterway permitting associated with a rail spur expansion. Supported community engagement through presentations at various town hall meetings.

Conway Central Express Expansion Wetland Permitting, Franklin, WI

Completed wetland delineation/evaluation, wetland permitting, and wetland mitigation design for expansion of the trucking facility.

Morrison Creek Cranberry Company, Wetland Mitigation Bank Monitoring and Remediation, Oakdale, WI

Completed annual mitigation site monitoring, vegetation surveys, and performance evaluations of 60-



acre mitigation bank site. Completed mitigation remediation management plan for compliance with USACE performance standards.

Northwestern Mutual Campus Facility, Native Landscape Management, Franklin, WI

Managed and coordinated the development of a native landscape plan for the 50 acres of open space surrounding Northwestern Mutual's campus facility. The plan consisted of wetland, woodland, and prairie restoration. Managed and coordinate the implementation of the native landscape installation and long-term management.

Daybreak Foods, Proposed Facility Expansion, Lake Mills, WI

Completed wetland assessment and delineations on over 175 acres of various properties of DayBreak Foods. Provided wetland regulatory guidance to support the expansion of the egg production and processing facilities.

Sinsinawa Dominican Sisters, Grant County, WI

Completed wetland delineations on the 57-acre Sinsinawa Dominican Sisters property in support of a land use planning study.

Government & Non-Government Organizations

City of Fitchburg, Fitchburg Northeast Neighborhood Plan, Fitchburg, WI

Completed wetland mapping and assessment and developed wetland protection standards for the City of Fitchburg's NE Neighborhood Plan.

Lake Koshkonong Wetlands Association, Lake Koshkonong Water Level and Wetland Studies, Lake Koshkonong, WI

Developed and conducted various scientific wetland studies for development of a water level management plan: E. prairie fringed orchid hydrology study; Floodplain forest/hydrology study; Floristic quality assessment/vegetation mapping within 4000 acres of wetlands on behalf of the Lake Koshkonong Wetlands Association.

Richland Center Utilities, New Force Main Project, Richland Center, WI

Supported the planning and approval of a new force main utility corridor on behalf of Richland Center Utilities. Completed wetland delineations and threatened and endangered species assessments along the approximate 3.5-mile project corridor. Completed wetland and waterway permit applications, wetland restoration plans, and completed annual monitoring of restored wetland areas.

Portage Parks Department, Samuelson Fen Restoration, Portage, IN

Developed a restoration plan to restore a degraded 30-acre fen, conducted vegetation surveys, floristic quality assessments and hydrology monitoring.

Badger Prairie Health Care Center Expansion, Verona, WI

Completed wetland delineation/evaluations and wetland permitting in support of the expansion of the healthcare facility.

City of Fitchburg, Native Restoration Support, Fitchburg, WI

Assisted the City of Fitchburg with restoration activities on multiple projects involving incorporating native restoration within various regional stormwater and outlot facilities.

City of Tomah, Proposed Bike Trail Project, Tomah, WI

Completed wetland delineations along an approximate 1-mile proposed bike trail path on behalf of the City of Tomah.

City of Sun Prairie, Sheehan Park, Sun Prairie, WI

Completed wetland delineations throughout the 50-acre Sheehan Park on behalf of the City of Sun Prairie.



City of Madison, Various Projects, Madison, WI

Completed numerous wetland delineations on behalf the City of Madison in support of stormwater improvement and other facility improvement projects.

Private Landowners & Recreational Properties

Erin Hills Golf Course, Washington County, WI

Completed wetland delineations throughout the approximate 200-acre golf course property. Provided wetland regulatory guidance in support of the renovation of Erin Hills in preparation for hosting the 2017 U.S. Open championships.

La Belle Golf Course, The Prestwick Group, Inc., Lac La Belle, WI

Completed wetland delineations throughout the approximate 250-acre golf course property. Provided wetland regulatory guidance in support of the renovation of the La Belle Golf Course.

Big Hollow Wetland Mitigation Bank, Spring Green, WI

Completed wetland delineations on the approximate 200-acre property and evaluated the potential for developing a private wetland mitigation bank. Coordinated detailed hydrology monitoring and modeling to address potential off-site water impacts and support the development of the hydrology restoration plan. Completed the prospectus documents and submittals to the Interagency Review Team. Organized and led public informational meetings, and various stakeholder meetings to address local concerns.

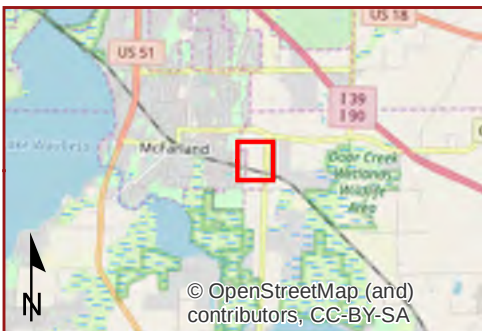
The Farm Golf Course, Cottage Grove, WI

Completed wetland delineations throughout the approximate 100-acre golf course property. Provided wetland regulatory guidance in support of residential development adjacent to the golf course.



VH Acquisitions LLC
Utterback Property North
Project #: 20190239
December 20, 2019

Appendix F | NAIP Aerial Imagery



 Study Area (39.80 ac)

0 150 300
Ft

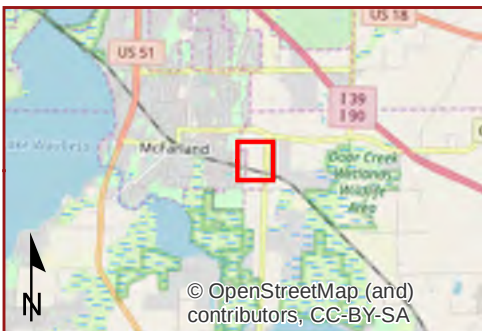
Heartland
ECOLOGICAL GROUP INC

**Appendix: 2004-06-22
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2004 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

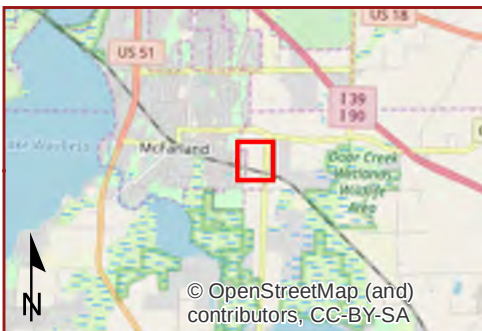
Heartland
ECOLOGICAL GROUP INC

**Appendix: 2005-06-20
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2005 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

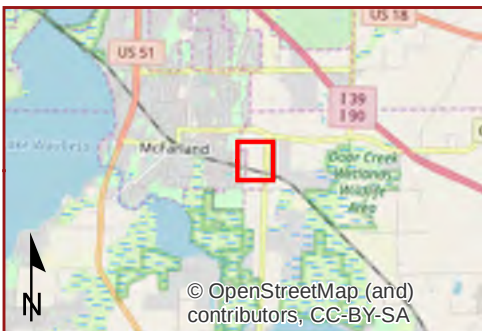
Heartland
ECOLOGICAL GROUP INC

**Appendix: 2006-07-31
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2006 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

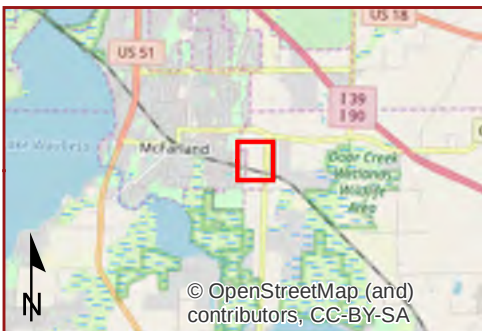
Heartland
ECOLOGICAL GROUP INC

**Appendix: 2008-08-10
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2008 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

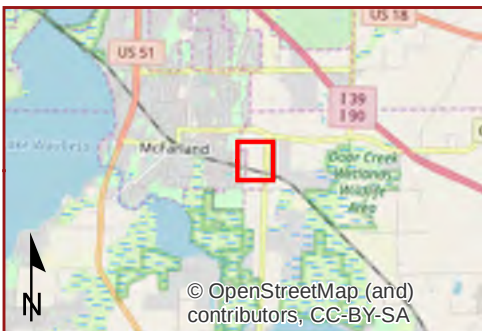
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**Appendix: 2010-07-02
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2010 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

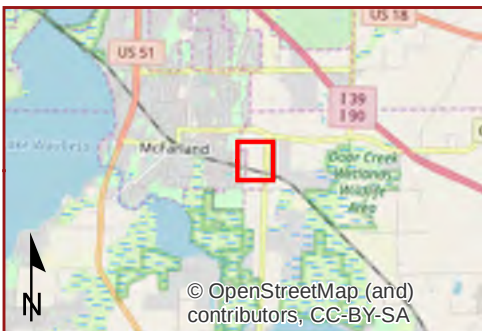
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**Appendix: 2013-06-19
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2013 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

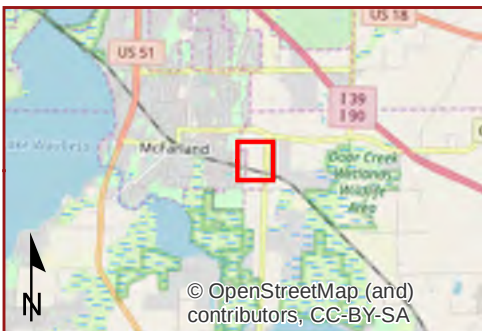
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**Appendix: 2015-10-11
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2015 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

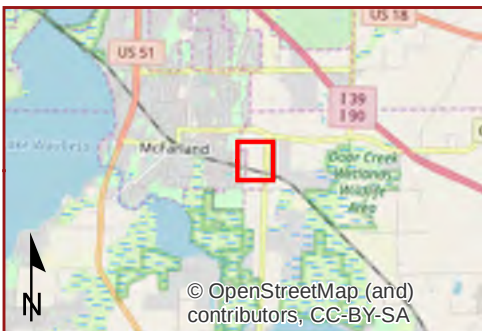
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**Appendix: 2017-09-03
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2017 NAIP
Data: USDA

12/17/2019



 Study Area (39.80 ac)

0 150 300
Ft

Heartland
ECOLOGICAL GROUP INC

**Appendix: 2018-10-04
NAIP Aerial Imagery**

Utterback Property North
Project #20190239
T6N, R10E, S02
T Dunn, Dane Co, WI

2018 NAIP
Data: USDA

12/17/2019

APPENDIX G

DRAFT MAINTENANCE AGREEMENT

Maintenance provisions:

Detention Basin

Visual inspection of the detention basin and outlet structure shall be performed, at a minimum annually. The inspections shall include checking for potential problems such as: subsidence, erosion, tree growth in and around the embankment and outfall structure, sediment accumulation, clogging of outfall structure, and damage to the emergency spillway. Problems identified by the inspections shall be repaired as soon as practicable.

Sediment accumulations shall be removed by dredging when two (2) foot of siltation has occurred or as directed by the Village of Waunakee. The dredged material shall be removed and disposed of in accordance with NR 347.

The detention basin shall be mowed a minimum of twice per year. Mowing shall maintain a minimum grass height of 6 to 8 inches. Areas of sparse vegetation shall be reseeded. Additional fertilizer shall be applied as needed, per the results of a soil test.

Separate and distinct records shall be maintained by the owner to record the specific activities and costs thereof for the maintenance plan implementation. The records shall include the dates of maintenance visits and the specific work performed. Records shall be kept as required by local, state or federal law.

Infiltration Basin

Visual Inspection of the Infiltration Basin shall be performed, at a minimum, annually.

Maintenance shall be required when system shows standing water beyond 24 hours of rain event. Cleaning shall consist of removal of sediment, two (2) foot undercut, undercut replacement with material consisting of 15-30% compost and 70-85% sand and restoration in-kind.

Restoration of plant material shall be with native plugs or seed mixture tolerant of fluctuating water conditions. If a seed mixture is used steps shall be taken to assure vegetation establishes

Document No.

**ROSEWOOD FIELDS
DECLARATION OF PROTECTIVE COVENANTS,
CONDITIONS AND RESTRICTIONS**

**VILLAGE OF MCFARLAND,
DANE COUNTY, WI.**

PREAMBLE

Drafted by and return to:
Angie Christensen
Veridian Homes
6801 South Towne Drive
Madison, WI 53713

See Exhibit "B"
(Parcel Identification Numbers)

This Declaration of Protective Covenants, Conditions and Restrictions (the "**Declaration**") made this _____ day of _____, 20__, by VH Rosewood Fields LLC, a Wisconsin Limited Liability Company (collectively, hereinafter referred to as the "**Declarant**") and/or its successors and assigns.

WHEREAS, Declarant is the owner of real property legally described as the plat of Rosewood Fields (the "**Plat**") located in the Village of McFarland, Dane County, Wisconsin, more particularly described and depicted in Exhibit "A" attached hereto and incorporated herein by reference, and desires to build thereon a planned development with housing units (the "**Development**"); and

WHEREAS, Declarant desires to provide for the maintenance and enhancement of property values and amenities in said Development, and for the preservation of the properties and improvements thereon, as well as, for the preservation of said Development's distinctive style, and to prevent the erection, or maintenance of poorly designed or constructed improvements; and

WHEREAS, to the above end, Declarant desires to subject said real property, to the covenants, restrictions, easements, charges and liens hereinafter set forth, each and all of which is and are for the benefit of said property and each owner thereof; and

WHEREAS, Declarant has thought it desirable for the efficient maintenance and preservation of the values of said Development to create an Association to which should be delegated and assigned the powers of

owning, maintaining and administering the Common Property and facilities, as set forth below, and administering and enforcing the covenants and restrictions, and collecting and disbursing the Assessments and charges as hereinafter or in the future created or established, and promoting the health, welfare and recreation of the Development's residents. Declarant will incorporate the Rosewood Fields Homeowners Association, Inc. a non-profit, non-stock corporation, under the laws of the State of Wisconsin (the "**Association**") for such purposes;

NOW, THEREFORE, the Declarant declares that the following real property legally described and depicted in Exhibit "A", attached hereto and incorporated herein by reference, will and shall be sold, transferred and conveyed subject to the easements, covenants, restrictions, assessments, charges and liens hereinafter set forth.

PART A

ASSOCIATION MATTERS

A-1) Definitions.

A) "Association" shall mean and refer to as Rosewood Fields Homeowners Association, Inc., and its successors and assigns.

B) "Common Property" shall mean those areas located in the Development which are not contained within a Lot and which the Declarant or the Association, as the case may be, shall be required to maintain in accordance with agreements between Declarant and the Village of McFarland, or pursuant to applicable Village of McFarland rules, regulations and ordinances, until such time as maintenance of such areas is turned over to the Village of McFarland and the Village of McFarland accepts such maintenance. Areas within the Development which will initially constitute Common Property include, but are not limited to, storm water management and park areas.

C) "Declarant" shall mean and refer to VH Rosewood Fields LLC; a Wisconsin Limited Liability Company and/or their successors and assigns.

D) "Lot" shall mean and refer to the lands described as Rosewood Fields as described and depicted in Exhibit "A", now owned by Declarant, but which Declarant in the future intends to convey to purchasers who shall thereupon become members of the Association. The term "Property" or "Properties" shall be synonymous with the term Lot.

E) "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title to any of the Properties described in Exhibit "A". A purchaser of any of said Properties by land contract shall be referred to as "Owner" instead of the land contract vendor.

F) "Occupant" shall mean and refer to the occupant of any of the Properties who shall either be an Owner or a lessee who holds a written lease having an initial term of twelve months or more.

G) "Subdivision" shall refer to the lands described in Exhibit "A". The term "Subdivision" is synonymous with the term "Development".

A-2) Membership and Voting Rights.

A) Members. Declarant will incorporate the Association. Each Owner of a Lot shall automatically become a member of the Association. By acceptance of the Deed or other instrument of

conveyance, the Owner(s) of each Lot consent to such Owner's membership in the Association whether or not specified on the deed to the Owner. Membership in the Association is appurtenant to each Lot. Each Owner of a Lot shall automatically be entitled to the benefits and subject to the burdens relating to such membership in the Association. The Association shall have authority to manage the Common Property. Persons or entities, including a land contract vendor, who hold an interest merely as security for the performance of an obligation, shall not be members of the Association. Tenants of Properties who are not Owners shall not be members of the Association. To the extent that Declarant owns any Lot, Declarant shall be a member of the Association until such ownership terminates.

B) Voting Rights.

1) Each member shall be entitled to one vote for each Lot owned except as set forth in A-2(B) (2) below.

2) When there is more than one Owner of a Lot, said Owners shall only be entitled to one collective vote for each Lot. There shall be no fractional votes or voting. When there is more than one Owner of any Lot, the vote attributable to such ownership must be cast unanimously by all the Owners of that Lot, or it shall not be considered for any purpose.

C) Proxies. Any Member may vote by proxy. All proxies shall be in writing and signed by the Owner or in cases where there is more than one Owner, by all Owners of the Lot.

D) Articles of Incorporation and By-Laws. The purposes and powers of the Association and the rights and obligations with respect to the members thereof, shall be governed by the Articles of Incorporation and By-Laws of the Association; provided, however, that such Articles of Incorporation and By-Laws shall be subject to, and shall not contravene, the terms, conditions, benefits and burdens set forth in this Declaration.

E) First Year's Operating Expenses. Commencing on the date established for the payment of assessments under Section A-4(B)(1), Declarant shall pay to the Association an amount equal to the estimated operating expenses of the Association for a period of one (1) year, less assessments on Lots owned by Declarant actually paid to the Association for the one (1) year period of time. Said payment may be made in a lump sum or in twelve (12) monthly installments, at Declarant's option. Prior to said date, Declarant shall be solely responsible for payment of all maintenance expenses.

A-3) Description.

A) Responsibility for Assessments. Declarant shall turn over to the Association, at the time control is turned over to the Members, any surplus received by the Association of income over expenses. Assessments shall be based on the number of assessment units (an "**Assessment Unit**"), which are assigned to Lots in the Development based upon their intended use at the present time. The number of Assessment Units for a particular Lot will be divided by the total number of Assessment Units in the Development to arrive at a particular Lot's percentage share ("**Percentage Interest**") of assessments for common area maintenance and other expenses, which the Association is permitted to assess to members under the Declaration. The Declarant shall be responsible for payment of assessments on Lots owned by Declarant, only at such time as a Declarant owned Lot has been improved with street, utilities and such other improvements as are necessary to permit commencement of construction on such Lot. For the purposes of the following table, a single family residence shall be deemed a Dwelling Unit.

<u>Use</u>	<u>Number of Assessment Units</u>
1) Single Family:	One (1) per Dwelling Unit.
2) Twins (2 unit residential)	One (1) per Dwelling Unit (each side defined as a dwelling unit)

B) Association Management. The Association is required to retain a professional property management company with the experience necessary to perform the duties of the Association (the "**Management Company**"). The Association shall enter into a management contract (the "**Management Contract**") with the Management Company on such terms and conditions as the Association and the Management Company shall agree. The initial Management Company is DSI Real Estate Group, Inc., a Wisconsin Corporation, which is affiliated with the Declarant by reason of common ownership. The Management Contract between DSI Real Estate Group, Inc. and the Association has not been negotiated on an arm's length basis.

C) General Fund. As used herein, the term "**Surplus**" shall mean the amount by which assessments collected by the Management Company on behalf of the Association to pay for common expenses relating to the Property exceed the common expenses for the fiscal year in question. The Management Company shall deposit and hold any Surplus in the Association's operating account maintained by the Management Company. The Surplus, in the discretion of the Association working in conjunction with the Management Company, may be applied to future Association expenses as they become due, but there shall be no obligation on either the Association's or the Management Company's part to return the Surplus to lot owners.

D) Percentage Interest for Condemnation or Insurance Proceeds. For the purposes of establishing an Owner's percentage of insurance proceeds or condemnation awards in the event any portion of the Common Property is completely destroyed or taken by eminent domain and is not reconstructed, each Owner shall have a percentage interest in the insurance or condemnation proceeds equal to the Percentage Interest of such Owner in the Common Property.

E) Conveyance, Lease or Encumbrance of Percentage Interest. Any deed, mortgage, lease or other instrument purporting to convey, encumber or lease for a period of time in excess of one (1) year (a "**Lease**") any Lot shall be deemed to include the Owner's Percentage Interest in the Common Property and in the insurance proceeds or condemnation awards even though such interest is not expressly described or referred to therein. The conveyance, encumbrance or Lease of an Owner's Percentage Interest in the Common Property independent of the appurtenant Lot and the conveyance, encumbrance or Lease of an appurtenant Lot independent of the Owner's Percentage Interest in the Common Property shall be prohibited.

F) Ownership. The Common Property is dedicated to the Village of McFarland for the purposes described in the Plat

G) Damage or Destruction of Common Property by Owner. In the event any Common Property is damaged or destroyed by an Owner or any of his guests, lessees, tenants, licensees, agents or member(s) of his family, including pets, said Owner does hereby irrevocably authorize the Association to repair said damage. The Association shall repair and restore any damaged area to its former condition. The amount necessary for said repair shall become a special assessment upon the Property of said Owner.

A-4) Maintenance of Common Property

A) Maintenance Requirements.

1) Responsible Party. The Declarant or the Association shall provide for the care, operation, management, maintenance and repair of the Common Property, until maintenance obligations are assumed by the Village of McFarland. The Common Property shall be maintained in good and safe condition, in accordance with the agreements between Declarant and the Village, as well as applicable Village ordinances, rules and regulations.

2) General Responsibilities. Maintenance shall include, but not be limited to, responsibility for landscaping and lawn care, trash, snow removal including shoveling with particular attention being paid to cross walk ramps and islands, improvements to common areas, upkeep of storm water management facilities which may include detention basins and drainage swales, common property lighting and/or other common property utility charges and any special street design features or traffic calming features.

3) Specific Responsibilities. Certain streets within the Property may include special traffic islands and traffic calming measures within the public right-of-way. The Association shall be responsible, at the Association's sole cost and expense, for the maintenance and upkeep of such physical traffic measures. Such maintenance and upkeep shall be performed at the discretion of the Association except to the extent required by the Village of McFarland, and shall include landscaping, snow and ice removal. If the special street design features or landscaping are not maintained, the Village of McFarland will give notice to the Association that it is not being maintained. If the Association does not respond to the notice within sixty (60) days, the Village may modify the physical traffic measures to minimize maintenance needs; including replacing landscaped surfaces with asphalt. The Association and persons involved with the maintenance and upkeep of the special traffic measures shall indemnify and hold harmless the Village of McFarland and its boards and commissions, and their officers, agents and employees from and against all claims, demands, loss or liability of any kind, type or description, related to the maintenance and upkeep of the special traffic measures.

4) In order to carry out its maintenance obligations, the Association may enter into a contract with a reputable property management company ("**Management Company**"), pursuant to which contract the Management Company shall assume the maintenance obligations of the Association as provided herein.

5) Any and all expenses incurred by the Management Company, on behalf of and pursuant to its contract with the Association, in connection with the management and maintenance of the Common Property and administration of the Association shall be deemed to be common expenses ("**Common Expenses**"), including, without limitation, expenses incurred for: landscaping and lawn care; snow shoveling and plowing; improvements to the Common Property; common grounds security lighting; municipal utility services for Common Property enforcement of this Declaration (including attorneys' fees); and maintenance and management salaries and wages.

B) Assessments.

1) The Association, or the Management Company, on its behalf, shall levy annual general assessments (“**General Assessments**”) against each Lot beginning January 1, 2016 or the purpose of maintaining a fund from which Common Expenses may be paid. The General Assessments against each Lot shall be assessed according to their Percentage Interests in the Common Property. General Assessments shall be due in advance on the first day of each year, or in such other manner as the Association may set forth in the Bylaws. Any General Assessment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with interest, collection costs, and reasonable attorneys’ fees, shall constitute a lien on the Lot on which it is assessed.

2) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, may, whenever necessary or appropriate, levy special assessments (“**Special Assessments**”) against the Lots for deficiencies in the case of destruction or condemnation, for defraying the cost of improvements to the Common Property or for any other purpose for which the Association and/or the Management Company may determine a Special Assessment is necessary or appropriate for the improvement or benefit of the Subdivision. Special Assessments shall be paid at such time and in such manner as the Association or the Management Company may determine. Any Special Assessment or installment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with the interest, collection costs and reasonable attorneys' fees, shall constitute a lien on the Lot on which it is assessed.

3) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, shall have the right to collect all General and Special Assessments and such sums shall constitute a lien on such Lot. The Owner of a Lot, or any portion thereof, shall be personally obligated to pay such charges which were assessed or accrued upon the land owned during the period of Ownership. The Association or the Management Company, on behalf of and pursuant to its contract with the Association, may commence an action against any Owner personally obligated to pay the charges or to foreclose the lien for such charge against any Lots. Any such foreclosure action may be brought at the Association election, either in the same manner as an action to foreclose a real estate mortgage, or as a proceeding to enforce a statutory maintenance lien as provided in Section 779.70, Wis. Stats., to the extent said Section is applicable. Any lien in favor of the Association/Management Company securing unpaid charges arising by virtue of this Declaration shall be subject and subordinate to the lien of any mortgage whether the mortgage is executed or recorded prior to or after the creation of such lien.

C) **Subordination of the Lien to Mortgages.** The lien of the assessments provided for herein shall be subordinate to the lien of any first mortgage. Sale or transfer of any Property shall not release the assessment lien. However, the sale or transfer of any Property pursuant to mortgage foreclosure or any proceeding in lieu thereof shall extinguish the lien of such assessment(s) as to payments which become due prior to such sale or transfer. No sale or transfer pursuant to foreclosure or proceedings in lieu thereof shall relieve such Property from liability from any assessments thereafter becoming due or from the lien thereof.

D) **Joint and Several Liabilities of Grantor and Grantee.** Upon a voluntary conveyance, the grantee of a Property shall be jointly and severally liable with the grantor for all unpaid assessments against the grantor as provided in this Declaration up to the time of conveyance, without prejudice to the grantee's right to recover from the grantor the amount paid by the grantee therefore. However, any such grantee shall be entitled to a statement from the Association setting forth the amount of such unpaid assessment and any such grantee shall not be liable for, nor shall the Property conveyed be subject to a lien for, any unpaid assessments against the grantor pursuant to this Declaration in excess of the amount therein set forth.

PART B
CONDITIONS, COVENANTS AND RESTRICTIONS

B-1) Applicability. The following provisions in this Part B shall apply to all Lots and Outlots, as described in Exhibit “A” and such other Lots or Outlots as may, in the future, be subjected to this Declaration, as the same may be amended from time to time, by Declarant in the sole exercise of Declarant’s discretion.

B-2) Land Use And Building Type. Only the following designated uses for all private Lots and Outlot 3 shall be permitted. The remaining Outlots are dedicated to the Village and uses are noted for informational purposes only.

A) Lots 1-96 and 107-117 shall be used for single family residential purposes. No building shall be erected, altered, placed or permitted to remain on any Lot other than one detached single family dwelling unit not to exceed two and one-half stories in height. Each dwelling unit shall have an attached or detached garage of a size to be approved by the Committee, as that term is defined below. The size of a dwelling unit to be constructed on specific Lots shall not be less than the minimum size to be established hereinafter.

B) Lots 97-106 shall be used for twin single family homes.

C) Outlots 1 and 4 are dedicated to the public for stormwater management.

D) Outlot 2 shall be for private alley purposes and shall be maintained by the Association.

E) Outlot 3 is dedicated to the public for park purposes.

F) Outlot 5 is dedicated for private open space and shall be maintained by the Association.

G) Lease Requirements.

1) *Lease Requirements.* The following provisions are not applicable to Lots 16 and 17 of the Subdivision. An Owner may rent its dwelling by written Lease (a “Lease”), provided that

a) The term of any such Lease shall not be less than six (6) months;

b) The Owner has obtained the prior written approval of the Association to the proposed tenant and the terms of the proposed Lease, and the written approval for any proposed extension of the Lease; and

c) The Lease contains a statement obligating all tenants to abide by this Declaration, the Articles, the Bylaws, and the Rules and Regulations, providing that the Lease is subject and subordinate to those instruments; and

d) The Lease provides that any default arising out of the tenant’s failure to abide by the Declaration, the Articles, the Bylaws, and the Rules and Regulations shall be enforceable by the Association as a third-party

beneficiary to the Lease and that the Association shall have, in addition to all rights and remedies provided under the Declaration, the Articles, the Bylaws and the Rules and Regulations, the right to evict the tenant and/or terminate the Lease should any such violation continue for a period of ten (10) days following delivery of written notice to the Owner and the tenant specifying the violation.

2) *Standard for Approval of Lease and Tenant.* The Association may withhold approval on any reasonable basis, including, but not limited to: the failure of the Lease terms to comply with all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; the past failure of the Owner, the tenant or tenant's guests to abide by all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; and the past use by Owner, the tenant or its invitees or guests of any part of the Lot in a manner offensive or objectionable to the Association or other occupants of the Property by reason of noise, odors, vibrations, or nuisance.

3) *Violations / Remedies.*

- a) During the term of any Lease of all or any part of a Lot, each Owner of such Lot shall remain liable for the compliance of the Lot, such Owner and all tenants of the Lot with all provisions of this Declaration, the Bylaws, and the Rules and Regulations of the Association, and shall be responsible for securing such compliance from the tenants of the Lot. The Association may require that a copy of each Lease of all or any part of a Lot be filed with the Association.
- b) In the event that an Owner leases out its dwelling or any portion of its Lot in violation of this provision, the Association may impose a daily fine up to the greater of (i) an amount equal to the daily rental amount being charged by Owner to its tenant and (ii) \$100 (this daily fine shall be adjusted up every five years by 5%).

In addition to any fines imposed under this Section, the Owner shall reimburse the Association for all costs incurred by the Association, including attorneys' fees, incurred to enforce this Section, any action the Association takes under this Section B-2)E) against Owner or Owner's tenant, and to collect any outstanding amounts owed by Owner to the Association."

Uses, other than the uses set forth in this section B-2, shall not be permitted on the Lots or Outlots, as applicable, without the prior written approval of the Declarant and Committee (defined in Section B-3 below), as appropriate. After Declarant control of the Association has terminated, approval from the Association and the Committee shall be required.

Except as otherwise provided herein, no buildings, signs or other structures incidental to the use of any Outlot, which have been approved in advance by the Committee, may be constructed on any Outlot.

All rights-of-way noted on the Plat shall be dedicated as permanent public streets and rights-of-way and shall be improved in accordance with agreements entered into between the Declarant and the municipality in which the Development is located.

B-3) Architectural Control. No building shall be erected, placed or altered on any Lot until the construction plans and specifications and a plan showing the location of the structure have been approved by a majority of the Architectural Control Committee (the "**Committee**") as to quality of workmanship and materials, harmony of external design with existing structures, and as to location with respect to

topography and finish grade elevation. There shall be a variation in building elevations on adjacent Lots. Approval shall be as provided below.

B-4) Dwellings and Landscaping. The landscaping to be installed on all Lots must meet or exceed the minimum number of points for foundation planting and cumulative total landscaping points, including foundation planting points as set forth hereafter as described in Exhibit “C”, attached hereto and incorporated herein by reference and further described in the Design Guidelines. The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit “D”, attached hereto and incorporated herein by reference and further referenced in the Design Guidelines. The structure and the minimum landscaping requirements shall be completed within nine (9) months after issuance of a building permit. Landscape installed by the Declarant may or may not meet the minimum number of required points. All driveways shall be of concrete and shall be installed within nine (9) months after substantial completion of the structure. No outbuilding or accessory building of any nature shall be erected on any Lot with the exception of detached garages approved by the Committee in advance of construction. No above-ground swimming pools shall be permitted. All Lot areas not used as a building site, or under cultivation as a family garden, shall be planted with grass seed or shall be sodded, and shall be maintained on a regular seasonal basis, including mowing of a frequency of not less than once every fourteen (14) days during the lawn growing season. Maintenance of all improvements on a Lot shall be performed by the Owner. Maintenance shall include, but not be limited to, watering, pruning and routine fertilizing and mulching of all plantings and plant beds, replacement of dead, dying and/or diseased trees and shrubs, prompt removal of weeds, trash and debris from plant beds and areas adjacent to shrubs and trees so as to keep said landscaping in a healthy, attractive and neat condition.

If the Owner of any Lot, after reasonable notice, fails or refuses to install landscaping as described herein, or maintain it as required above, the Committee, through its duly authorized agents or employees, shall have the right to enter upon said Lot at reasonable hours to perform said landscaping and/or maintenance. The costs of the materials and labor to perform such landscaping and/or maintenance shall be assessed against said Lot in accordance with the terms of Section A-4 (B)(2) above, which assessment may be foreclosed or collected in accordance with the terms hereof or collected as provided herein.

B-5) Vehicle and/or Equipment Storage. No inoperable, dilapidated or junk vehicles of any nature may be kept upon any Lot except in a fully enclosed garage. The exterior storage of boats, trailers, travel trailers, campers, motorcycles, recreational vehicles, automobiles or trucks, portable moving and storage containers, mini storage or on-site storage containers (collectively, without limitation by reason of enumeration “**Equipment**”), of any nature is prohibited whether or not screened from public view. No Equipment shall be parked or stored on lawns. The temporary storage of vehicles in a drive area for the purpose of loading or unloading for a period not to exceed twelve (12) hours is permitted. No commercial vehicles, including trucks, semi-trailers, trailers, may be stored or parked overnight on or in front of said Lots except in an enclosed garage

B-6) Construction On Adjoining Lots. Nothing contained herein shall be construed to prohibit the construction of a residential dwelling or private garage partially on one Lot and partially on an adjoining Lot without regard to side yards between adjoining Lots, provided that all such Lots are owned by the same person or persons.

B-7) Easements.

A) No structure, planting, or other materials shall be placed or permitted to remain within any easement of record (an “**Easement**”) if any, which may damage or interfere with the installation and maintenance of utilities, or which may change, obstruct or retard the flow of water or the

direction of such flow through the Easement or through such other drainage channels or swales that may have been created by the Plat or otherwise. The Easements located on each Lot and all improvements therein shall be maintained continuously by the owner of the Lot, except for those improvements for which a public authority or utility company is responsible.

B) The Intra-block drainage Easement shall be graded with the construction of each principal structure in accordance with the approved Stormwater Drainage Plan on file with the Village Engineer and the Zoning Administration, as amended in accordance with the Village Ordinances.

C) Public utility easements six feet (6') wide (unless otherwise noted on the Plat). Utility easements as herein set forth on the Plat are for the use of public and private utilities having the right-of-way to serve the area.

D) All lots within this plat are subject to a non-exclusive easement for drainage purposes which shall be a minimum of six feet (6') in width measured from the property line to the interior of each lot except that the easement shall be twelve feet (12') in width on the perimeter of the Plat. Easements shall not be required on the property lines shared with greenways or public streets.

E) There will be a public storm water drainage easement on Outlot 5.

F) Temporary Construction Easement. Each Lot which has been made subject to this Declaration (for the purposes of this paragraph each Lot described herein shall be referred to as the "**Primary Lot**") is hereby made subject to a temporary, non-exclusive easement over, under, upon, across and through so much of the side yards of the Primary Lot as may be necessary for the safe and code compliant construction of a basement, including but not limited to footings, foundation and basement walls, on the adjoining Lot (the "**Adjoining Lot**"). The purpose of this Temporary Construction Easement is to permit Declarant to adequately slope and provide lateral support to the walls of the basement excavation in question so as to protect against cave-ins and loss of lateral support, and it shall be broadly construed to effectuate such purpose. This Temporary Construction Easement shall remain in effect for so long as it is needed to permit construction of the basement on the Adjoining Lot in a safe and code compliant manner. After completion, Declarant shall backfill the excavated area, compact such backfill in accordance with good construction practices, and restore the area affected by this easement to the condition existing immediately preceding the excavation, including replacement of sod, trees, shrubs and other landscaping, at no expense to the Owner of the Adjoining Lot (collectively "**Restoration**"). This Temporary Construction Easement shall, without further notice, terminate upon completion of said Restoration.

G) Lots 97-106 shall be subject to a Declaration of Party Wall Agreement. The Lots described are proposed twin homes which are two homes that share a party wall and roof with each other.

H) Certain Lots will feature grouped mailboxes (CBU – cluster box units) on each Lot and will have a recorded Multi-User Mailbox Easement for these Lots. The selected Lots for the CBU's will be determined by each constructed phase and will be noted in the Neighborhood Disclosure Addendum A for Buyer's notification at the time the Sales Contract is signed.

I) Outlot 4 will be subject to a Sign and Landscaping Easement and will be maintained by the Association.

J) Lots 94-95 and 89-90 will be subject to a 20 foot (20') wide (10' on each Lot) public storm sewer easement.

K) Lots 107-115 and 117 will be subject to a 25 foot (25') wide gas pipeline easement.

B-8) Slope and Swale Areas.

A) The graded slopes and swales as established by Declarant shall remain as permanent. Within these slopes and swales, no structure, planting or other material shall be placed or permitted to remain, or other activities undertaken which may damage or interfere with established slope and swale ratios, create erosion or sliding problems or which may change the direction of flow of drainage channels or obstruct or retard the flow of water through drainage channels. The slopes and swales of each Lot and all improvements in them shall be maintained continuously by the Owner of a Lot, at the Owner's sole expense, except for those improvements for which a public authority or utility company is responsible.

B) In order to control run off, all down spouts and down spout extenders are to drain into a permeable area such as grass or a planting bed.

C) Declarant and the Village of McFarland have agreed to a certain Storm Water Management Plan. In the event of conflict between any plans and such Storm Water Management Plan, the Storm Water Management Plan shall control. Declarant and the Association shall each have the right to enter upon any Lot at any time for the purpose of inspection, maintenance or correction of any drainage condition and the Lot Owner shall be responsible for the cost thereof.

D) Any disputes relating to drainage swales, drainage or other surface water issues, shall be resolved by the Board of Directors of the Association, which may seek the advice of the Village Engineer of the Village of McFarland. The Association shall establish procedures by which such decisions can be heard by the Board of Directors and decided by said Board.

B-9) Nuisances. No noxious or offensive activity shall be carried on upon any Lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood or which may have a detrimental effect on the value of other Lots and/or improvements.

B-10) Temporary Structures. No structure of a temporary character, trailer, basement, tent, shack, garage, barn or other outbuilding shall be used on any Lot at any time as a residence, either temporarily or permanently.

B-11) Signs. No sign of any kind shall be displayed to the public view on any Lot except, one professional sign of not more than one square foot, one sign of not more than six square feet advertising the property for sale or rent or signs without regard to size used by the Declarant, a builder or licensed real estate broker to advertise the property during the construction and sales period or to identify the subdivision and/or its Declarant.

B-12) Entrance Sign. It is contemplated there will be an entrance monument sign and associated easement in Outlot 4 of the Plat. The sign and easement associated with the sign will be owned by the Association. The Association will be responsible for the maintenance of said sign to include watering, mowing and basic landscape requirements. The Association is responsible for determining whether said signs shall remain in place and assess all owners in the neighborhood of any future replacement cost after Declarant turns over control of the Association to the Owners

B-13) Animals. No animals, livestock or poultry of any kind shall be raised, bred or kept on any Lot, except that dogs, cats or other household pets may be kept, provided that they are not kept, bred or maintained for any commercial purpose. No animal enclosure, house, pen or fences or similar device shall be placed on any Lot without the prior written approval of the Committee which may require special landscaping and screening.

B-14) Garbage and Refuse Disposal. No Lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage or other waste shall not be kept except in sanitary containers. No incinerators shall be permitted. Other equipment for the storage or disposal of such material shall be kept in a clean and sanitary condition. No trash, building materials, debris, leaves, lawn clippings, rocks or earth shall be placed in any Outlot.

B-15) Sight Distance at Intersections. No fence, wall, hedge or shrub planting which obstructs sight lines at elevations between 30” and 72” above the roadways shall be placed or permitted to remain on any corner Lot within the triangular area formed by the street property lines and a line connecting them at points twenty five (25) feet from the intersection of the street lines, or in the case of a rounded property corner, from the intersection of the street property lines extended. The same sight-line limitations shall apply on any Lot within ten (10) feet from the intersection of a street property line with the edge of a driveway. No tree shall be permitted to remain within such distances of such intersections unless the foliage line is maintained at sufficient height to prevent obstruction of such sight lines.

B-16) Mailboxes and posts. Based on new, recently adopted requirements of the United States Postal Service, the Rosewood Fields platted lots will receive mail by using CBU’s (cluster box units) instead of curb side mailboxes on newly constructed homesites. These new requirements will phase out curb side mailboxes nationwide solely at the Postal Service's discretion.

B-17) Notices to Owners. The following information is being put of record in order to give record notice to all Owners, mortgagees and other persons and entities having an interest in the Property:

A) Private: Private Alleys (collectively, “Alleys”) are shown on the Plat as Outlots. Said Alley will be dedicated to the Association. The cost of the maintenance of the Alleys shall be the responsibility of the Association. Certain Lots in the Development border Alleys, which are intended to serve as the access to such Lots. Restrictions on the Alleys are summarized as follows:

1) There will be no public trash, leaf or recycled material pick-up service in said Alleys, but instead, there will be one or more trash pick-up collection points designated by the Declarant to be used by Owners of a Lot bordering the Alleys in question. Trash pick-up may initially be provided by the Association and charged as an expense of the Association, but such arrangement may be changed to provide for public or some other method of trash pick-up at a future time as determined by the Declarant or the Association. All trash receptacles to include recycling receptacles must be removed from the Alleys within 24 hours after trash or recycled material pick-up.

2) Mailboxes for homes located on the Alleys may be clustered at one end of the Alleys in question or clustered at various locations along the public street. Location and placement of the mailboxes is the sole discretion of the United States Postal Service.

3) Snow removal, repair and replacement of Alleys will be the responsibility of the Association.

4) Homes with garage access to a private alley are required to have two (2) “coach” lights on each side of the garage door, which will be wired to a photo electric eye for automatic use from dusk to dawn. The lights have been pre-selected by Declarant. There are four (4) selections available. It is the Buyer’s responsibility to maintain the lights so that they are always operational.

B) Plantings, flower beds, and entry signs (including utility installations connected therewith) constructed and installed by Declarant, if any, shall be deemed a part of the Common Property. The Association is obligated to maintain any entry feature; maintenance shall include electrical charges (if any), sign repair and maintenance of the landscaping including mowing of all lawns and grass areas. The cost of maintenance of said Common Property shall be an assessment against all of the Property in the subdivision in accordance with the Declaration, for so long as such maintenance is necessary or required adversely affects the natural flow of surface or underground waters with in the area permitted.

C) Notice is hereby given that as of the date hereof there is an active railroad on certain lands in close proximity to the subdivision, and that the foregoing railroad operation may have an effect on the use, enjoyment and market value of Lots in the subdivision, and in particular, those Lots located in close proximity to the railroad. Each buyer should familiarize themselves with the location of their Lot and its proximity to the railroad operation.

B-18) Improvements Within Easements. Any improvements (for example, fences, landscaping) located within any part of a Lot which is subject to a utility easement is subject to removal at the Owner’s expense for utility maintenance and other reasons as determined by the party benefitted by the easement. Reinstallation of any improvement would be at the Owner’s cost and would also be subject to the discretion of the party benefitted by the easement and is subject to terms and conditions as set forth on the final plat.

PART C

ARCHITECTURAL CONTROL COMMITTEE

C-1) Membership. Declarant shall establish an Architectural Control Committee (the “Committee”) consisting of three (3) members. So long as Declarant has title to any Lot subject to this Declaration, the Committee shall be appointed by Declarant. After Declarant no longer has title to any Lot within the Development or at such earlier time as determined by the Declarant, the initial members of the Committee shall resign and the Association shall elect three (3) Owners to serve on the Committee. At any time, Declarant may elect to surrender the selection of the members of the Committee to the Association.

A majority of the Committee may designate a representative to act for it. In the event of the death or resignation of any member of the Committee, the remaining members shall have full authority to designate a successor.

The Committee appointed hereunder shall serve for the time period specified in paragraph C-10, below. Any Committee member may resign prior to said date. Such resignation shall be effective upon receipt. If a resignation shall occur, prior to turning over control of the Committee, then the remaining members of the Committee may appoint a replacement.

C-2) Architectural Control. No structure, whether residence, accessory building, tennis or sport court, swimming pool, decks, patios, antenna (whether located on a structure or on a Lot), flag pole, wall, fence, landscaping, recreational equipment or other improvements, including exterior colors and

materials to be applied to said improvements, shall be constructed, maintained or performed upon any Lot and no alteration or repainting of the exterior of a structure shall be made unless complete Architectural Review Application (“**Application**”) Plans, specification and plot plans therefore shall have been submitted to and approved in writing by a majority of the Committee. Approval shall also be required for location of improvements with respect to topography and finish grade elevation. Said Application, plans, specifications and plot plans shall show the exterior design, height, building materials and color scheme thereof, the location of the structure plotted horizontally and vertically, the location and size of driveways, the plans for required landscaping, and the grading plan. A copy of such Application, plan specifications and plot plans as finally approved shall be deposited with the Committee. The Application can be found on the Veridian Homes website www.veridianhomes.com. Select Homeowner Resources (located on the top toolbar), select Architectural Control Committee and select the appropriate application for your request.

C-3) Plan Review. The Committee shall review said Application, plans and specifications as to quality of workmanship and materials, harmony of external design with existing or proposed structures and as to location with respect to topography and finish grade elevation. The Committee shall use the guidelines set forth in this Declaration as an aid in exercising its architectural control responsibilities hereunder, but nothing contained herein or therein shall limit the Committee’s discretion to grant variances from or make changes to, the guidelines, as they shall determine in the sole exercise of their discretion.

C-4) Procedure.

A) Neither the members of the Committee nor its designated representative shall be entitled to any compensation for services performed pursuant to this covenant for the initial approval of a residential structure. Thereafter, said Committee may charge a “request for action” or “approval” fee not to exceed Fifty and no/100 Dollars (\$50.00) for each such request or approval. The Committee’s approval or disapproval, as required in these Covenants, shall be in writing. In the event the Committee fails to provide, in writing, approval or disapproval within thirty (30) days after application, plans and specifications or any other matters requiring approval have been submitted to it, the request shall be deemed denied.

B) A submission will not be complete, and the thirty (30)-day approval time, as applicable, set forth above shall not commence until all documents required herein have been submitted. All such submissions shall be made to the Committee at the address set forth in this Declaration or to such other address that the Committee may designate.

C) The Committee shall have the sole right to reject any Application and plans which, in the judgment and sole opinion of a majority of its members are not in conformity with this Declaration; or are not desirable for aesthetic reasons; or are not in harmony with buildings located on the surrounding Lots; or are not in conformity with the general purposes of this Declaration.

D) The Committee shall exercise its sole approval authority and discretion in good faith and each Owner, by acceptance of a deed to, or any other interest in, a Lot, agrees to hold the Committee harmless from any perceived discrepancies in the Committee’s good-faith performance of its duties. Refusal of approval of plans by the Committee may be based on any grounds, including purely aesthetic grounds, which in the sole discretion of the Committee shall be deemed sufficient.

E) The Committee may set its own operating procedures consistent with this Declaration and any limitations hereafter imposed by the Association. The costs of operating the Committee shall be assessed by the Association as Common Property expenses, except as permitted below. The Committee may engage consultants (e.g., architects, engineers or attorneys) either on a general or on a case-by-case basis, and the costs thereof may be charged to an applicant. The members of the Committee shall not draw any compensation for serving thereon but may be reimbursed for expenses incurred in performing their duties. All funds relating to the Committee shall be handled by the Association.

C-5) Separate Village Approval. Matters which require approval of the Committee may also require approval of the Village of McFarland. Obtaining approval from the Committee and the Village of McFarland is solely the responsibility of the Owner desiring approval. Approval of Plans by the Committee shall not be deemed approval by the Village of McFarland and approval by the Village of McFarland shall not be deemed approval by the Committee.

C-6) Records. Until such time as a replacement Committee is designated, all plans, applications and requests shall be submitted to said Committee at the following address:

Rosewood Fields Homeowners Association, Inc.
Architectural Control Committee
6801 South Towne Drive
Madison, Wisconsin 53713

C-7) Committee Liability. Neither the Committee nor any member thereof shall be liable for damages to any person submitting request for approval or to any Owner of any Lot by reason of any action, failure to act, approval, disapproval or failure to approve or disapprove with regard to such requests. The Committee is not responsible for ensuring that the application and plans submitted by an Owner are in compliance with applicable laws, rules, regulations, ordinances or customary and typical building practices. The Committee does not review plans for structural design.

C-8) Indemnification. Each member or former member of the Committee, together with the personal representatives and heirs of each such person, shall be indemnified by the Association against all loss, costs, damages and expenses, including reasonable attorney's fees, asserted against, incurred by or imposed in connection with or resulting from any claim, action, suit or proceeding, including criminal proceedings, to which such person is made or threatened to be made a party by reason of service as a member thereof, except as to matters resulting in a final determination of gross negligence or willful misconduct on the part of such member. In the event of settlement of such proceeding, indemnification shall be provided only in connection with such matters covered by the settlement as to which the Association is advised by counsel that the person to be indemnified has not been guilty of gross negligence or willful misconduct in the performance of such person as a member in the matter involved. This right of indemnification shall be in addition to all other rights and defenses. All liabilities, losses, damages, costs and expenses incurred or suffered by the Association in connection with this indemnification shall be a Common Property expense. Nothing in this Section C-8 shall be deemed an indemnification of such person with respect to such person's status as an Owner, occupant or otherwise.

C-9) Variance. The Committee shall have the power and absolute discretion to authorize a variance from any of the requirements of this Declaration if it finds that the strict application thereof would, in its sole discretion and opinion, result in difficulties or undue hardship to the Lot owner or in the event the architecture of the proposed Lot improvement is such as to present, in its opinion, a particularly pleasing appearance compatible with other houses in the development.

C-10) Successor to Committee. Declarant may turn over control of the Committee to the Members of the Association at any time, and shall turn over control when Declarant no longer has any ownership interest in the Property. At such time as Declarant turns over Committee control, the Association's Board of Directors shall designate not less than three (3) or more than five (5) Members of the Association to serve and act as the Committee for all purposes hereunder.

PART D

DESIGN GUIDELINES

D-1) Single Family Dwelling Units.

A) Architectural Character. Architecture within the Development will be developed with a variety of American vernacular architectural styles in mind. These architectural styles, while not a comprehensive list, will offer a unique mixture of styles for the development, and will be applied with proportions and character in mind. The overall character of the development will be created so that the architectural styles are compatible and the overall cohesion of styles will help foster a unique setting without stifling the architectural creativity on the individual building level, creating a varied but integrated community. Identical floor plans with the same elevation style shall not be located within 7 sites to assure this variety. The following are examples of styles permitted:

Cottage	Craftsman	Four Square	Farmhouse	Salt Box
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The requirements as itemized in the following section will be used as applicable to the context of the specific architectural style. Declarant reserves the right to grant variances in its sole discretion. Where Village zoning is more restrictive, such requirements will govern.

B) Front Porch. Usable front porches are encouraged as both visual and functional design elements.

1) A usable open front porch is defined as having a minimum depth of 6'-0", and a minimum width of 8'-0".

2) Porch post style should be consistent with the overall architectural style of the home. Minimum standard porch design details include the following; porch posts or alternate per plan, porch balustrades, when provided, of nominal 2" x 2" square wood at a maximum of six inches (6") on center; and newel posts that are compatible with the design of the column posts. Porch columns and railings shall be painted to match the trim color of the house.

C) Garage.

1) There shall be a minimum of a two (2) car, 20' x 20' garage per dwelling unit.

2) The maximum garage width exposed on the front elevation shall be no greater than fifty percent (50%) of the overall building width.

3) On homes with a front-entry garage face must be set back a minimum of 2'-0" from the front elevation unless applicable zoning ordinances require a greater setback.

4) Tandem, split or side entry garages are encouraged for three (3) or four (4) car garages. For three (3) car front entry garages, the third stall must have a minimum setback of the greater of 2' from the two-car garage line or as required by compatible roof design. Garage width must comply with zoning and the design guideline standards of 50% of overall building width.

5) The garage door shall be a raised panel design painted to match the siding on the home. The use of windows in the door, appropriate to the architectural style, is encouraged. The maximum single garage door size is 8' x 18".

D) Ornamental Design Elements.

1) Ornamental design elements, such as dormers, shutters, window wrap window grids, gable vents, pilasters, pediments, etc., shall be used in a manner consistent with the overall architectural style of the home and with emphasis on elevations exposed to public space.

2) Window wrap or shutters and window grids are required on front and other primary elevations facing a public space. Gable vents, 5" horizontal vinyl trim, and/or eyebrow roofs are required on front elevation gables greater than 10'-0" in width and are encouraged on other gables as deemed appropriate by the Architectural Control Committee.

3) The shutters shall be wood or polystyrene with colors as approved by the Architectural Control Committee or of other material or color as deemed acceptable by

the Architectural Control Committee. Panel or louver design shutters shall be used as appropriate to home materials & style.

4) The window wrap and corner trim shall be a minimum 3½” vinyl or composite material as approved by the Architectural Control Committee and used with box outs or when part of the standard plan.

5) Gable vents shall be the NuWood triangle or peaked series or equivalent for the front elevation, and side elevations facing a public street, or other design approval by the Architectural Control Committee. Other gable ornamentation as appropriate to architectural style may be allowed or required by the Architectural Control Committee.

E) Roof/Facias/Soffits/Eaves.

1) Roof Standards:

- a) Roof design must be consistent with the overall architectural style of the home. Roof forms and pitches as established on individual styles may not be altered without approval by the Architectural Control Committee.
- b) Roof material shall be Owens Corning Oakridge 30 architectural shingle or equal and in colors as approved by the Architectural Control Committee.
- c) Use of an eyebrow roof or projecting gable is required at brick walls not extending into a gable and are encouraged, as appropriate, at double gable returns and porch column caps.
- d) Hip roof design, porches or other elements deemed appropriate by the Architectural Control Committee may be used in lieu of specific gable requirements.

2) Fascia, Soffit and Eave Standards:

- a) Facia shall be 6” minimum aluminum with colors as approved by the Architectural Control Committee, wood or composite material may be used when appropriate to the architectural style.
- b) Aluminum soffit and eave color shall match facia.
- c) A minimum 12” overhang is required at typical eaves and gable ends. However, 6” is allowable with projections less than 6’-0” in width, such as the fireplace chase and a small bay window, and beyond structure line at open porches. Larger overhangs may be required as appropriate to the architectural style.

F) Exterior Wall Surfaces.

1) Siding material shall be premium vinyl or composite material as approved by the Architectural Control Committee. Shingle or vertical board and batten siding is encouraged for accent areas appropriate to the style of the home. Colors shall be approved by the Architectural Control Committee.

2) Windows may be vinyl; vinyl clad, aluminum clad or wood with colors as approved by the Architectural Control Committee.

3) Variation of wall planes on primary elevations is encouraged as appropriate to overall building style and massing.

4) Any elevations facing public streets or spaces shall have a minimum of three (3) windows with wrap trim or shutters and window grills as appropriate and one (1) gable vent at all gable ends.

5) The use of brick or stone is encouraged as appropriate to architectural style. When brick is used, it shall be on full wall surfaces from foundation to eaves or on a two-story elevation at least to the second floor windowsill line. When brick is used, a soldier course window heads and rowlock sills are required. Additional details (i.e. projecting belt course and projecting corner accents) are encouraged as appropriate. Stone may be used as full wall surfaces or as a base course to first floor sill line. Brick or stone facing must return a minimum of 2'-4" when terminated at an outside corner.

6) Brick or stone material and color selections shall be as approved by the Committee and harmonious with overall neighborhood palette, as well as with the specific home design.

D-2) Other Improvements.

A) **Fences** All fencing must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. All fence material shall be constructed of vinyl. Zoning approval and/or building permit from the Village of McFarland may be required to construct fencing. Committee approval does not supercede the need for any municipal approvals or permits.

1) Fencing may consist of vinyl. The fence style permitted is the PlyGem Stratford Vinyl, depicted in Exhibit "E".

a) All fencing shall be erected finish side out (i.e. pickets on the outside of the rail facing the street or neighboring lot).

b) Posts shall be spaced a minimum of 72" and a maximum of 96" on center. Rails shall be discontinuous and abut into the posts.

c) Gates are permitted and shall be consistent with the fencing style. All gates shall open into the lot. Gates may be required for access to utility easements and access easements that are dedicated on the plat.

- B) Decks.** All decks must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. A zoning approval or building permit from the Village of McFarland may be required to construct a deck. Committee approval does not supercede the need for any municipal approvals or permits.

- 20

- b) Deck(s) shall not occur in freestanding segments or be placed arbitrarily on the lot.
- c) Deck(s) shall not interfere with utility equipment. Your utility companies shall be consulted for current requirements and the most restrictive shall apply.

C) Outbuildings. No outbuilding, shed or accessory building of any nature shall be erected on any Lot, with the exception of a detached garage that is the only garage on the lot and is approved by the Committee prior to construction. Secondary units (granny flats) above detached garages may be allowed with prior written approval from the ACC.

D) Antennae/Wind Powered Electric Generators. No wind powered electric generators, exterior television, radio receiving or transmission antennae, satellite signal receiving station or dish shall be placed or maintained upon any portion of a Lot without prior written approval of the Committee.

1) Appropriate antennae or satellite dish placement:

- a) Only one antennae or satellite dish shall be allowed per lot.
- b) The location of the satellite dish can be any of the following and shall not be visible from the curb directly in front of the home:
 - i. On a pole in the backyard and located close to the home.
 - ii. Attached to the deck.
 - iii. On the rear roof line of the home.
- 1. A satellite dish shall not project past the uppermost roof ridgeline. This method is not recommended by the Committee as you may have water infiltration issues if the dish is not properly installed and roof repairs may not be covered under the applicable roof warranty.

2) Inappropriate antennae or satellite dish placement:

- a) Antennae or satellite dish in front or side yards shall not be permitted.
- b) Antennae or satellite dish shall not interfere with utility equipment.

E) Firewood Storage. No firewood or woodpile shall be kept on any lot unless it is neatly stacked, placed in the rear yard and screened from street view by plantings or a fence first approved in writing by the Committee.

F) Solar Collectors. No active solar collector or apparatus may be installed on any Lot unless such installation is first approved in writing by the Committee, which shall consider the aesthetic and sun reflection effects on neighboring structures. Solar collectors or apparatus installed flat against or parallel to the plane of the roof shall be preferred.

G) Lighting. Exterior lighting installed on any Lot shall either by indirect or of such controlled focus and intensity that such lighting will not disturb the residents of adjacent Lots.

H) Landscaping Requirements. Pursuant to Section B-4 of the Declaration of Conditions, Covenants and Restrictions, Developer hereby imposes upon all Lots described in Exhibit "A", attached hereto and incorporated herein by reference, the requirement that the Owners thereof install landscaping on such Lots which meets or exceeds the minimum number of points for landscaping set forth in Exhibit "C". The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit "D", attached hereto and incorporated herein by reference. All terms, covenants and conditions of Section B-4 of the Declaration of Conditions, Covenants and Restrictions, as amended herein, shall be applicable to the landscaping to be installed pursuant to the terms of this paragraph. Landscape installed by the Declarant may or may not meet the minimum number required.

PART E **GENERAL PROVISIONS**

E-1) Term. This Declaration shall run with the Property and Common Property, and shall be binding on Declarant and all Members and their successors and assigns, and all persons claiming under them for a period of twenty-five (25) years from the date recorded, after which time said Declaration shall be extended automatically for successive periods of five (5) years each unless an instrument signed by a majority of the Members agreeing to change said Covenants in whole or in part or to terminate the same.

E-2) Enforcement. The Declarant (or either one of them if more than one), Architectural Control Committee or any Owner shall have the right to enforce by any proceedings at law or in equity all restrictions, conditions and covenants created or imposed herein, against any person or persons violating or attempting to violate any covenant, by any action to either restrain violation or to recover damages, or both including reasonable attorney fees. Failure to enforce any covenant, condition or restriction herein shall in no event be deemed a waiver of the right to do so thereafter. In the event of a violation of this Declaration the Committee shall have the right to assess and collect from the violating party a fine for such violation equal to the greater of (i) the actual damages suffered on account of the violation, or (ii) the sum of \$100.00 per day for each day the violation remains outstanding plus (iii) all costs of collection and enforcement, including actual attorney fees.

E-3) Severability. Invalidity of any one of these covenants by judgment or court order shall in no way affect any of the other provisions which shall remain in full force and effect.

E-4) Model Homes. So long as Declarant shall own any Lot in the Development, Declarant shall be permitted to maintain model homes in the Development, including therein a sales office for the purpose of sales and marketing of its homes.

E-5) Parade of Homes. So long as Developer shall own any Lots in the Development, or condominium units in any condominium located within the Development (collectively a "Lot/Unit"). Developer reserves the right to submit some or all of said Lots/Units as a site for the Parade of Home and/or the Parade of Condominiums of the Madison Area Builders Association (the "Parade"). In the event that some or all of said Lots/Units are selected as a site for a Parade, this Declaration of Protective Covenants, Conditions and Restrictions shall, as to the Lots/Units enrolled in the Parade, for a limited period of time ending 48 hours after the conclusion of the Parade, be deemed temporarily altered and modified, to the extent necessary, to permit the Madison Area Builders Association to hold its Parade in this Development pursuant to the then current Parade Rules and Checklist of the Madison Area Builders

Association. All purchasers of Lots/Units, and/or their successors and assigns, shall take title subject to this specific reservation by the Developer and shall waive all rights to object to violations of this Declaration of Protective Covenants, Conditions and Restrictions by the Developer, the Madison Area Builders Association, or any of the builders or participants in the Parade for the period of the Parade as set forth above, including the closing of any public or private streets in the Parade area. All Lot/Unit owners appoint the Developer their attorney-in-fact to execute all necessary petitions; applications and consents to facilitate said street closings for the Parade.

E-6) Governing Law. This Declaration shall be construed and enforced in accordance with the terms of the laws of the State of Wisconsin. The terms of this Declaration are not intended to replace or affect any applicable laws, ordinances, rules or regulations of the Village of McFarland.

E-7) Wet Basins. Wet Basins within the dedicated storm water management facilities may not permanently contain water due to weather conditions and will not be filled by the Village.

E-8) Notices.

A) Notices to Declarant shall be given to Declarant at the following address: 6801 South Towne Drive, Madison, WI 53713.

B) Notices to an Owner of any Lot within the Development shall be given in care of the street address of the Lot.

C) Any party may change its address by written notice given to the other parties. Party, its successors and/or assigns, may change said addresses by notice properly given hereunder.

E-9) Amendment and Release. At any time until Declarant conveys all of the Lots which comprise the entire Property, or turns control of the Association over to its Members, whichever occurs first, Declarant may modify, amend, alter and grant variances to this Declaration without the consent of any Member, Owner or Occupant, their Mortgagees or any other party, including the Association and its Board of Directors. These restrictions or any part thereof may be cancelled, released or amended in writing as to the entire Plat or any part thereof by the Declarant at any time until Declarant conveys all of the Lots or until the Declarant turns over control to the Committee, whichever comes first. After the Declarant has sold all of the Lots or otherwise released or assigned his right to enforce the Declaration, then this Declaration or any part thereof may be released, cancelled, amended or waived hereof. Notwithstanding the foregoing or anything else set forth herein, amendments to the following sections of this Declaration shall also require the approval of the Village of McFarland as restrictions for public benefit pursuant to §236.293 Wis. Stats., in order to be effective: Sections B-7, B-8, B-14, B-17, C-5, E-1 and this Section E-9.

E-10) No Waiver. Whenever a waiver, consent or approval is required or permitted herein, it must be express and in writing; no waiver, consent or approval shall be implied. Failure to enforce any provision of this Declaration shall not operate as a waiver of any such provision or any other provision of this Declaration.

E-11) Number and Gender. Whenever used herein, unless the context shall otherwise provide, the singular shall include the plural, the plural shall include the singular, and the use of any gender shall include all genders.

E-12) Including. Whenever used herein, the term “including” preceding a list of one or more items shall indicate that the list contains examples of a general principle and is not intended as an exhaustive listing.

E-13) Captions. The captions and article and section headings in this Declaration are intended for convenience and reference only and in no way define or limit the scope or intent of the various provisions hereof.

E-14) Remedies. All remedies herein are cumulative.

[Signature Page Follows]

IN WITNESS WHEREOF, the said VH Rosewood Fields LLC Wisconsin Limited Liability Companies
has caused these presents to be signed and sealed this ____ day of _____, 20__.

VH Rosewood Fields LLC
By: VH Holdings, LLC, Its Sole Member

By: _____
Chris Ehlers, Authorized Signatory

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20__, Chris Ehlers the Authorized Signatory of VH Rosewood Fields LLC a Wisconsin Limited Liability Company, to me know to be such persons and officers who executed the foregoing instrument and acknowledged that they executed the same as such officers, by its authority for the purposes therein contained.

Notary Public
Dane County, Wisconsin
My Commission Expires: _____, 20__

**CONSENT TO DECLARATION OF
COVENANTS AND RESTRICTIONS**

The undersigned, _____ Bank, hereby consents to the forgoing Declaration of Conditions, Covenants and Restrictions for the plat Rosewood Fields. This consent does not limit, restrict or affect in any way Mortgagee's rights, interest and remedies regarding Mortgagee's interest in the Property.

Dated at Madison, Wisconsin this _____ day of _____, 20__.

By: _____

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss.
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20__, the above named _____, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

Notary Public
County of Dane, State of Wisconsin
My Commission Expires: _____

Exhibit “A”

Description of Rosewood Fields Lots

Lots 1-117, Outlots 1-5, Rosewood Fields, Village of McFarland, Dane County, Wisconsin

Exhibit “B”

PINs:

EXHIBIT “C”

Total Minimum Points for Landscaping

Lot(s)	Minimum Points for Foundation Plantings	Total Minimum Points for Landscaping
	350	500

EXHIBIT "D"
Landscaping Elements

Elements	Point Schedule
A) <i>Small Shade Trees (balled and burlaped)</i> (1.5"-2" caliper at 6" from the roots)	50
B) <i>Medium Shade Trees (balled and burlaped)</i> (2"-3" caliper at 6" from the roots)	100
C) <i>Large Shade Trees (balled and burlaped)</i> (3"-4" caliper at 6" from the roots)	150
D) <i>Extra-Large Shade Trees (balled and burlaped)</i> (4" + caliper at 6" from the roots)	200
E) <i>Ornamental Trees (balled and burlaped)</i> (1.5"-2" caliper at 6" from the roots)	50
F) <i>Small Evergreen Trees</i> (3' to 4.5' when planted)	25
G) <i>Medium Evergree Trees</i> (5' to 6.5' when planted)	50
H) <i>Large Evergreen Trees</i> (7' + when planted)	100
I) <i>Evergreen Shrubs</i> (18" minimum diameter)	20
J) <i>Small Deciduous Shrubs</i> (18" to 35" in diameter)	10
K) <i>Medium Deciduous Shrubs</i> (35" to 60" in diameter)	15
L) <i>Large Deciduous Shrubs (balled and burlaped)</i> (60" or greater in diameter)	25
M) <i>Decorative Retaining Walls</i> (Points are per face foot. Boulders, timbers, and stones only – no concrete walls included.)	10
N) <i>Paver Stone Walks, Paths or Patios</i> (Points per square foot – no driveways included.)	1
O) <i>Planting Beds</i> (Points per square foot – must be decorative stone or mulch.)	1

The final point totals must consist of a balanced variety of the listed elements acceptable to the Architectural Control Committee. Existing vegetation, trees and shrubs may be included in the point totals if they are properly protected and maintained during the construction process and located as such on the landscape plans submitted to the Architectural Control Committee for approval.



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action in order to issue a Request for Proposal (RFP) for Sanitary Sewer Cleaning and Televising Services.

PREVIOUS ACTION:

Proposal was approved and recommended to the Village Board by the Public Utilities Committee, at their May 19, 2020 meeting.

ISSUE SUMMARY:

As part of the yearly sanitary sewer maintenance program, the utility contracts out the sewer cleaning and televising services. It has been past practice to clean and televise approximately one-third of the village per year. The estimated cost for cleaning and televising is in the range of \$0.50 per foot, for each service. It is our intent to get this price down as we have about 68,000 feet or 13 miles of pipe to clean.

FINANCIAL/BUDGET IMPACT:

To be evaluated upon receipt of the proposals following the advertisement period. Costs will be paid out of the sanitary service within the Utilities Fund (600).

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

None.

ATTACHMENTS:

1. Sanitary Sewer Line Cleaning and Televising RFP 05212020 mgs



Request For Proposals

Sanitary Sewer Line Cleaning and Televising

RFP Issuance Date: May 29, 2020

RFP Due Date: June 26, 2020 10:00 a.m.

Please Submit to:

Village of McFarland
Attn: Jim Hessling
5915 Milwaukee Street, PO Box 110
McFarland, WI 53558
**SANITARY SEWER LINE CLEANING AND TELEVISIONING
SERVICES FOR VILLAGE OF MCFARLAND**

SCOPE OF SERVICES

This Scope of Services will become an integral part of the contract between the Village of McFarland and the Contractor. The Contractor hereby agrees to provide services and/or materials to the Village pursuant to the provisions set forth below.

1. **PURPOSE:** The purpose and intent of the Request for Proposals (RFP) is to solicit proposals from qualified Contractor(s) to provide personnel and equipment necessary for cleaning sanitary sewer lines and closed-circuit television inspection (CCTV) services under the direction of the Village of McFarland Public Works Director.
2. **BACKGROUND:** The Village desires a private contractor to perform these services to maintain a clean collection system, as well as to properly assess the condition of the collection system pipeline.
3. **VILLAGE OF MCFARLAND DESIGNATED REPRESENTATIVE:**
Jim Hessling
Public Works Director
5115 Terminal Drive
McFarland, WI 53558
608-838-7287
jim.hessling@mcfarland.wi.us
4. **WORK REQUIREMENTS:**
 - A. CLEANING – The Contractor will be given a list of line sections to be cleaned. It is the intent of this contract to satisfy Village collection system requirements; namely, the Contractor will clean at least one-third (1/3) of the Village collection system each year. It is estimated that the footage to be cleaned is approximately 68,000 feet. This includes sewer mains located in the street and easements. As a condition of the work, the Contractor will be required to use water to clean the footages specified. Bulk water purchases are the responsibility of the contractor.
 - B. TELEVISIONING - The Contractor will be given a list of line sections to be televised. It is the intent of this contract to satisfy Village collection system requirements; namely, the Contractor will televise at least one-third (1/3) of the Village collection system each year. It is estimated that the footage to be cleaned is approximately 68,000 feet. This includes sewer mains located in the street and easements. Should deficiencies in the pipeline or in the area of a manhole structure be noted during operations; additional photographic evidence will be required of the deficiencies to alert the Village of possible repair needs. The Contractor shall provide an electronic copy of the television inspection report upon completion of the work.

C. GENERAL REQUIREMENTS

- i. A copy of the collection system map will be given to the contractor at the onset of the contract, to assist in this endeavor.
- ii. During the course of the contract, additional infrastructure may be incorporated into the collection system from new development, or other such causes. The village has a right to require the contractor to perform additional cleaning and inspection work at the price per foot quoted by the contractor.
- iii. It is understood that this will take multiple weeks, or months, to clean the specified section of the system. Once operations commence, updates will be required by the Village as part of their notification process to residents and businesses. It is also understood that more frequent updates should be given, if the Village or the Contractor feels there is need. Final cleanings shall be completed by December 1st of the contract year, to give Village staff adequate time to review the deliverable and decide if the contract will be renewed.

5. **SCHEDULES/TIMELINES:** The initial term of the contract is from August 1, 2020 through December 31, 2020; with the option to renew by the Village for three (3) successive one (1) year periods, under the same terms and conditions. Any renewal shall be based on satisfactory performance by the Contractor during the previous year.

QUALIFICATIONS AND SUBMISSION REQUIREMENTS

The Proposal must include all of the information set forth in this Section and other Sections of this RFP and should be organized and tabbed appropriately. Including but not limited to the following:

- Company history and background.
- Qualifications of the Contractor.
- Relevant past project experience of the Contractor.
- Availability of resources and reliance on subcontractors.
- No fewer than three municipal references.

All reports are required to be submitted in an electronic format. The following information will be required on the report.

- Manhole number to and from
- Any manhole issues
- Pipe size
- Date and time cleaned
- Any noted problems in this section of pipe

TERMS AND CONDITIONS

Each proposal will be reviewed to determine if it meets the requirements contained within this RFP. Failure to meet the requirements for the RFP may be cause for rejection. The Village may reject any proposal if it is conditional, incomplete, contains irregularities, or if in the sole discretion of the Village not considered in the Village's best interest. The Village may waive an immaterial deviation in a proposal, but this shall in no way modify the proposal document or excuse the Architect from compliance with the contract requirements if the Architect is awarded a contract.

The Village will require the use of its standard contract template. Modifications to this standard may be required or considered subject to review and approval by the Village Attorney under the direction of the Village Board.

There is no expressed or implied obligation for the Village to reimburse firms for any expenses incurred in preparing proposals in response to this request. Materials submitted by respondents are subject to public inspection under Wisconsin law. Any language purporting to render the proposal, or any part thereof, confidential or proprietary will be ineffective and will be disregarded unless consistent with the Wisconsin Public Records Law.

The Village reserves the right to retain all proposals submitted, and to use any idea in a proposal, regardless of whether the proposal was selected. Submission of a proposal indicates acceptance by the Contractor of the terms and conditions contained in the RFP, unless clearly and specifically noted in the proposal submitted and confirmed in the contract between the Village and the Contractor.

All property rights, including ownership and publication rights of all conceptual plans, designs, bidding documents, and reports produced by the selected Contractor in connection with services performed under this agreement shall be vested in the Village.

The Village reserves the right to reject any or all proposals submitted. Furthermore, the Village reserves the right to award to multiple Contractors or to a single Contractor deemed to be fully qualified and best suited among those submitting proposals.

COST PROPOSAL FORM

The Village of McFarland invites your proposal to provide Sanitary Sewer Line Cleaning and Televising Services for the Village of McFarland Sewer System to be received until 10:00 a.m. on June 26, 2020 at the Village of McFarland Municipal Center, 5915 Milwaukee St, McFarland WI 53558.

In accordance with the attached instructions, terms, conditions, and Scope of Services we submit the following proposal to the Village of McFarland.

This shall include labor, materials, supervision, equipment, appliances, and materials to perform all operations required to do annual Sanitary Sewer Line Cleaning and/or Televising, as specified.

<u>Description</u>	<u>Total Price</u>
Cleaning and Televising cost per foot	\$

<u>Description</u>	<u>Total Price</u>
Cleaning cost per foot	\$

<u>Description</u>	<u>Total Price</u>
Televising cost per foot	\$

I certify that the contents of this proposal are known to no one outside the firm, and to the best of my knowledge all requirements have been complied with.

Authorized Signature _____

Printed Name _____

Title _____

Firm Name _____

Date _____



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding Ordinance #2020-13: an ordinance amending the McFarland Municipal Code regarding driveways.

PREVIOUS ACTION:

May 12th, 2020, Public Works recommended adoption of Ordinance 2020-13.

ISSUE SUMMARY:

The Community & Economic Development Department received a request from a resident at 6115 South Court to reconstruct two existing driveways into one driveway. The existing driveways are separated by a 3-4 foot curb and green space. Removing the space between the two driveways is not permitted as the new driveway would be wider than permitted under the Village's driveway ordinance, Division 4, Sec. 53-546. Sec. 53-518 allows the Village Board to grant variances to driveway location, design and construction requirements; however, as written, Sec. 53-518 only applies to Division 3 and does not apply to the requirements of Division 4, Sec. 53-546. Staff and the Village Attorney find that this is an unintended omission of the Municipal Code. Ordinance 2020-13 would allow the Village Board to grant variances to the driveway requirements in the entire Article IX and not just those in Article IX, Division 3. Ordinance 2020-13 also provides new guidance under Sec. 53-518 as to those reasons for which the Village Board may grant a variance.

Ordinance 2020-13 also makes other amendments to Sec. 53-509 (Number) and Sec. 53-546 and 53-576 (Width of Driveways). Currently the Director of Public Works can administratively approve more than one driveway for a property, and driveway widths greater than 30 feet at the curb, with no standards for approval. Typically when an ordinance delegates a discretionary determination to an official there should be a standard for the official to follow. Also in practice, the Plan Commission would approve the number, location, and width of driveways as part of site plan review for commercial, industrial, multi-family and institutional uses under Sec. 62-310 of the Zoning Code. Ordinance 2020-13 amends Sec. 53-509 and 53-546 to vest the Plan Commission, through site plan review, and the Village Board through variance petitions, the authority currently vested with the Director of Public Works for deviations in the number and width of driveways.

Approval of Ordinance 2020-13 would allow the Village Board to grant the separate driveway



variance request by the owner of 6115 South Court included later in the agenda.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

Chapter 53, Article IX

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend the Village Board approve Ordinance 2020-13.

ATTACHMENTS:

1. Driveway Code track changes (Ordinance 2020-13)
2. 2020-13 Ordinance Regarding Driveways

Summary of Proposed Changes to Chapter 53, Article IX Driveways, reflected in Ordinance 2020-13.
(code insertion), (code deletion)

53-509 - Number

The number of driveways to serve an individual property fronting on a street shall be one, except where approved by the Plan Commission as part of a site/design review under Sec. 62-310 or when approved by the ~~Director of Public Works~~ Village Board under Sec. 53-518.

53-518 - Variances

Any of the requirements listed in this ~~Division~~ Article may be varied by the Village Board in such instances where the peculiar nature of the property or the design of the street may make the rigid adherence to the requirements listed in this ~~Division~~ Article impossible or impractical, or when the Village Board determines that a variance is appropriate in order for the property to have reasonable and adequate street access, after considering the risk to the public, the volume of traffic on the affected street, and any other factor the Village Board determines relevant in making this determination.

53-545 – Applicability

The regulations in this Division are applicable to driveways serving agricultural, rural home, commercial and industrial properties

53-546 – Width of Driveways (Agriculture, Rural Home, Commercial and Industrial Driveways)

No part of a private driveway located within the dedicated area of a public street shall, except as hereinafter provided, have a width greater than 30 feet measured at right angles to the centerline of said driveway, except as increased by permissible radii. In instances where the nature of the ~~commercial or industrial~~ land use activity or the physical characteristics of the land would require a driveway of greater width than herein specified, the Plan Commission, as part of a site/design review under Sec. 62-310, or the ~~Director of Public Works~~ Village Board under Sec. 53-518 in cases of modifications to existing driveways, in his/her discretion may permit a driveway of additional width.

53-575 – Applicability

The regulations in this Division are applicable to driveways serving urban residential properties.

53-576 – Width of Driveways (Urban Residential Zoned Driveways)

Openings for vehicular ingress and egress for urban residential district properties shall be at least ten feet wide at the property line, but shall not exceed 24 feet at the property line, with a maximum of 30 feet at the curb opening. In instances where the nature of the land use activity or the physical characteristics of the land would require a driveway of greater width than herein specified, the Plan Commission, as part of a site/design review under Sec. 62-310, or the Village Board under Sec. 53-518 in cases of modifications to existing driveways, may permit a driveway of additional width.

ORDINANCE 2020-13

AN ORDINANCE AMENDING THE MCFARLAND MUNICIPAL CODE REGARDING DRIVEWAYS.

Purpose: To amend certain driveway provisions in the McFarland Municipal Code.

Sponsor: Andrew Bremer, Community & Economic Development Director

Recommended Referral: Public Works Committee

Public Hearing: Not Required

WHEREAS, the McFarland Municipal Code regulates the number, location, design, and construction of driveways; and

WHEREAS, Village staff recommends amending the current Code to update provisions concerning requests for modifications and variances to driveway requirements; and

WHEREAS, Village Board previously found, and continues to find, for the safety of the general public, the Village shall determine the location, size, construction and number of access points to public roadways within Village limits; and,

WHEREAS, the Village Board accepts the recommendations of Village staff and finds that the proposed changes to the Code are in the public interest because they provide clearer procedures concerning requests for modifications and variances to driveway requirements.

NOW, THEREFORE, the Village Board of the Village of McFarland, does ordain as follows:

1. Section 53-509 of the McFarland Municipal Code is amended to read as follows:

The number of driveways to serve an individual property fronting on a street shall be one, except where approved by the Plan Commission as part of a site/design review under Sec. 62-310 or when approved by the Village Board under Sec. 53-518.

2. Section 53-518 of the McFarland Municipal Code is amended to read as follows:

Any of the requirements listed in this Article may be varied by the Village Board in such instances where the peculiar nature of the property or the design of the street may make the rigid adherence to the requirements listed in this Article impossible or impractical, or when the Village Board determines that a variance is appropriate in order for the property to have reasonable and adequate street access, after considering the risk to the public, the volume of traffic on the affected street, and any other factor the Village Board determines relevant in making this determination.

3. Section 53-545 of the McFarland Municipal Code is amended to read as follows:

The regulations in this Division are applicable to driveways serving agricultural, rural home, commercial and industrial properties.

4. Section 53-546 of the McFarland Municipal Code is amended to read as follows:

No part of a private driveway located within the dedicated area of a public street shall, except as hereinafter provided, have a width greater than 30 feet measured at right angles to the centerline of said driveway, except as increased by permissible radii. In instances where the nature of the land use activity or the physical characteristics of the land would require a driveway of greater width than herein specified, the Plan Commission, as part of a site/design review under Sec. 62-310, or the Village Board under Sec. 53-518 in cases of modifications to existing driveways, may permit a driveway of additional width.

5. Section 53-575 of the McFarland Municipal Code is amended to read as follows:

The regulations in this Division are applicable to driveways serving urban residential properties.

6. Section 53-576 of the McFarland Municipal Code is amended to read as follows:

Openings for vehicular ingress and egress for urban residential district properties shall be at least ten feet wide at the property line, but shall not exceed 24 feet at the property line, with a maximum of 30 feet at the curb opening. In instances where the nature of the land use activity or the physical characteristics of the land would require a driveway of greater width than herein specified, the Plan Commission, as part of a site/design review under Sec. 62-310, or the Village Board under Sec. 53-518 in cases of modifications to existing driveways, may permit a driveway of additional width.

The above and foregoing Ordinance was duly adopted at a regular meeting of the McFarland Village Board on the ____ day of _____, 2020.

APPROVED:

Brad Czebotar, Village President

ATTEST:

ORDINANCE 2020 – 13	
MOTION	SECOND
ACTION	DATE
Adopted	
Referred	
Tabled	
Withdrawn	
Defeated	
Published	
INDIVIDUAL VOTING RECORD	
Brassington -	Kryzenske-
Clow -	Rupert -
Czebotar -	Utter -
Flaherty -	
VOTING RESULTS	
Motion Carried	
Motion Defeated:	

Cassandra Suettinger, Village Clerk-
Treasurer



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Matt Schuenke, Village Administrator, Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action regarding the award of contract for the 2020 Public Works Center Improvement project.

PREVIOUS ACTION:

The Public Works Committee reviewed the bids at their meeting on May 12, 2020 and recommended award of contract as presented.

ISSUE SUMMARY:

Enclosed are the final drawings for the improvements to the Public Works Center. This includes replacement of the roof, office remodeling, addition of a mezzanine, racking storage, pave yard replacement, and other maintenance improvements to the facility. Specifications for the project are also available upon request (the document is about 500 pages long). The roof replacement was added to the 2018-2022 CIP as recommended by previous assessments with the additional improvements added the next year for construction in 2020. These improvements will address office inefficiencies, noted safety issues, improved mechanicals, deferred maintenance, better working conditions, additional storage capability, and prolongs the use of the facility.

There were 12 bidders pre-qualified for the project with the Village receiving 10 bids to do the work. The low bidder for the project is Newcomb Construction Company of Madison. Their bid has been evaluated and found to be responsive by our consultant. Staff is recommending the contract be awarded to Newcomb for the base bid plus the two alternatives with a 10% contingency.

FINANCIAL/BUDGET IMPACT:

The 2020 Budget was approved to fund the project at a cost of \$1,000,000. This line item also included the costs for solar that is considered in the next item. The expense was to be offset by \$750,000 borrowed money and \$250,000 from reserves used for facility maintenance. The project estimate in the Fall of 2019 was \$929,594 which is where the budgetary estimate was derived from.

The project estimate rose to \$1,141,621 when we reviewed this at the Committee meeting in March. To help provide flexibility, we inserted two alternates in case the costs came in too high



plus planned on the inclusion of some funds from the utilities to help support the project.

Bids were opened on May 6th with the low bidder of Newcomb having a base bid of \$499,850 including \$113,750 for Alternative #1 (Yard) and \$32,605 (Garage Doors). The total cost of the project all included of those three items is \$646,205 which is substantially below the previous estimate and within the adopted budget for the project. This will allow the borrowing to be reduced to account for more favorable than expected bid prices.

VILLAGE PLAN REFERENCE:

The Facilities Master Plan was completed in 2017 to study facility needs of the Village across the organization. The Plan called attention to the fact that the facility within the office space was at capacity, especially with its storage needs. It suggested there were opportunities for mezzanine storage within the garage to assist with this while also looking into other technology to address file storage. It noted elements of the facility could use some security enhancements. Cost projected for the larger expansion at that time were projected at \$2.8 million. Further study of the facility since that time encountered additional issues within the office area as well as staffing growth of the Department this project is aligned to collectively address at a much lower dollar amount. The plan is located at www.mcfarland.wi.us/public_works_committee and information about Public Works can be found on page 14.

Elements of this project first began their inclusion in the 2018-2022 CIP and have been included through the most recent 2020-2024 CIP.

The Strategic Plan was adopted by the Village Board in 2020. Within it, the plan established Goal B stating that the Village would "Plan for and align physical facilities and open space to support future service delivery, quality of life, and infrastructure needs." A strategy to accomplish this is identified within this goal to "improve current Village facilities, including maintenance enhancements, and identify new systems to promote sustainability". The project as proposed and presented for award is aligned with these elements helping to address several key aspects of this facility to improve its functionality and longevity.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Presented for the Committee to make a recommendation to the Village Board to award the contract to Newcomb Construction Company in an amount of \$646,205 which is the base bid plus both alternatives including a 10% contingency.

Construction Administration contract is already in place and approved for Strand to do this work.

Final item that we will address in June will be needed furnishings, the plan for which is being



finalized.

ATTACHMENTS:

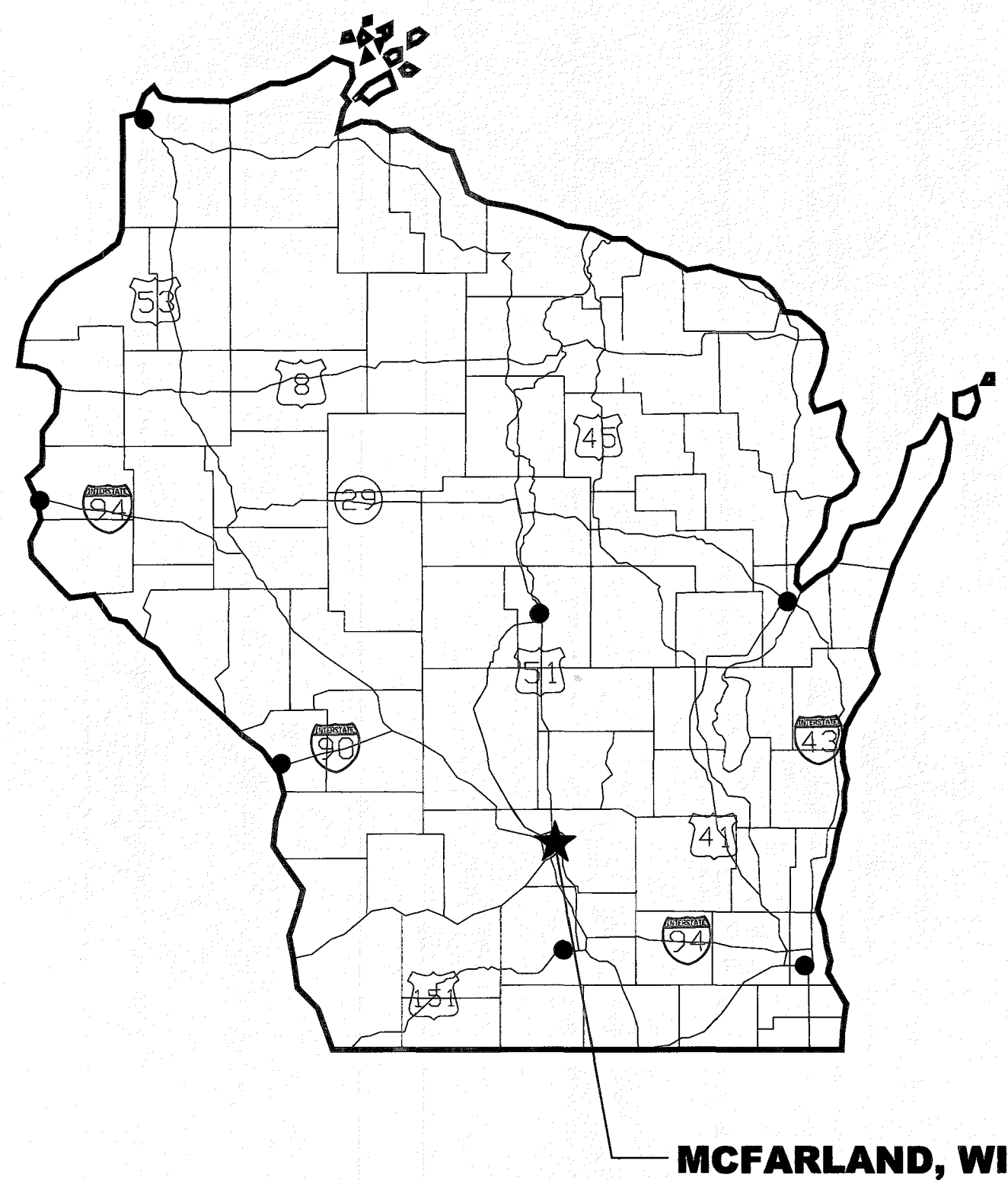
1. Issued for Bid Drawings 22x34-4_8_2020
2. McFarland.ResultingBidTab

PUBLIC WORKS FACILITY RENOVATION

FOR THE

VILLAGE OF MCFARLAND

MCFARLAND, WISCONSIN

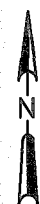


MCFARLAND, WI



5115 TERMINAL DR,
MCFARLAND, WI 53558

VICINITY MAP
NO SCALE



126 NORTH JEFFERSON STREET, SUITE 350
MILWAUKEE, WI 53202
414 271-0771
414 271-8312 FAX
WWW.STRAND.COM

CONTRACT 1-2020

LIST OF DRAWINGS

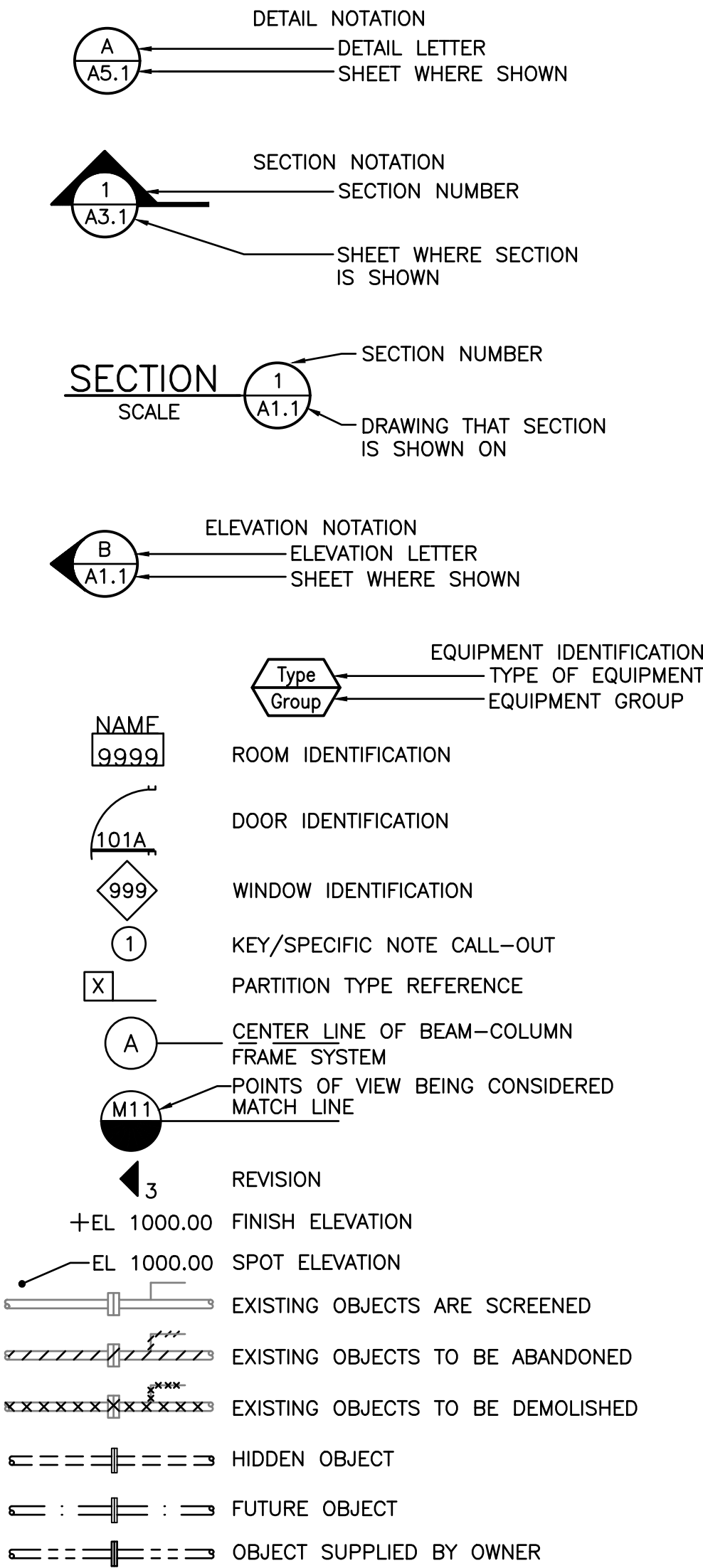
	SHEET NO.	DRAWING NO.	REVISION NO. 1	TITLE
<u>GENERAL</u>	1	G0.1		TITLE
	2	G0.2		STANDARD SYMBOLS AND ACCESSIBILITY GUIDELINES
	3	G0.3		OFFICE AND MEZZANINE CODE REVIEW, LIFE SAFETY, AND EXITING PLAN
<u>CIVIL</u>	4	C1.1		SITE PLAN
<u>DEMOLITION</u>	5	D1.1		OFFICE AND STORAGE GARAGE DEMOLITION FLOOR PLAN
<u>ARCHITECTURAL</u>	6	A1.1		OFFICE AND STORAGE GARAGE FIRST FLOOR PLAN
	7	A1.2		MEZZANINE FLOOR PLAN
	8	A1.3		ROOF PLAN
	9	A2.1		SOUTH EXTERIOR ELEVATION
	10	A3.1		SECTIONS-1
	11	A3.2		SECTIONS-2
	12	A5.1		ARCHITECTURAL DETAILS-1
	13	A5.2		ARCHITECTURAL DETAILS-2
	14	A6.1		DOOR AND WINDOW SCHEDULES AND DETAILS
	15	A6.2		OFFICE REFLECTED CEILING PLAN, FLOOR FINISH PLAN, AND ROOM FINISH SCHEDULE
<u>STRUCTURAL</u>	16	S1.1		CANOPY AND MEZZANINE ENLARGED FOUNDATION AND FRAMING PLANS
	17	S5.1		STRUCTURAL DETAILS - 1
	18	S5.2		STRUCTURAL DETAILS - 2
<u>HVAC</u>	19	H0.1		HVAC SYMBOLS AND ABBREVIATIONS
	20	H1.1		OFFICE ENLARGED HVAC PLAN
	21	H1.2		STORAGE GARAGE HVAC PLAN
	22	H3.1		HVAC SECTIONS
	23	H5.1		HVAC DETAILS
	24	H6.1		HVAC SCHEDULES
	25	H7.1		CONTROLS SCHEMATICS
<u>PLUMBING AND FIRE PROTECTION</u>	26	FP1.1		OVERALL PLUMBING AND FIRE PROTECTION FLOOR PLAN
	27	P7.1		PLUMBING SCHEMATICS
<u>ELECTRICAL</u>	28	DE1.1		ELECTRICAL DEMOLITION FLOOR PLAN
	29	E0.1		ELECTRICAL SYMBOLS AND ABBREVIATIONS
	30	E1.1		OVERALL ELECTRICAL FLOOR PLAN
	31	E1.2		OFFICE ENLARGED POWER PLAN
	32	E1.3		LIGHTING PLAN
	33	E4.1		UPPER AND LOWER LEVEL MEZZANINE POWER PLANS
	34	E4.2		UPPER AND LOWER LEVEL MEZZANINE LIGHTING PLANS
	35	E5.1		ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
	36	E5.2		ELECTRICAL DETAILS



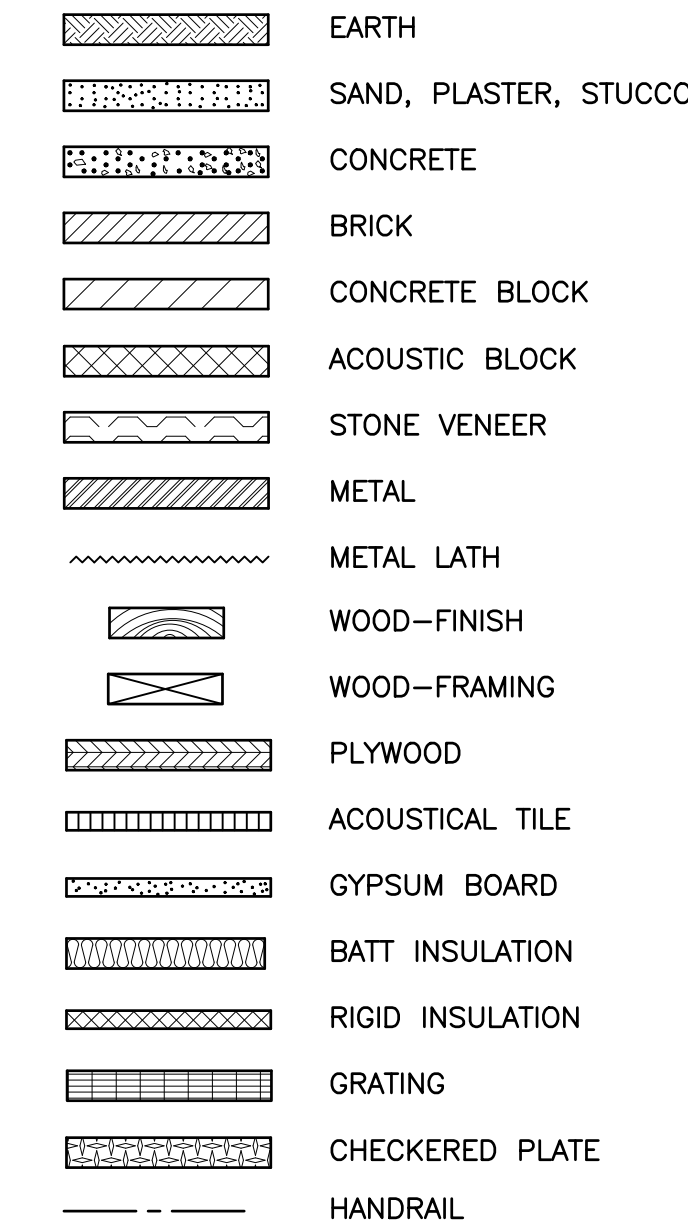
ISSUED FOR BID, 4/8/20

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1
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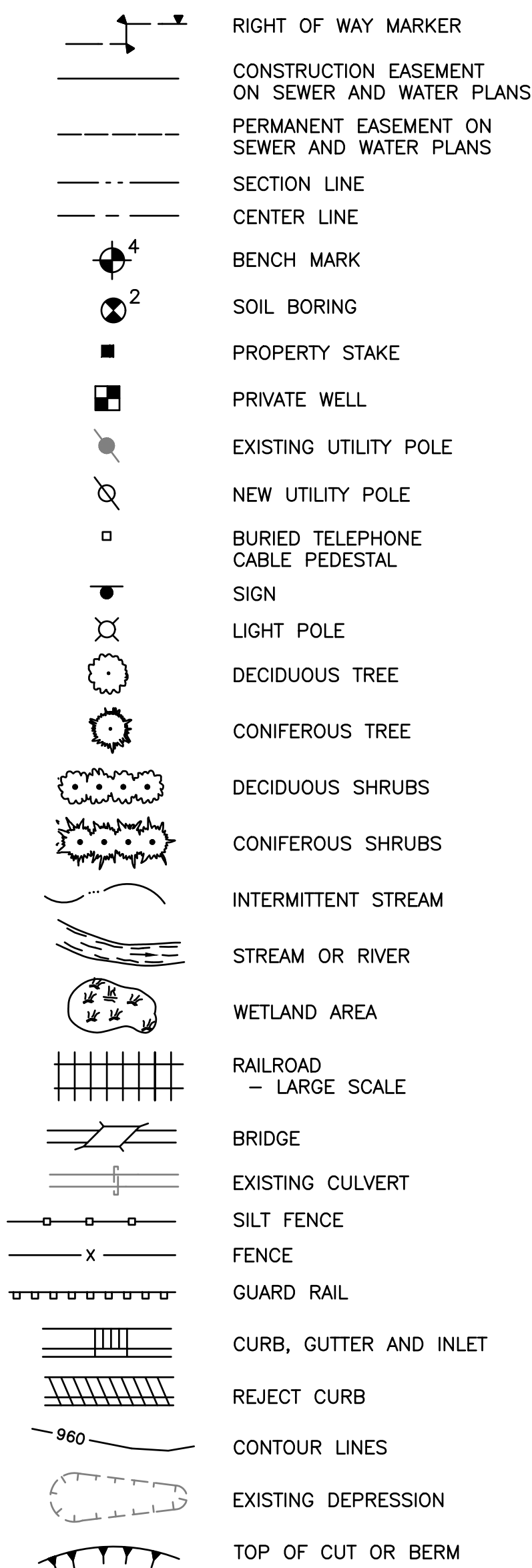
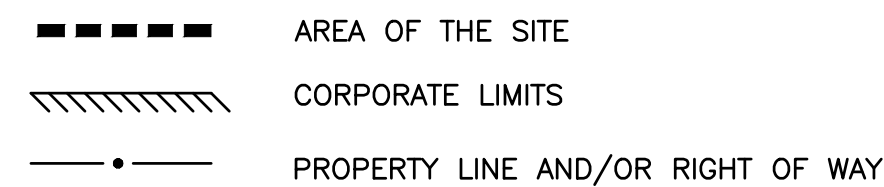
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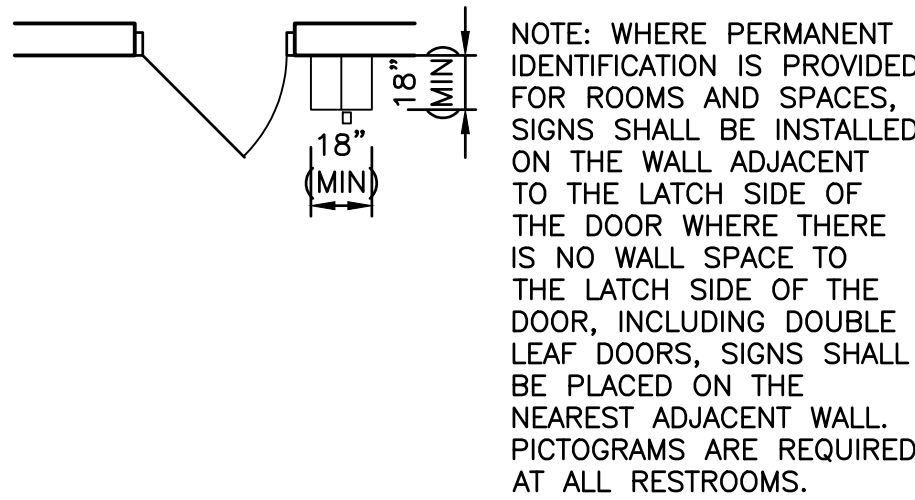
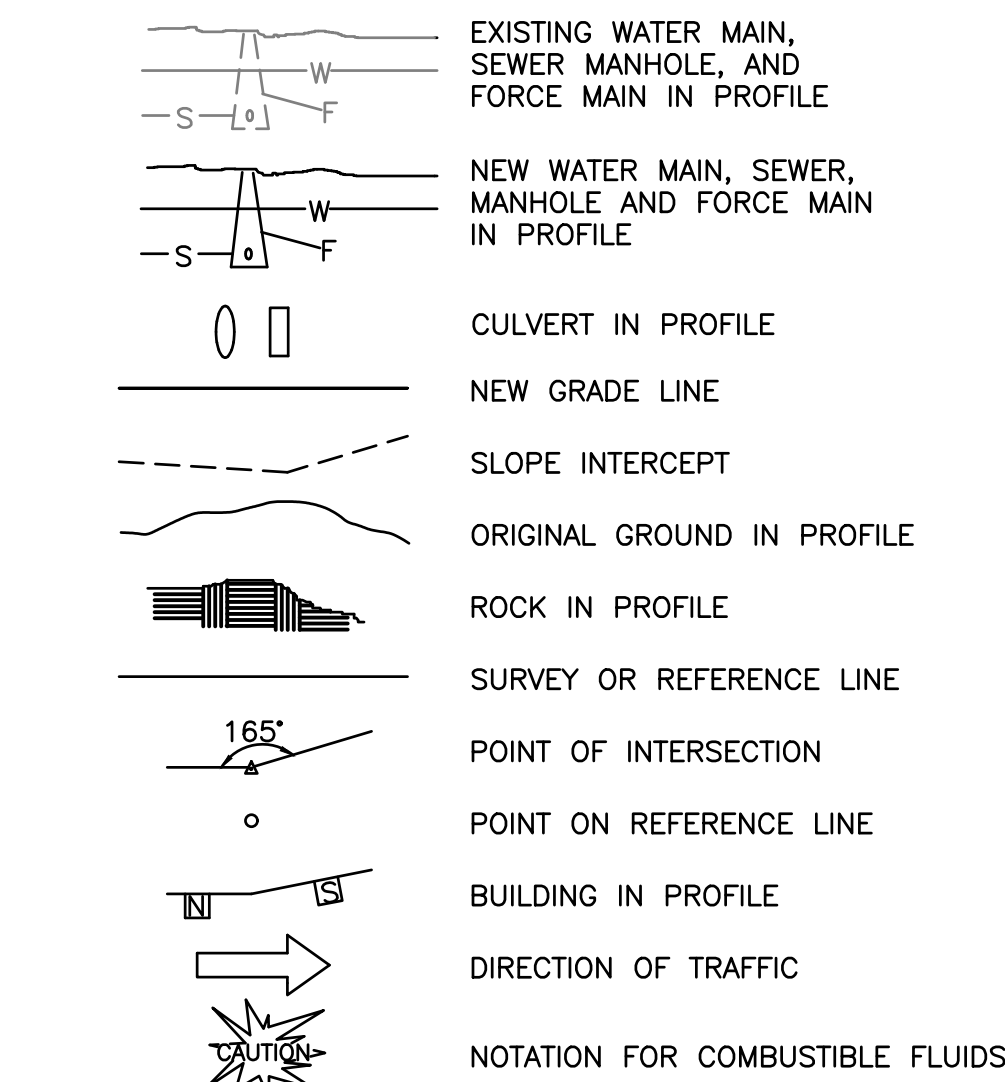
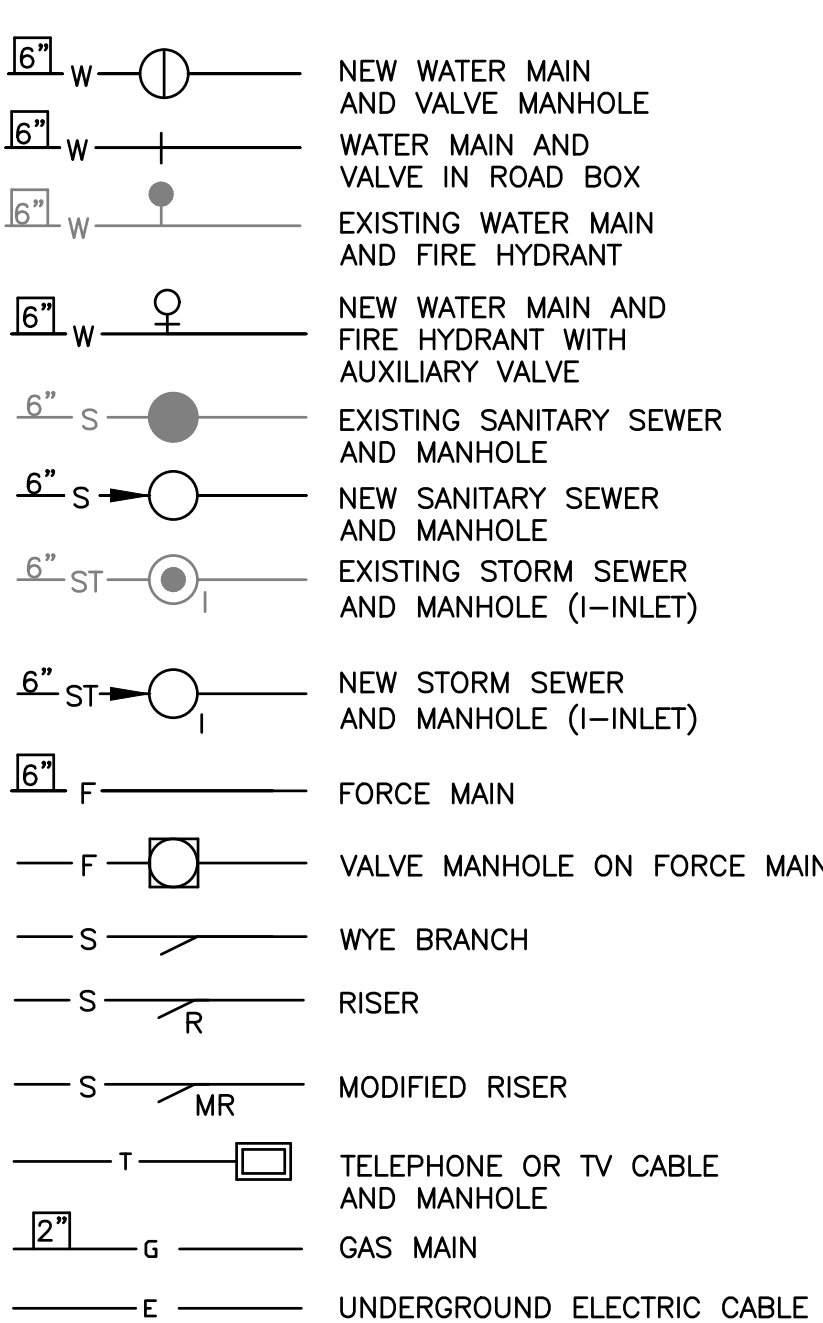
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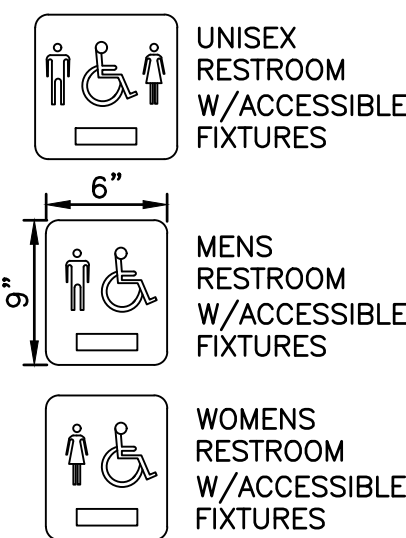
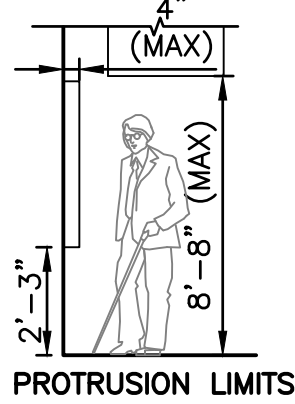
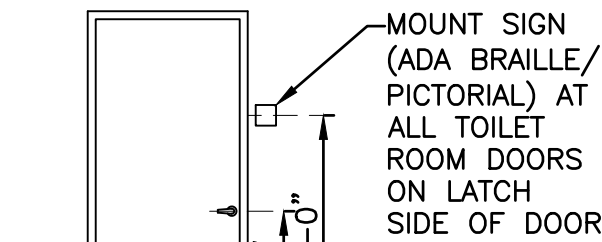
TOPOGRAPHICAL SYMBOLS



UNDERGROUND UTILITY SYMBOLS

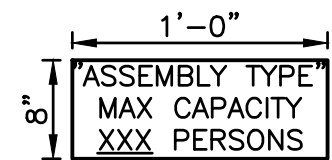
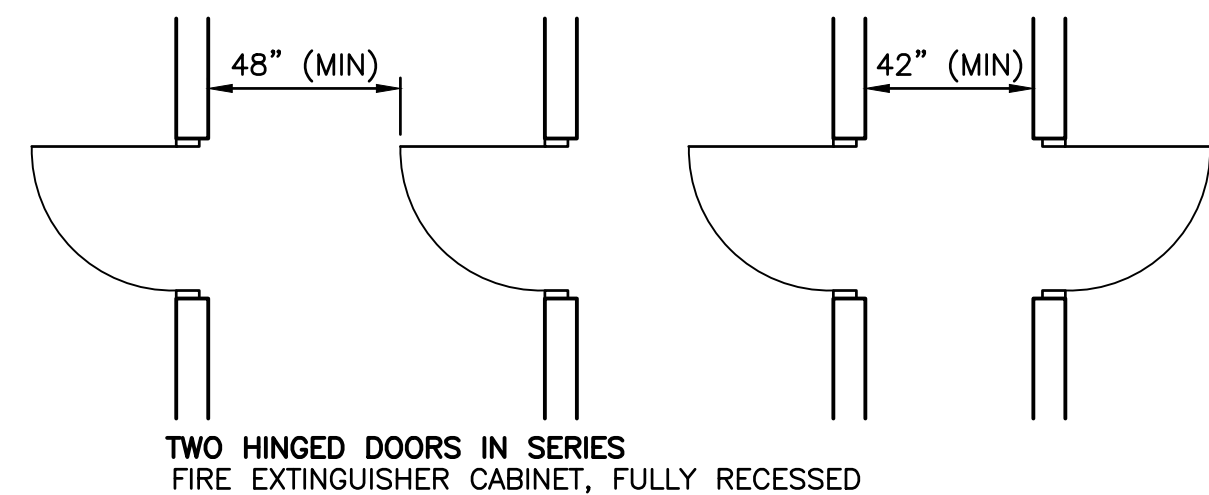


SEE 703/603.3/308 & 309



- NOTE:
- SIGNAGE TO BE MOLDED PLASTIC FRAMES WITH SEMI-PERMANENT SIGNAGE.
 - TEXT TO BE:
 - 1 1/2" LETTERS
 - RAISED 1/32"
 - CENTERED IN PANEL
 - ACCOMPANIED BY GRADE 2 BRAILLE
 - ALL COLORS TO BE MATTE FINISH
 - NOT ALL SIGNS ARE USED SEE PLANS FOR ALL APPLICABLE SIGNS.

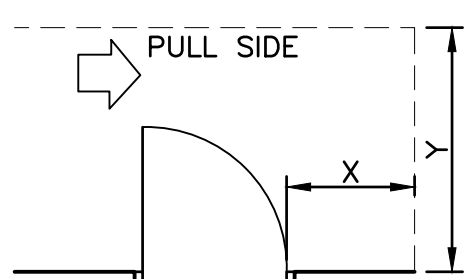
TYPICAL PROJECT SIGNAGE



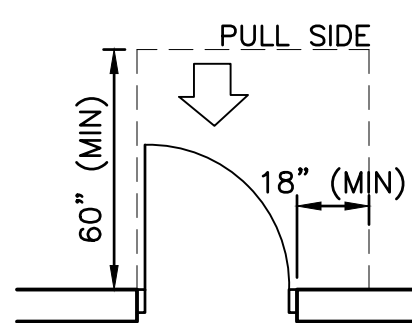
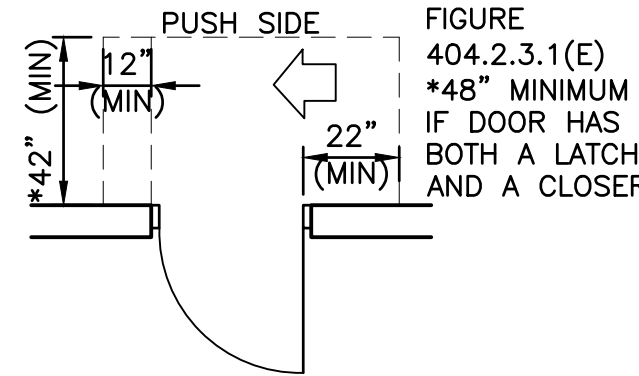
- COORDINATE INSTALLATION LOCATION WITH ARCHITECT & BUILDING OFFICIAL.
- TEXT TO BE:
 - 3/8" HELVETICA LETTERS
 - CENTERED IN PANEL
- COLORS TO BE:
 - BACKGROUND=WHITE
 - LETTERS=BLACK
 - ALL COLORS TO BE MATTE FINISH

XXX-INDICATES CALCULATED LOAD IN ROOM OR SPACE

PER IBC 1004.3: POSTING OF OCCUPANT LOAD EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR THE SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGN SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER.

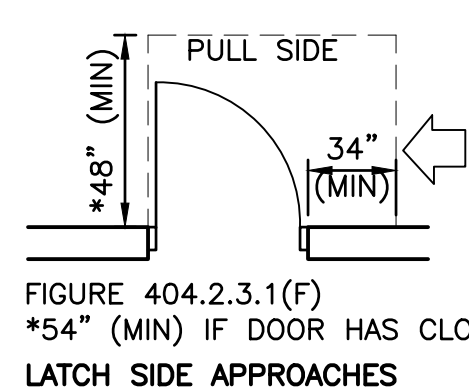
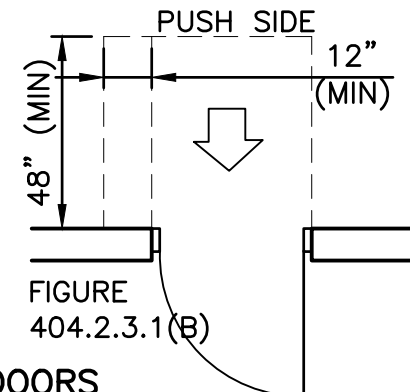


HINGE SIDE APPROACHES

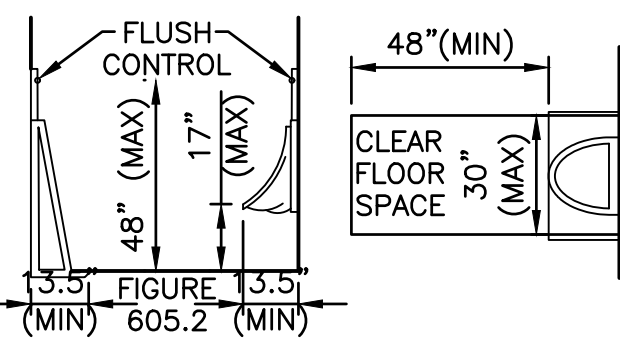


MANEUVERING CLEARANCES AT DOORS

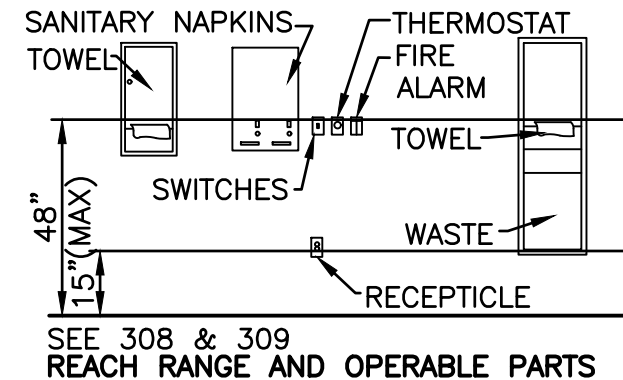
SCALE : 1/4" = 1' - 0"



LATCH SIDE APPROACHES

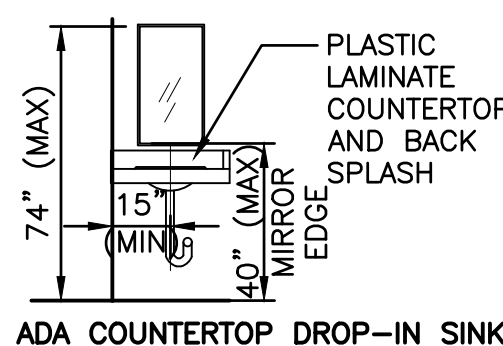
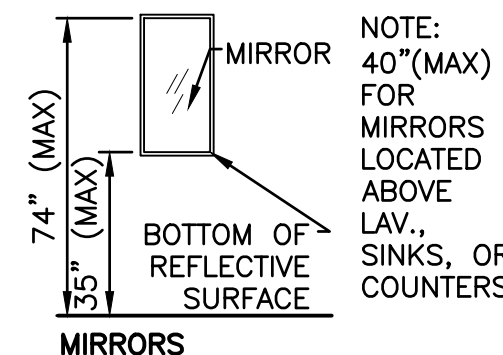


URINALS SEE 605



NOTE: THE HIGHEST PART OF CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE PLACED IN THIS REACH ZONE.

NOTE: 46" (MAX) IF THERE IS AN OBSTRUCTION



DATE:	4/8/20								
REVISIONS									
ISSUED FOR BID									
NO.	1								

STANDARD SYMBOLS AND ACCESSIBILITY GUIDELINES

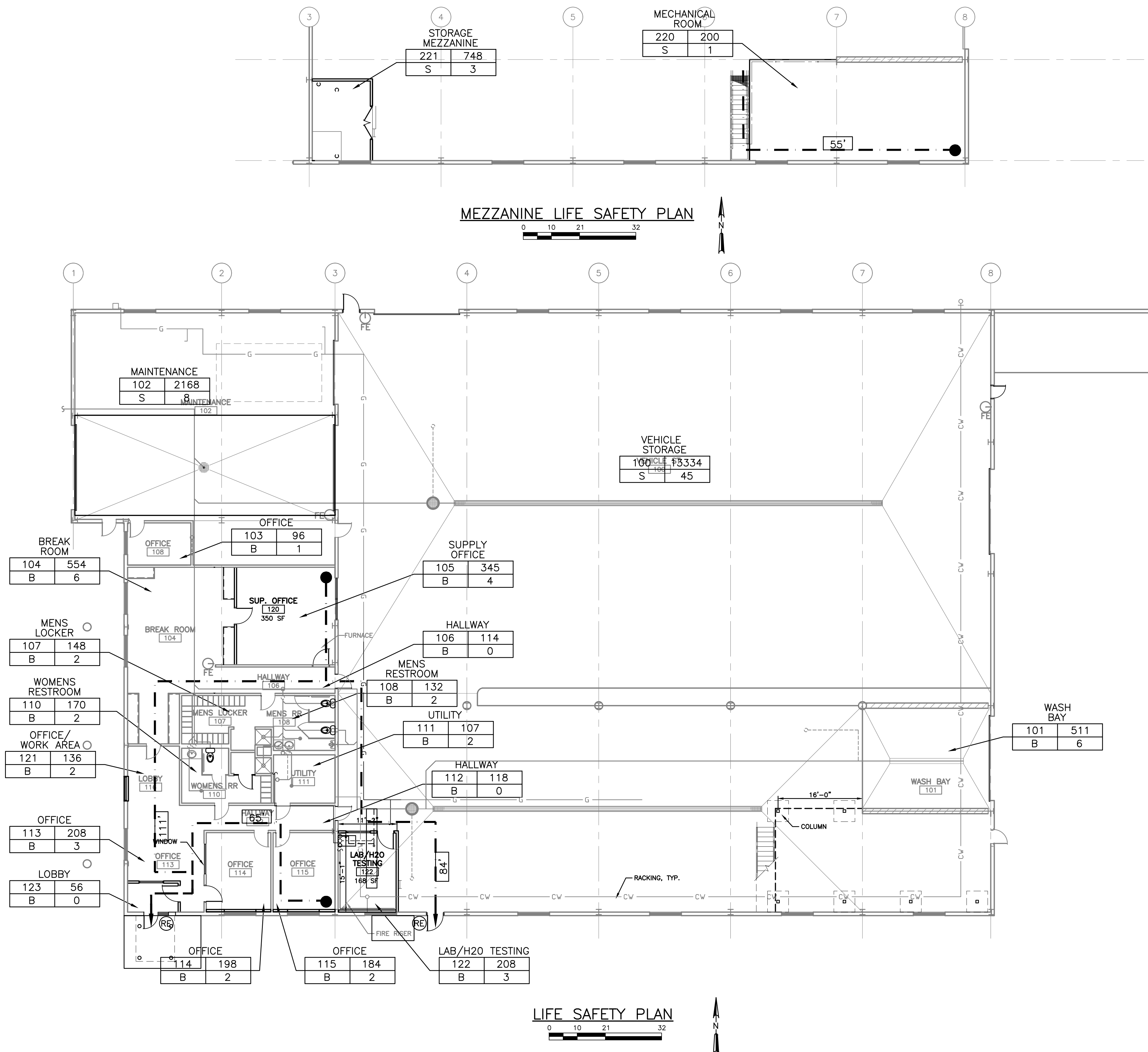
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



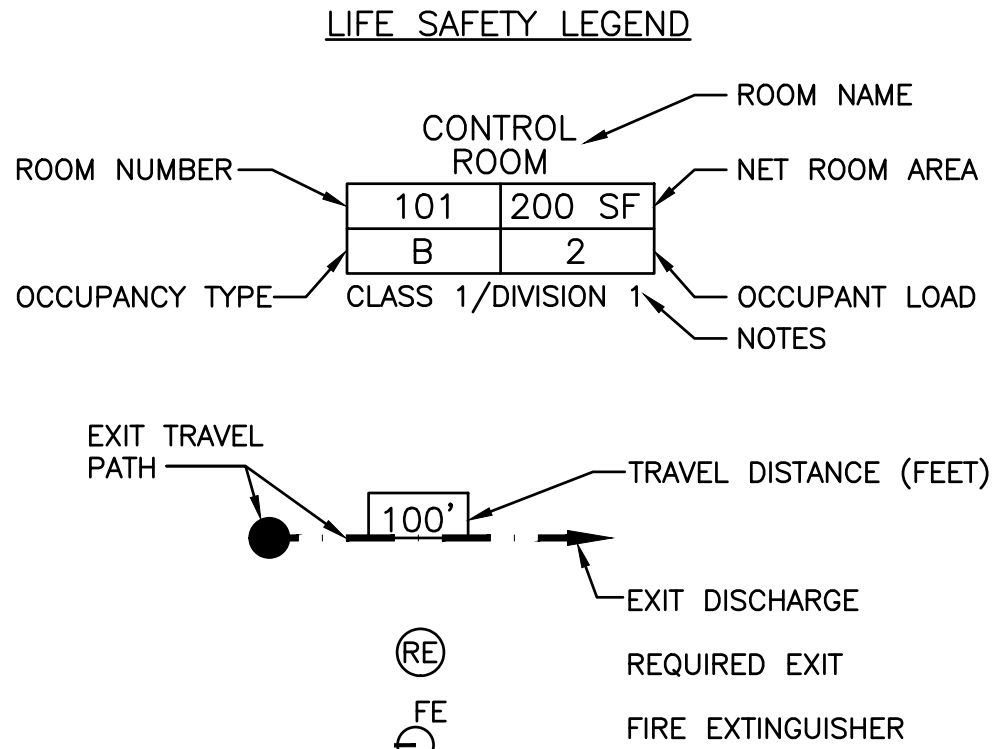
SHEET
2
G0.2



MEZZANINE LIFE SAFETY PLAN

LIFE SAFETY PLAN

PUBLIC WORKS FACILITY BUILDING CODE INFORMATION			
BUILDING CODE	2015 INTERNATIONAL BUILDING CODE (SPS 362)		
	2015 INTERNATIONAL FUEL GAS CODE (SPS 365)		
	2015 INTERNATIONAL MECHANICAL CODE (SPS 364)		
	2015 INTERNATIONAL ENERGY CONSERVATION CODE (SPS 365)		
	2015 INTERNATIONAL EXISTING BUILDING CODE		
	2017 NATIONAL ELECTRIC CODE (SPS 316)		
	2012 FIRE CODE		
PLUMBING CODE (SPS 362)			
ADA STANDARDS (SPS 362)			
SCOPE OF WORK:			
LEVEL 2 ALTERATION TO EXISTING OFFICE LAYOUT, STORAGE ROOF, AND ADDITION OF 758 SF MEZZANINE TO VEHICLE STORAGE.			
OCCUPANCY TYPE	NON-SEPARATED USE		
USE GROUPS	B AND S-1		
CONSTRUCTION TYPE	TYPE VB		
OCCUPANCY SEPARATION - NONE REQUIRED			
HAZARDOUS MATERIALS - NOT PRESENT			
CHEMICAL	CHEMICAL CLASSIFICATION	MAX. CONTROL AREA QUANTITY	ACTUAL QUANTITY
GENERAL BUILDING INFORMATION			
	ALLOWABLE		ACTUAL
NO. OF STORIES	2 STORIES		1 STORY
HEIGHT	60 FEET		20'-5" T.O. STORAGE ROOF
AREA PER FLOOR LEVEL (GROSS SF)			
B: EXIST 3,585		S-1: EXIST	15,716 SF
B: NEW 3,795		S-1: NEW	15,505 SF
TOTAL ALLOWABLE AREA PER FLOOR LEVEL	36,000 SF	TOTAL ACTUAL AREA (FIRST FLOOR, GROSS SF)	19,740 SF
PUBLIC WAYS OR YARDS	ACCESSIBLE FROM 4 SIDES, MIN. 60-FOOT ACCESS WIDTH		
FIRE SUPPRESSION SYSTEM			
SPRINKLERED - PORTABLE FIRE EXTINGUISHERS, RATED CLASS A, B, C; 10-POUND CAPACITY.			
NUMBER OF OCCUPANTS			
OCCUPANT LOAD FACTOR	100 GROSS (B)	300 GROSS (S-1)	
OCCUPANT CALCULATION - SEE PLANS			
ACTUAL NUMBER OF OCCUPANTS	ZERO PERMANENT OCCUPANTS, ONLY PRESENT FOR MAINTENANCE AND OPERATION		
TRAVEL DISTANCE		EXIT ACCESS	COMMON PATH
	B	300 FEET	100 FEET
	S-1	250 FEET	100 FEET
EXITS			
ALL OTHER SPACES/OCCUPANCIES NOT LISTED ABOVE REQUIRE 1 EXIT.			
NOTES:			

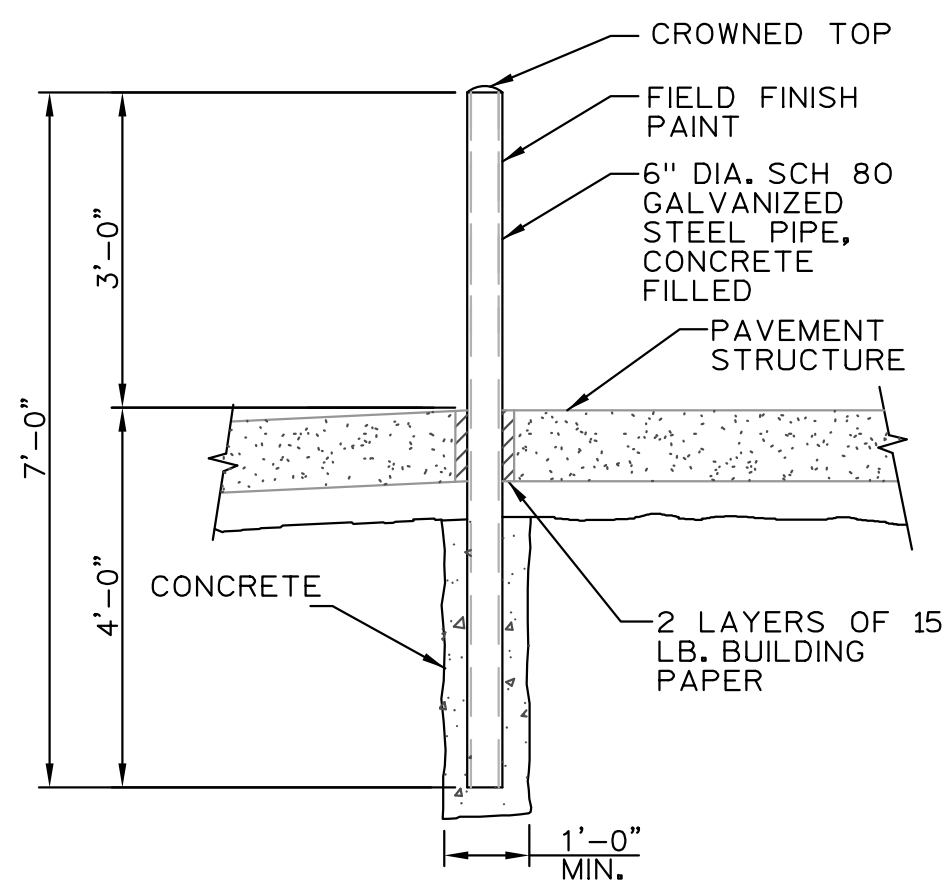


OFFICE AND MEZZANINE
CODE REVIEW, LIFE SAFETY, AND EXITING PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

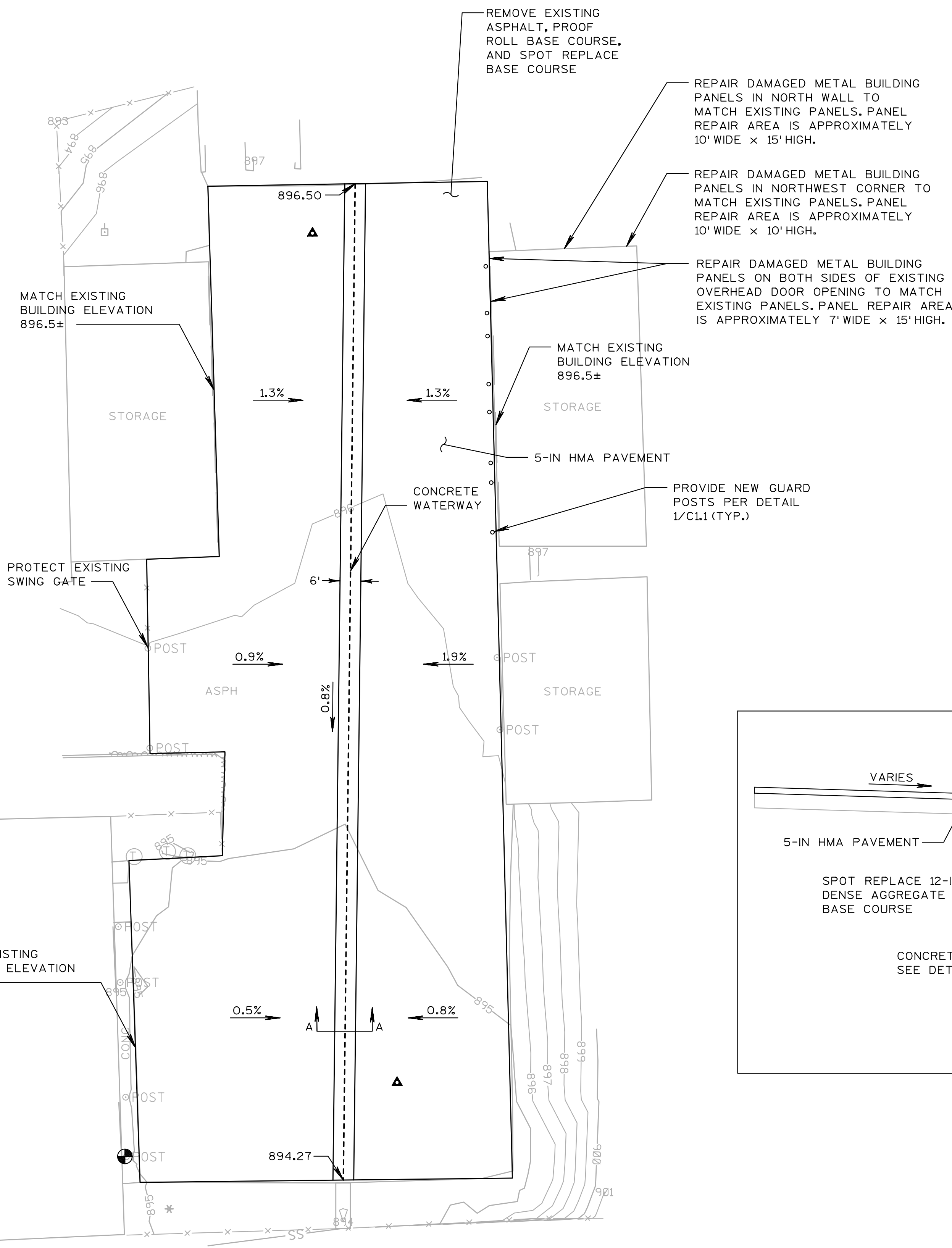
JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT



SHEET
3
G0.3

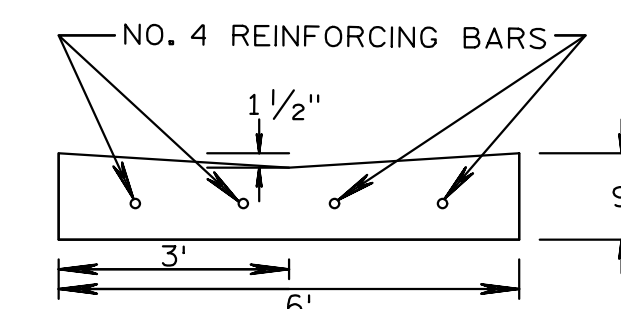
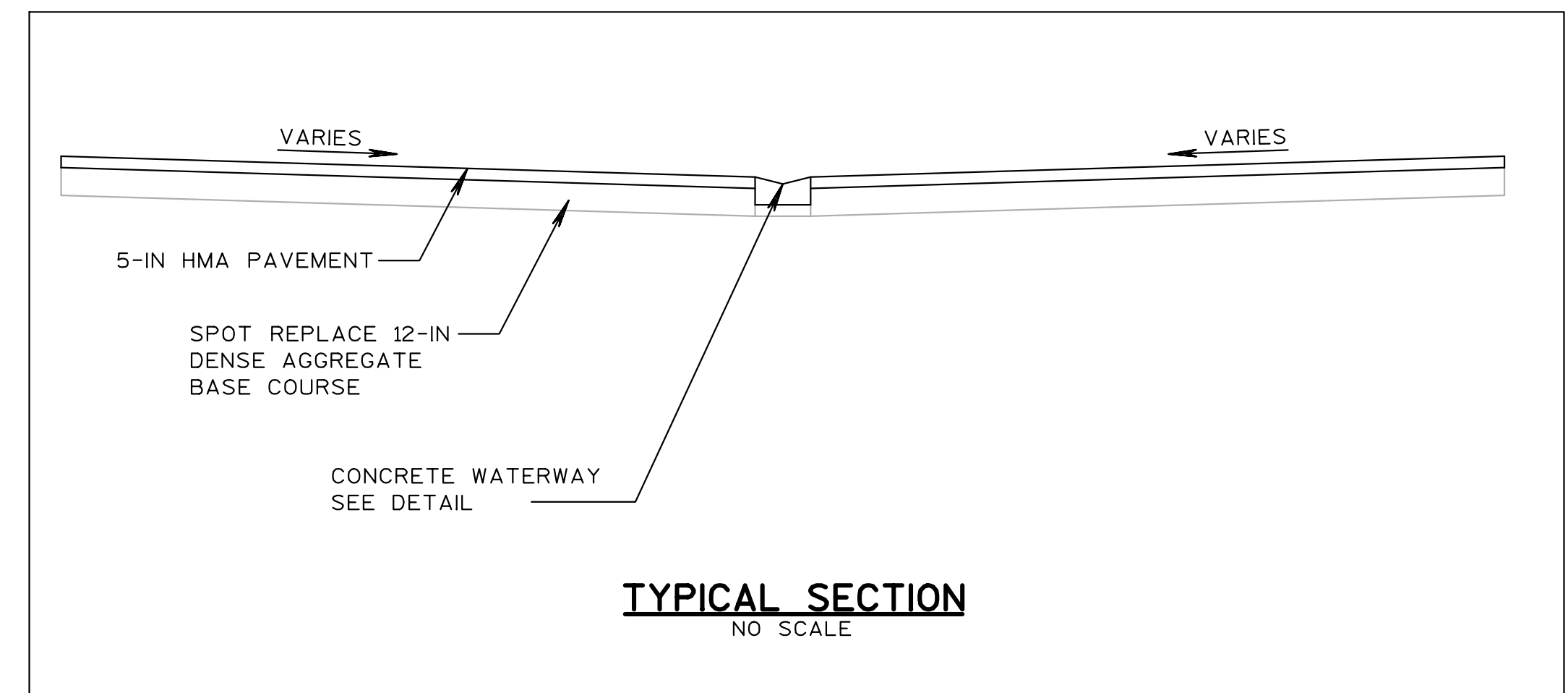


1
C1.1
GUARD POST
NO SCALE

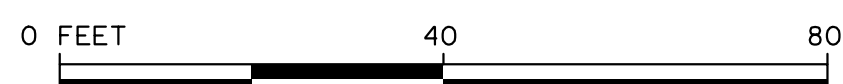


GENERAL NOTES:

1. ALL WORK ON THIS SHEET SHALL BE INCLUDED IN BID ALTERNATIVE NO. 1
2. SEE SPECIFICATIONS FOR UNSUITABLE PAVEMENT SUBGRADE REPLACEMENT ALLOWANCE.



CONCRETE WATERWAY
SECTION A-A
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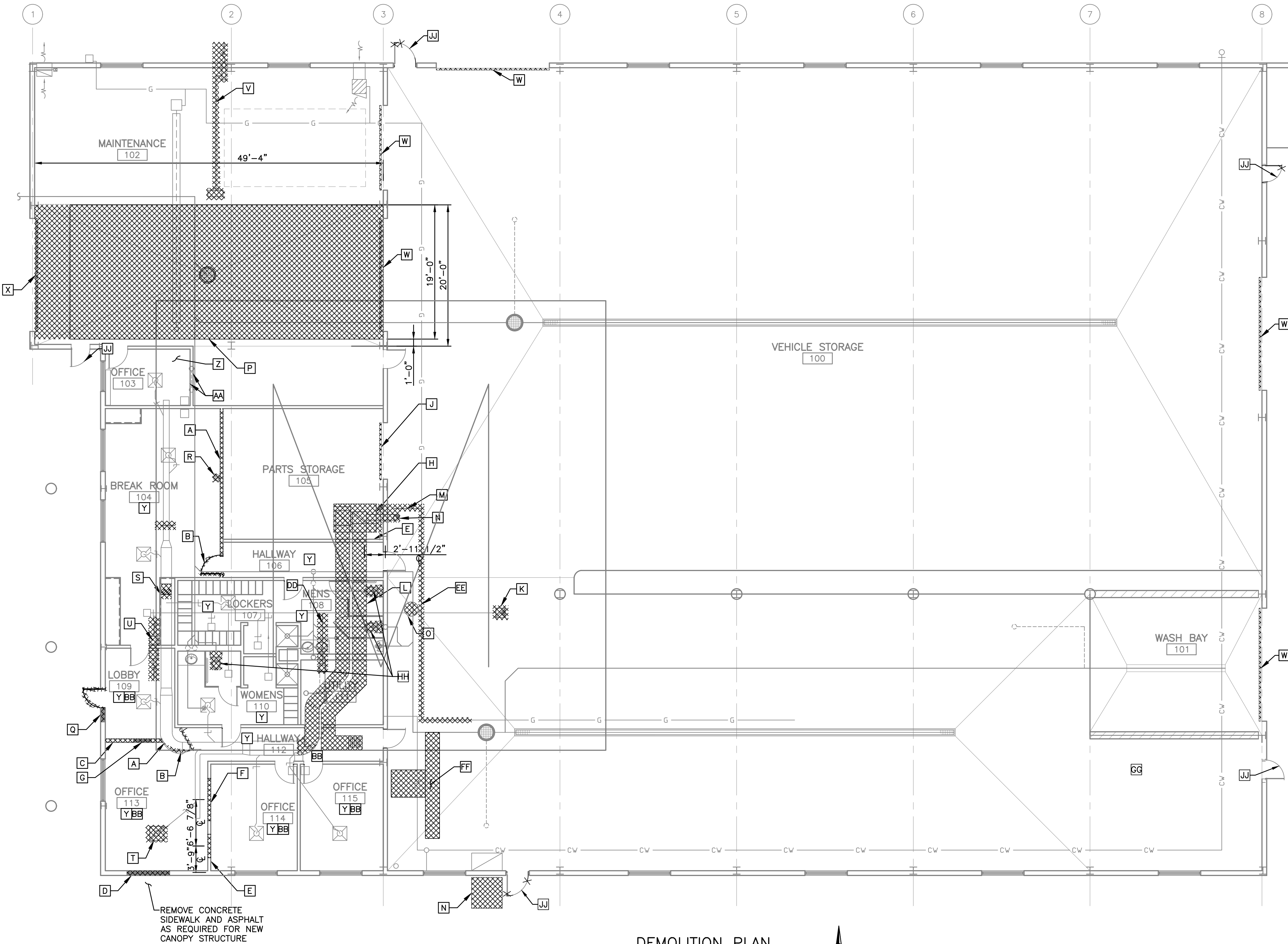
DATE	4/8/20
REVISIONS	
ISSUED FOR BID	
NO.	1

SITE PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT

STRAND
ASSOCIATES®

SHEET
4
C1.1



DEMOLITION PLAN

GENERAL DEMOLITION NOTES:

- DRAWINGS IN GENERAL DO NOT SHOW DIMENSIONS OF EXISTING CONSTRUCTION, BUT ARE DRAWN APPROXIMATELY TO SCALE. CONTRACTOR SHALL OBTAIN ALL DIMENSIONS REQUIRED FOR DEMOLITION.
- DRAWINGS DO NOT NECESSARILY SPELL OUT ALL ITEMS REQUIRING DEMOLITION, REMOVAL, OR PATCHING. WHERE NOT SHOWN, ALL DEMOLITION, REMOVAL, CUTTING AND PATCHING, AND OTHER WORK NECESSARY TO ACCOMMODATE NEW CONSTRUCTION SHOWN SHALL BE PROVIDED AS PART OF THE CONTRACT.
- NOT ALL EXISTING EQUIPMENT, PIPING, OR CONDUIT IS SHOWN. ALL LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL EXISTING STRUCTURES, PIPING, EQUIPMENT, AND CONDUIT.
- ALL HOLES AND OPENINGS FROM PIPING AND EQUIPMENT, PIPE HANGERS, ETC. BEING REMOVED SHALL BE PATCHED TO MATCH EXISTING.
- REFER TO DRAWING DE1.1 FOR ADDITIONAL ELECTRICAL DEMOLITION WORK REQUIRED.

DEMOLITION KEY NOTES:

- A** REMOVE PARTITION WALL.
- B** REMOVE DOOR, FRAMES, HARDWARE, AND ACCESSORIES.
- C** REMOVE PARTITION WALL, WINDOW, FRAME, AND ACCESSORIES.
- D** REMOVE EXTERIOR WINDOW FRAMES, GLAZING, AND ACCESSORIES. REMOVE EXTERIOR WALL FROM BELOW EXISTING WINDOW SILL TO GRADE FOR NEW DOOR. SEE DOOR SCHEDULE FOR DIMENSIONS AND DETAILS. SALVAGE 4" SPLIT FACE CMU VENEER FOR USE ELSEWHERE.
- E** REMOVE PARTITION WALL FOR NEW DOOR AND FRAME.
- F** REMOVE WALL FOR A NEW INTERIOR WINDOW. SEE WINDOW SCHEDULE FOR DIMENSIONS AND DETAILS.
- G** SALVAGE EXISTING SLIDING GLASS WINDOW FOR REUSE.
- H** REMOVE FURNACE AND ASSOCIATED NATURAL GAS/REFRIGERANT PIPING SERVING THE UNIT.
- J** REMOVE OVERHEAD COILING DOOR, GUIDES AND ASSOCIATED ACCESSORIES.
- K** REMOVE ROOF MOUNTED EXHAUST FAN.
- L** REMOVE MAIN SUPPLY AND RETURN DUCTS FROM FURNACE TO HALLWAY 112.
- M** REMOVE NATURAL GAS PIPING BACK TO MAIN.
- N** REMOVE AIR COOLED CONDENSING UNIT. LEAVE CONCRETE PAD IN PLACE.
- O** REMOVE OUTSIDE AIR DUCTWORK AND PATCH AND SEAL ROOF OPENING. PATCH UNSUED OPENINGS IN WALLS.
- P** REMOVE APPROXIMATELY 49'-4" X 19'-0" SLOPED CONCRETE FLOOR SLAB AND FLOOR DRAIN BODY AND COVER. PREP DRAIN PIPING FOR RECONNECT INTO TO NEW FLOOR DRAIN.
- Q** REMOVE DOOR, FRAME, HARDWARE, AND ACCESSORIES. RE-USE DOOR, FRAME, HARDWARE, AND ACCESSORIES AT NEW ENTRANCE.
- R** REMOVE ZONE DAMPER THERMOSTAT.
- S** REMOVE SECTION OF DUCTWORK AND CAP BOTH ENDS.
- T** REMOVE CEILING DIFFUSER AND PREP DUCT FOR RECONNECTION.
- U** REMOVE CEILING TRANSFER GRILLES AND REPLACE WITH CEILING TILES.
- V** REMOVE VEHICLE EXHAUST VENTILATION SYSTEM AND TURN OVER TO OWNER.
- W** REMOVE SECTIONAL OVERHEAD DOOR, TRACK AND OPERATOR. WORK TO BE INCLUDED IN ALTERNATIVE BID NO. 2.
- X** REMOVE SECTIONAL OVERHEAD DOOR OPERATOR, TRACK AND DOOR TO REMAIN. WORK TO BE INCLUDED IN ALTERNATIVE BID NO. 2.
- Y** REMOVE EXISTING ACOUSTICAL CEILING TILES. GRID TO REMAIN.
- Z** REMOVE VINYL TILE FLOORING AND BASE IN THIS ROOM.
- AA** REMOVE BOTTOM 2' OF DRYWALL ON BOTH SIDES OF WALL.
- BB** REMOVE EXISTING CARPET AND VINYL BASE.
- CC** REMOVE ZONE DAMPER CONTROLLER AND WIRING.
- DD** REMOVE DUCTWORK AND GRILLE.
- EE** REMOVE NATURAL GAS LINE WHERE SHOWN FOR NEW UPSIZED LINE TO BE INSTALLED.
- FF** SAWCUT AND REMOVE CONCRETE TO PERMIT INSTALLATION OF NEW UNDERFLOOR PLUMBING.
- GG** REMOVE CONCRETE SLAB IN THIS AREA AS REQUIRED FOR NEW FOOTINGS. USE CAUTION DURING DEMOLITION AND EXCAVATION WORK AS THERE IS UNDERGROUND WATER PIPING IN THIS AREA. EXACT LOCATION IS UNKNOWN.
- HH** REMOVE EXISTING WATER CLOSET.
- JJ** EXTERIOR DOOR DEMOLITION VARIES BASED ON NEED OF REPAIR. SEE DOOR SCHEDULE ON DRAWING A6.1 FOR REPAIR REQUIREMENTS AND DEMOLISH ELEMENTS AS NECESSARY.

DATE:	4/8/20								
NO.	1								
ISSUED FOR BID									
REVISIONS									

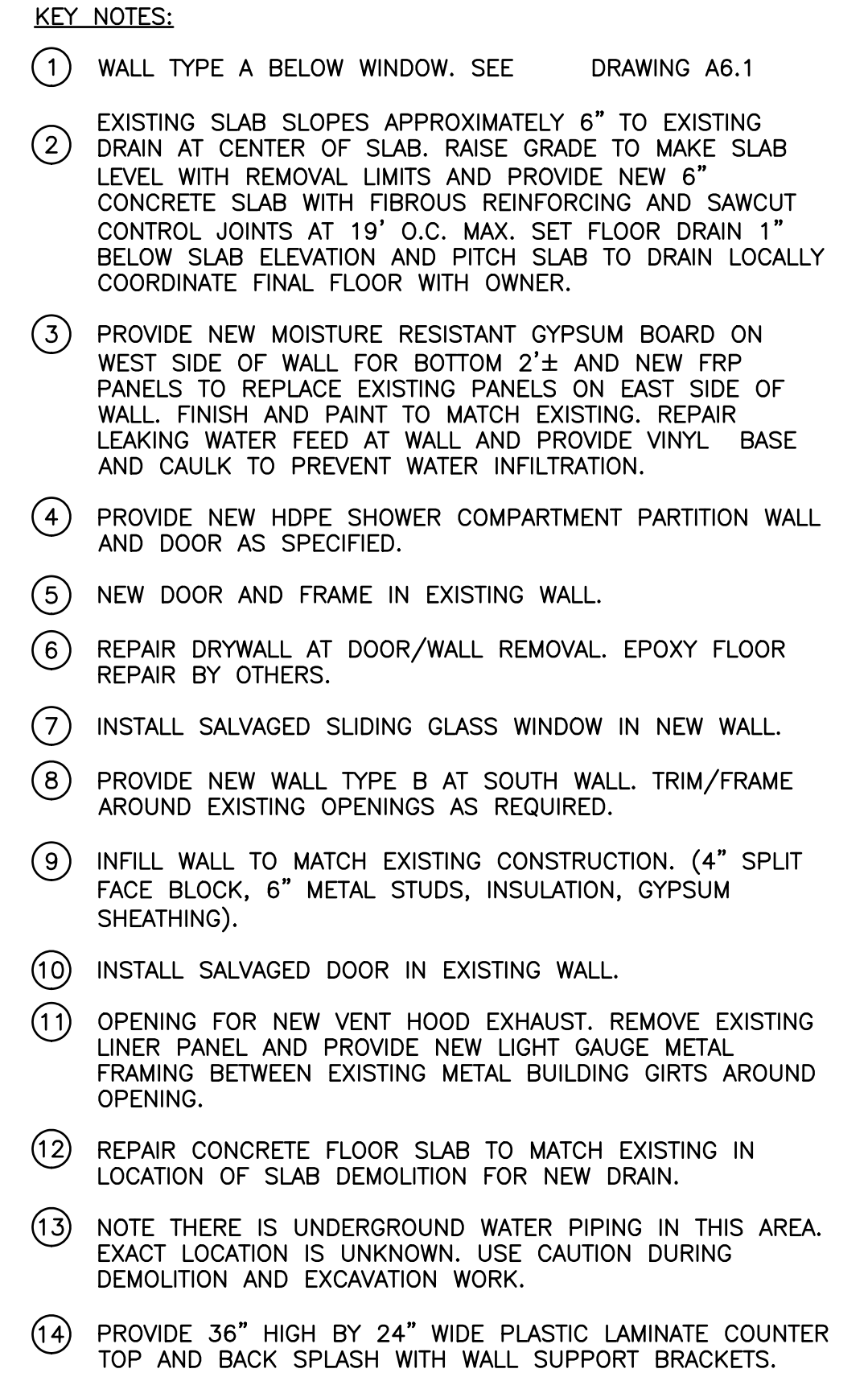
OFFICE AND STORAGE GARAGE
DEMOLITION FLOOR PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

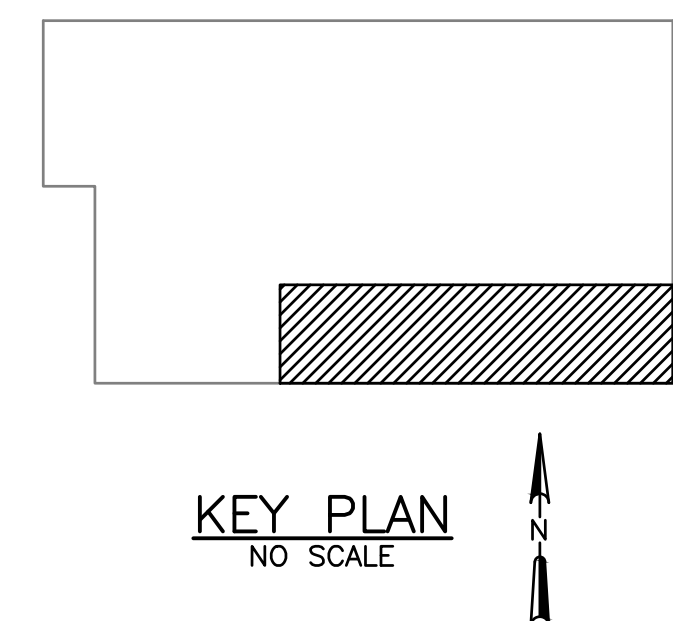
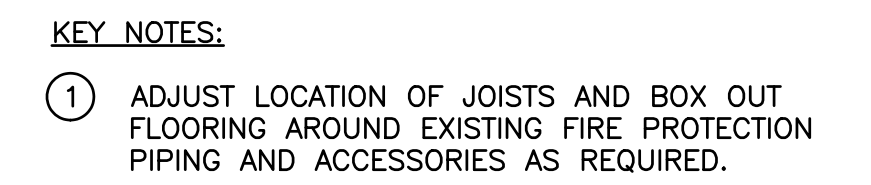
JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



SHEET
5
D1.1



[illegible]

MEZZANINE FLOOR PLAN

JOB NO.
1426.004

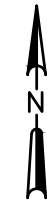
PROJECT MGR.
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SHEET
7
A1.2



OVERALL ROOF PLAN



GENERAL NOTES:

1. VERIFY REQUIRED OPENINGS IN NEW ROOF SYSTEM FOR SKYLIGHTS, ROOF EQUIPMENT, AND HVAC OPENINGS.
2. FLASH ALL PENETRATIONS PER ROOFING MANUFACTURER REQUIREMENTS.
3. SEE DRAWING A5.2 FOR TYPICAL DETAILS.
4. REVISE AND PROVIDE FLASHING AROUND ALL EXISTING VENT AND EXHAUST PIPES NOT SHOWN PER MANUFACTURER'S RECOMMENDATIONS.

KEY NOTES:

- 1 METAL-OVER-METAL RE-ROOF SYSTEM. FASTEN TO EXISTING DECK PER MANUFACTURER REQUIREMENTS AND PROVIDE 4" BATT INSULATION BETWEEN NEW AND EXISTING ROOF PANELS. SEE DRAWING A5.2 FOR TYPICAL SYSTEM DETAILS.
- 2 PROVIDE EAVE/FASCIA CLOSURE PER MANUFACTURER'S DETAILS.
- 3 REPLACE STANDING SEAM ROOF PANELS TO MATCH EXISTING, SEE SPECIFICATIONS.
- 4 MODIFY FLASHING AT SKYLIGHTS FOR NEW ROOF SYSTEM AS REQUIRED.
- 5 MODIFY GUTTER AS REQUIRED FOR NEW ROOF SYSTEM.
- 6 FLASH INTO WALL PANELS TO MATCH EXISTING CONSTRUCTION.
- 7 PROVIDE STANDING SEAM ROOF PANELS TO MATCH OFFICE AREA ROOF PANELS. PLACE PANELS FLUSH AGAINST EXISTING BUILDING SOFFIT.
- 8 REMOVE EXISTING SOLAR PANELS AND TURN OVER TO OWNER.

DATE:	4/8/20								
NO.	1								
REVISIONS	ISSUED FOR BID								

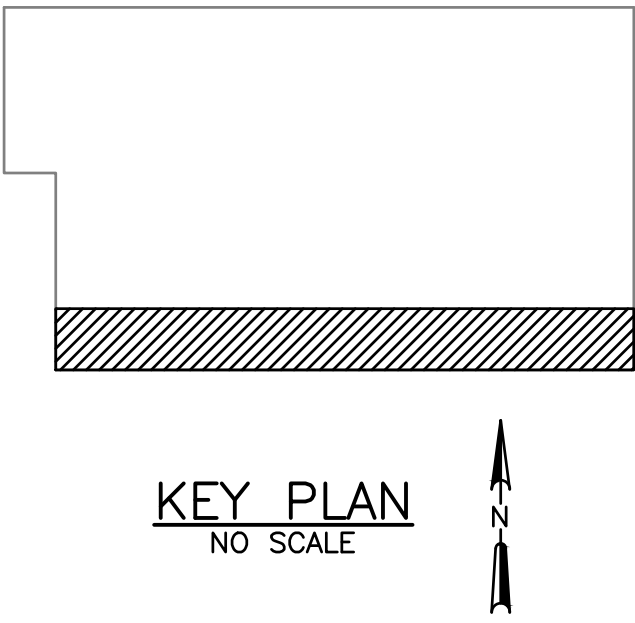
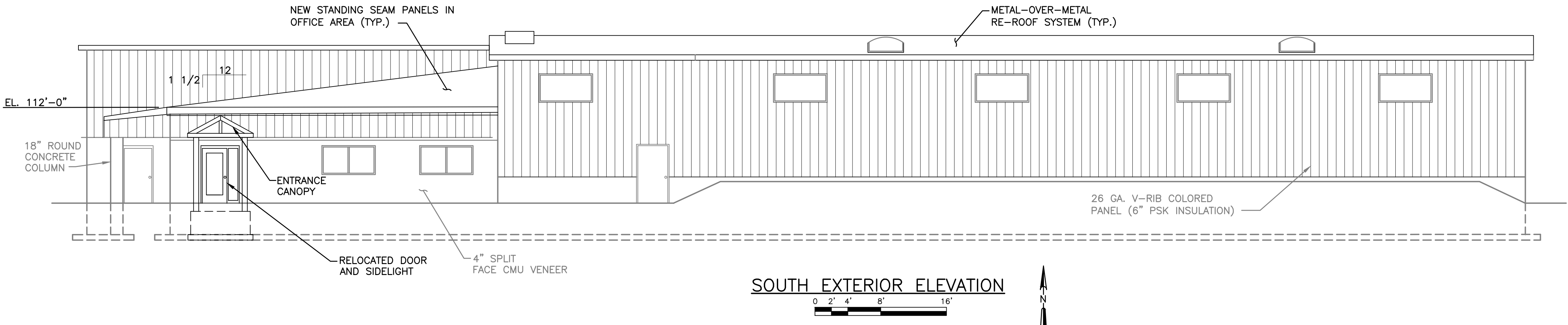
ROOF PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

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SHEET
8
A1.3



NO.	REVISIONS	DATE
1	ISSUED FOR BID	4/8/20

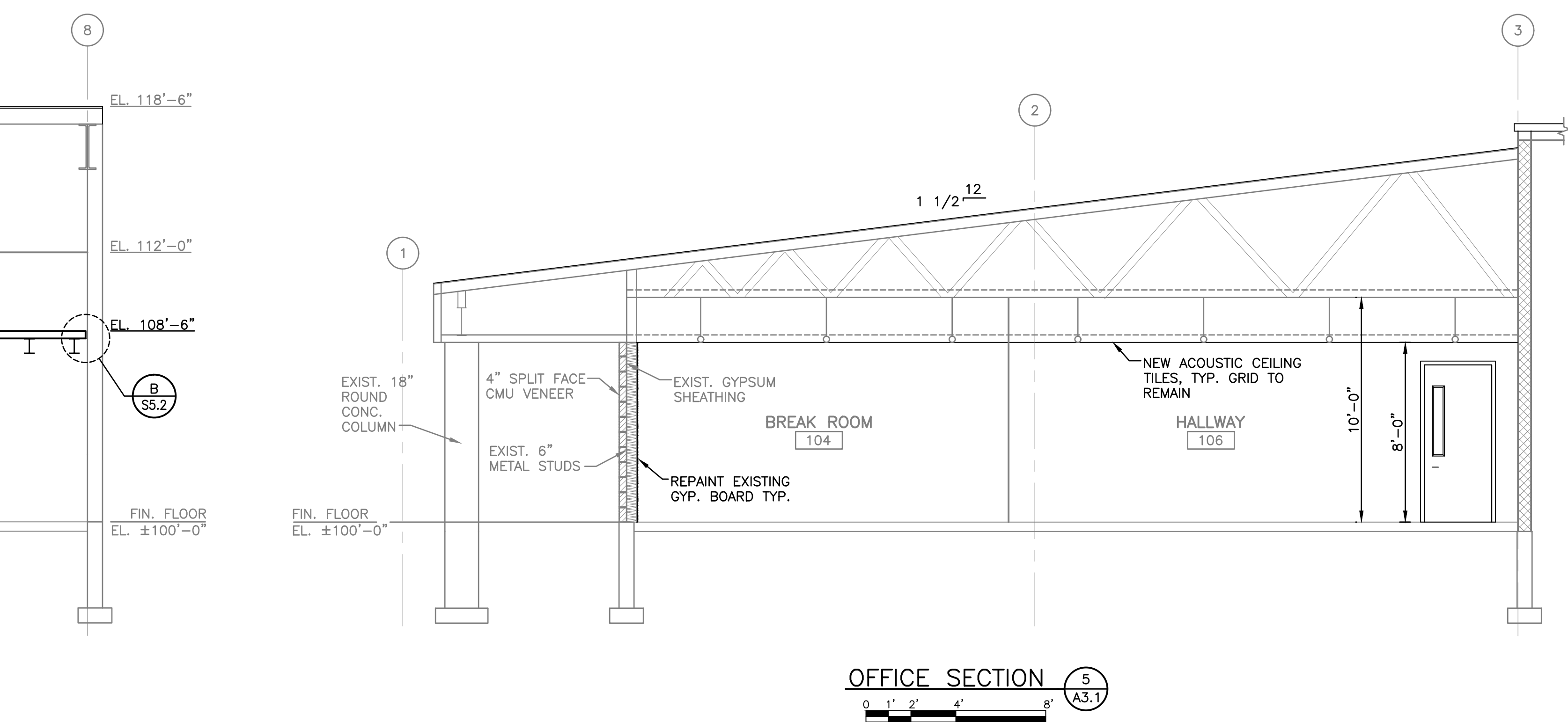
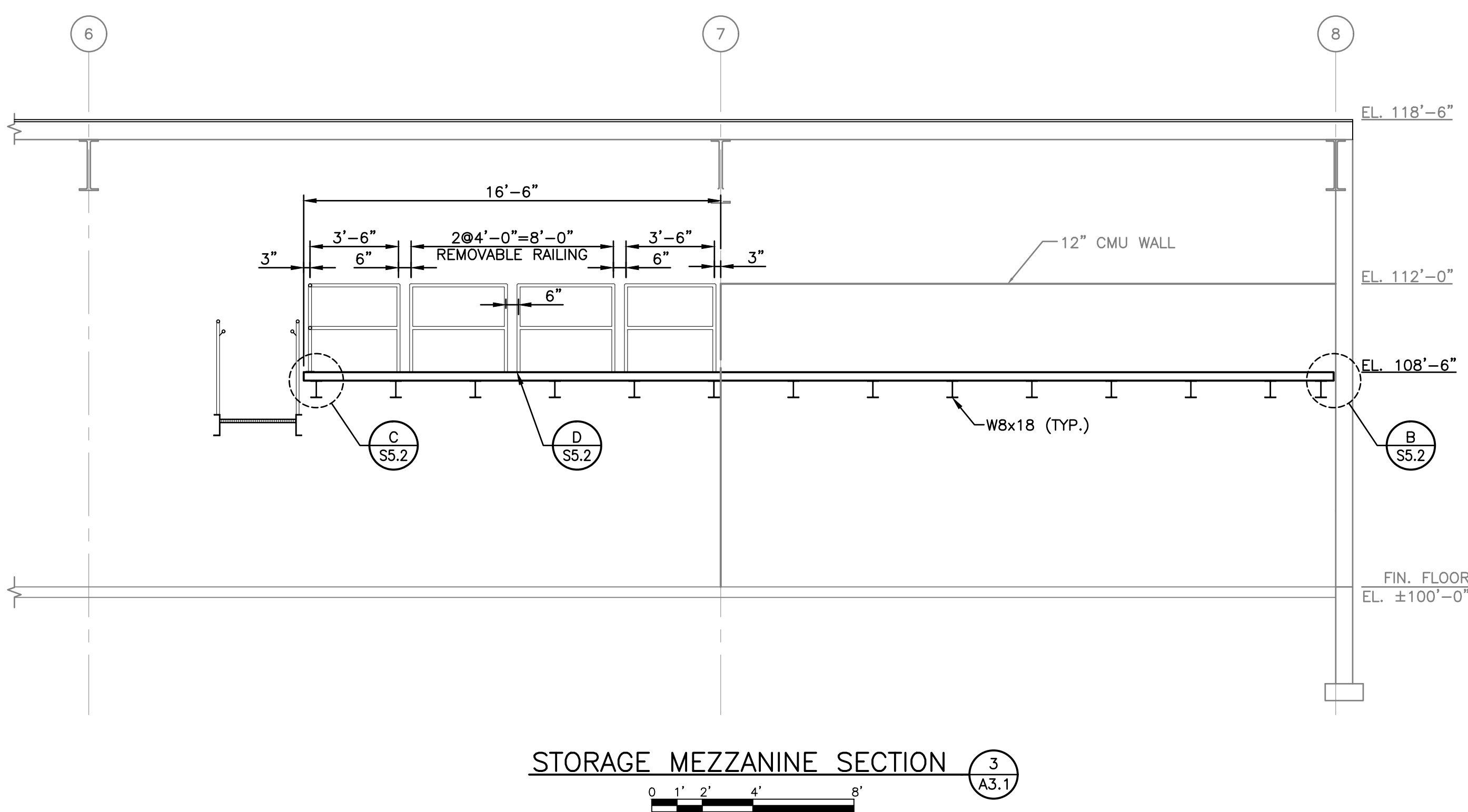
SOUTH EXTERIOR ELEVATION
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



SHEET
9
A2.1

[illegible]

SECTIONS - 1

PUBLIC WORKS FACILITY RENOVATION

VILLAGE OF MCFARLAND

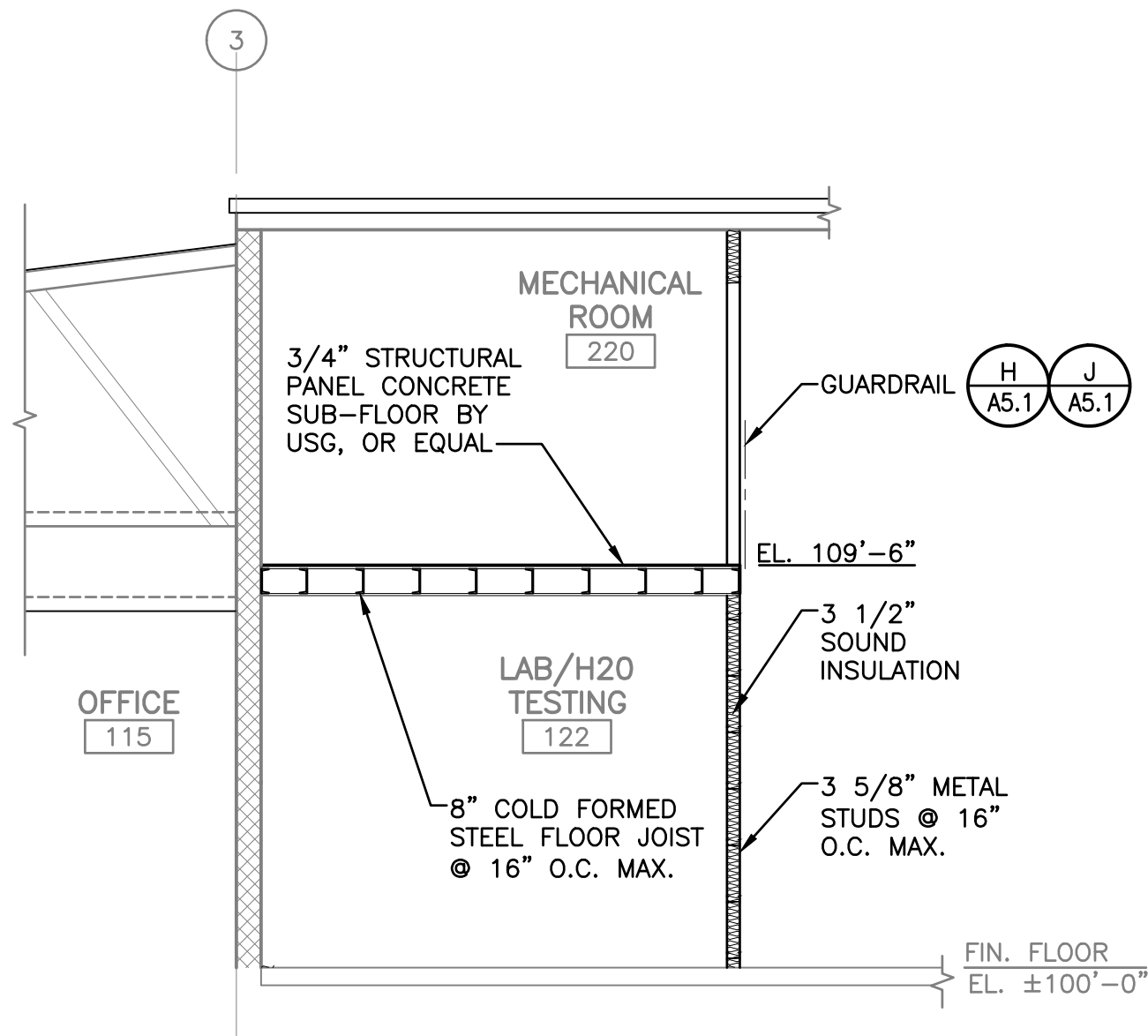
MCFARLAND, WISCONSIN

JOB NO.
1426.004

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SHEET
10
A3.1



SECTION 1
A3.2

0 1' 2' 4' 8'

NO.	REVISIONS	DATE
1	ISSUED FOR BID	4/8/20

SECTIONS - 2

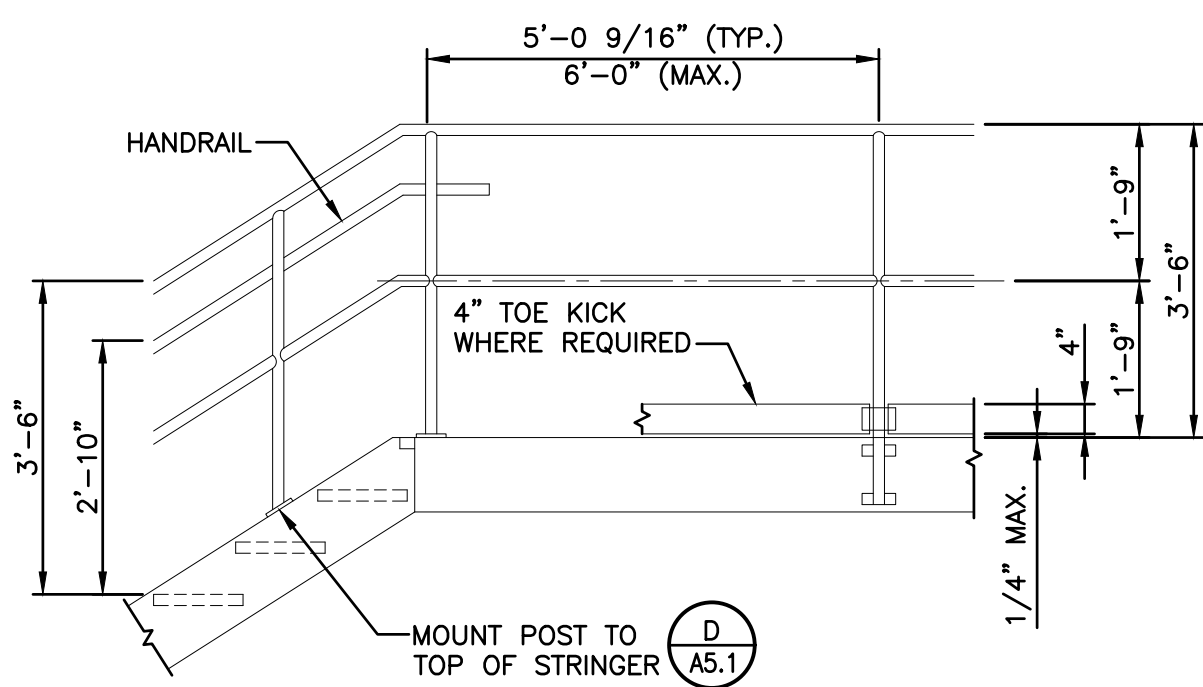
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
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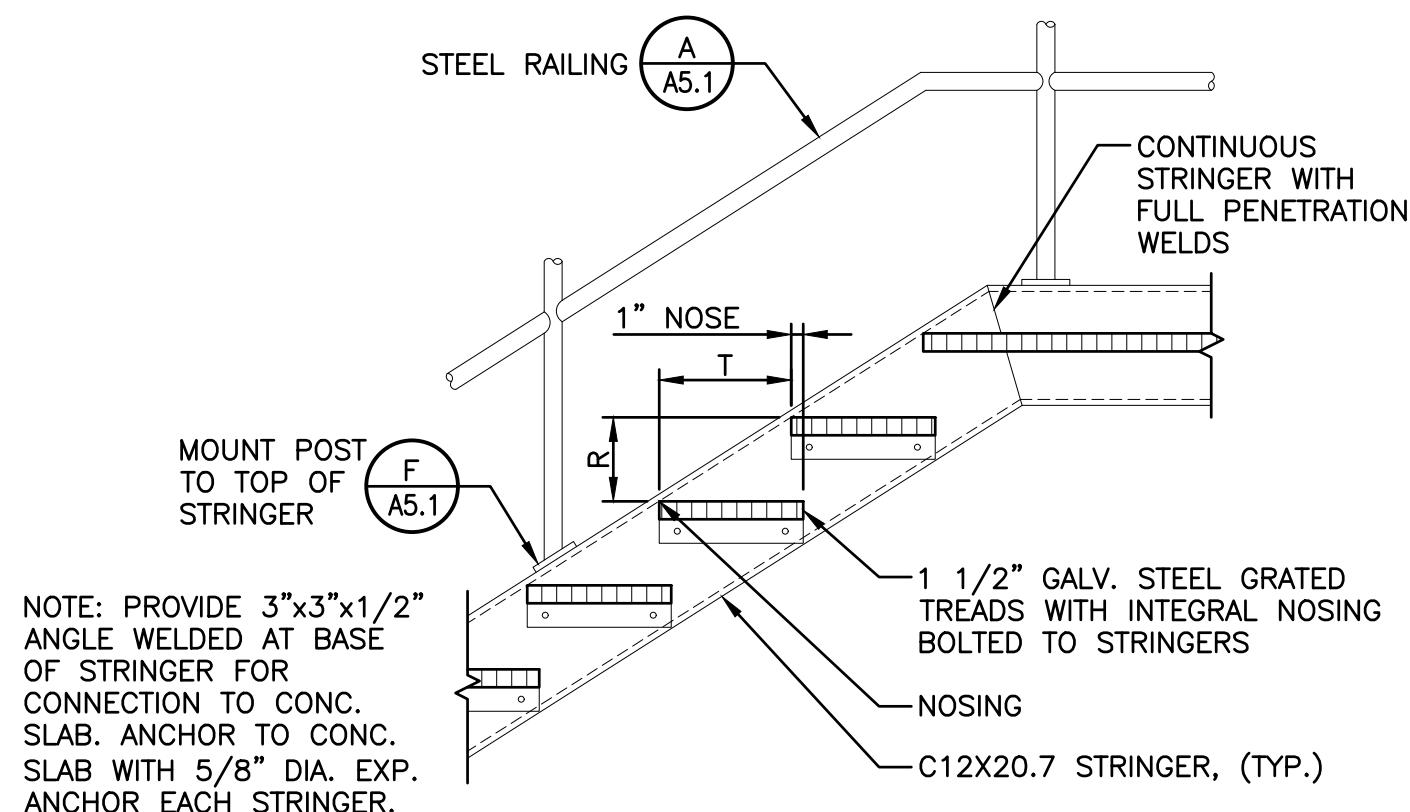
SHEET
11
A3.2



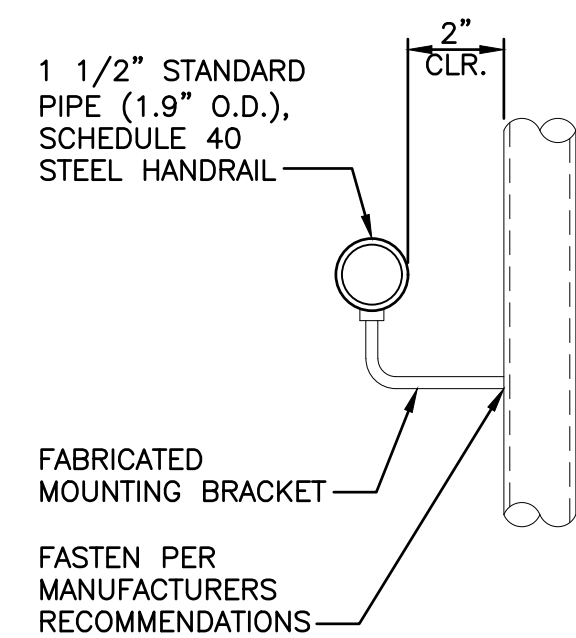
A PAINTED STEEL RAILING
A5.1 NO SCALE

NOTES:

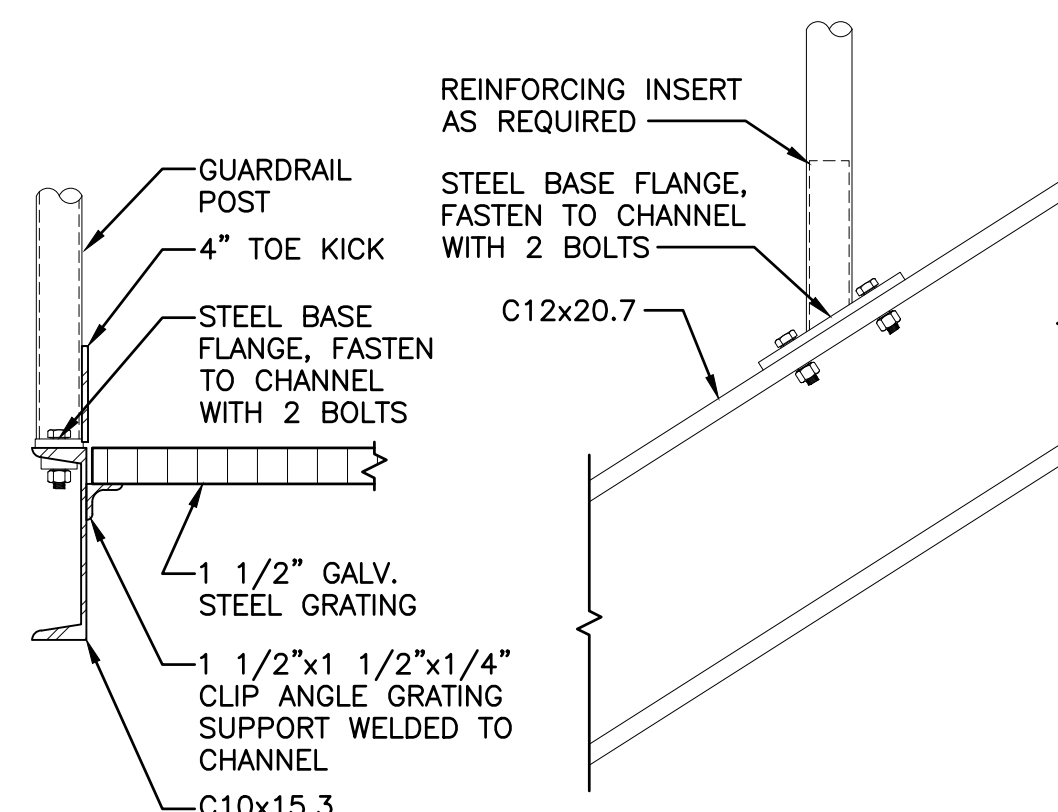
1. ALL RAILS AND POSTS SHALL BE 1 1/2" STANDARD PIPE (1.9" O.D.), SCHEDULE 40 STEEL.
2. ALL RAIL SYSTEMS SHALL MEET OSHA PERFORMANCE STANDARDS FOR PUBLIC AND INDUSTRIAL APPLICATIONS AND 2015 INTERNATIONAL BUILDING CODE.
3. EXTEND HANDRAILS HORIZONTALLY A MINIMUM 1'-0" BEYOND TOP RISER. HANDRAILS SHALL CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND BOTTOM RISER.
4. MOUNT HANDRAIL TO WALLS OR GUARDRAIL POST PER



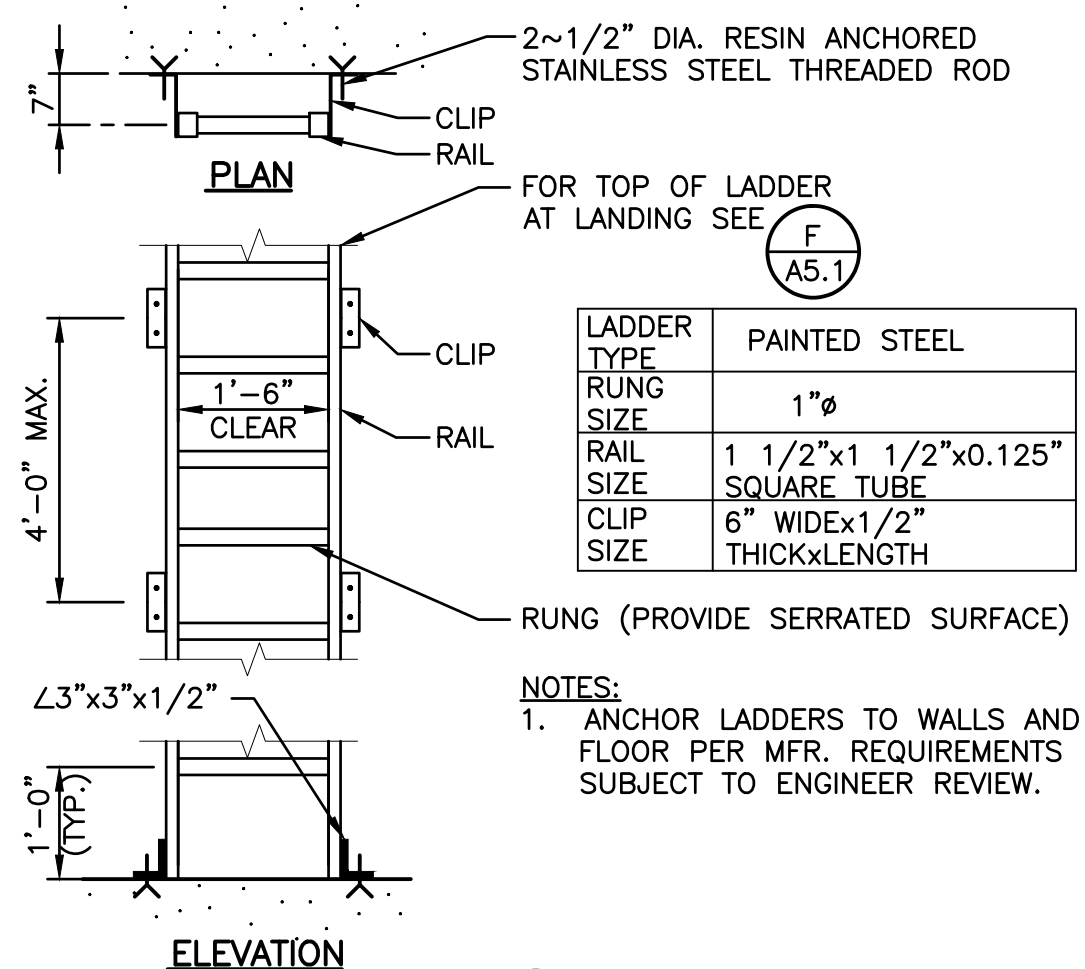
B STEEL GRATED STAIR
A5.1 NO SCALE



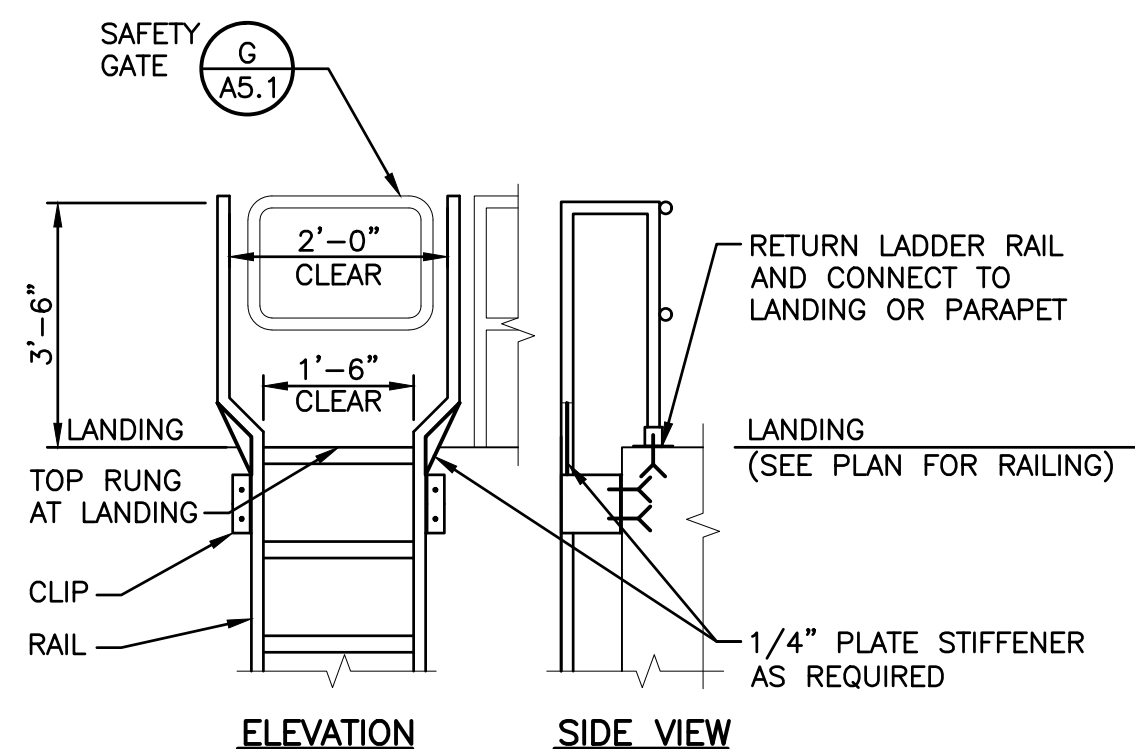
C DETAIL
A5.1 NO SCALE



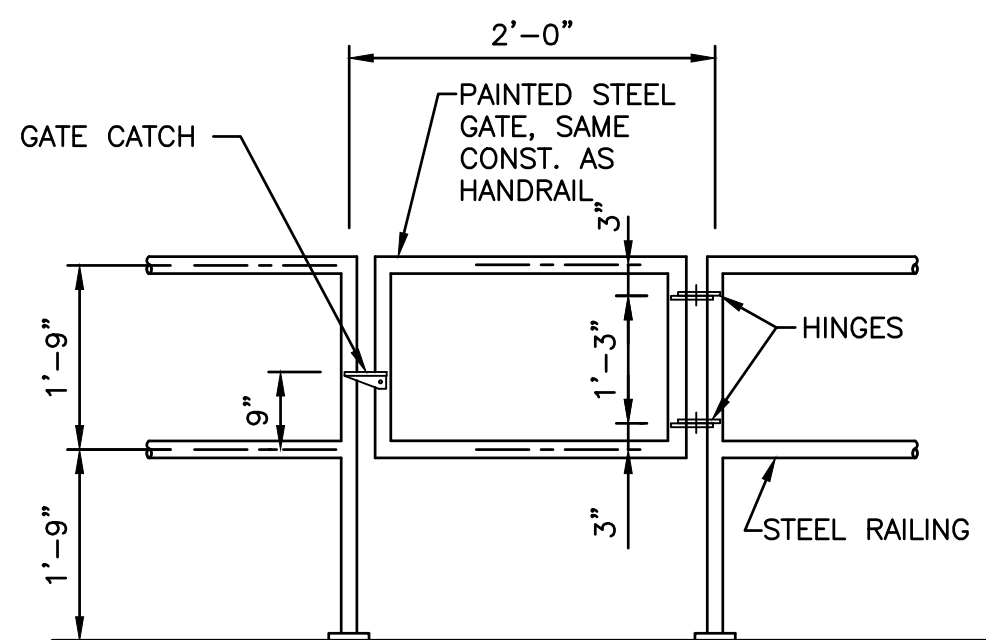
D GUARDRAIL STRINGER MOUNT
A5.1 1 1/2"=1'-0"



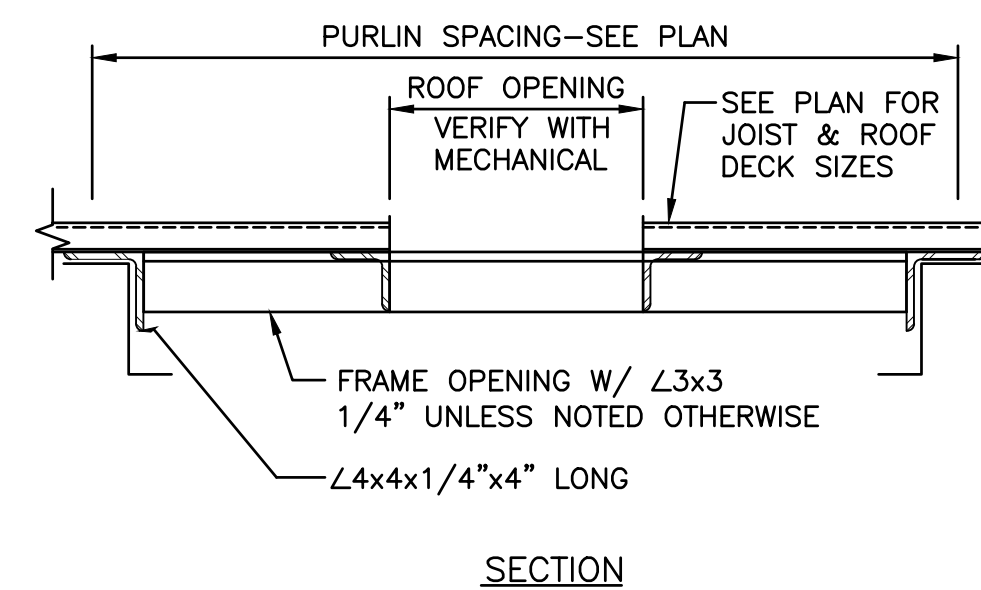
E LADDER
A5.1 NO SCALE



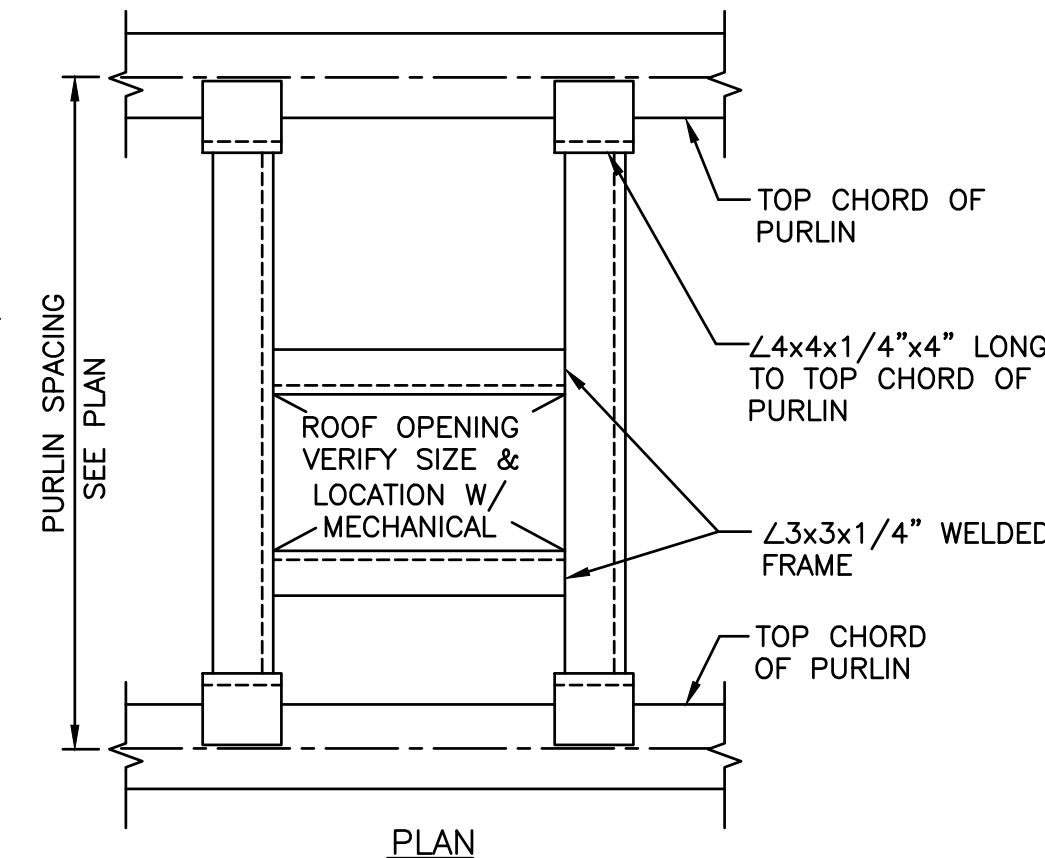
F LADDER AT LANDING
A5.1 NO SCALE



G SWING GATE
A5.1 NO SCALE

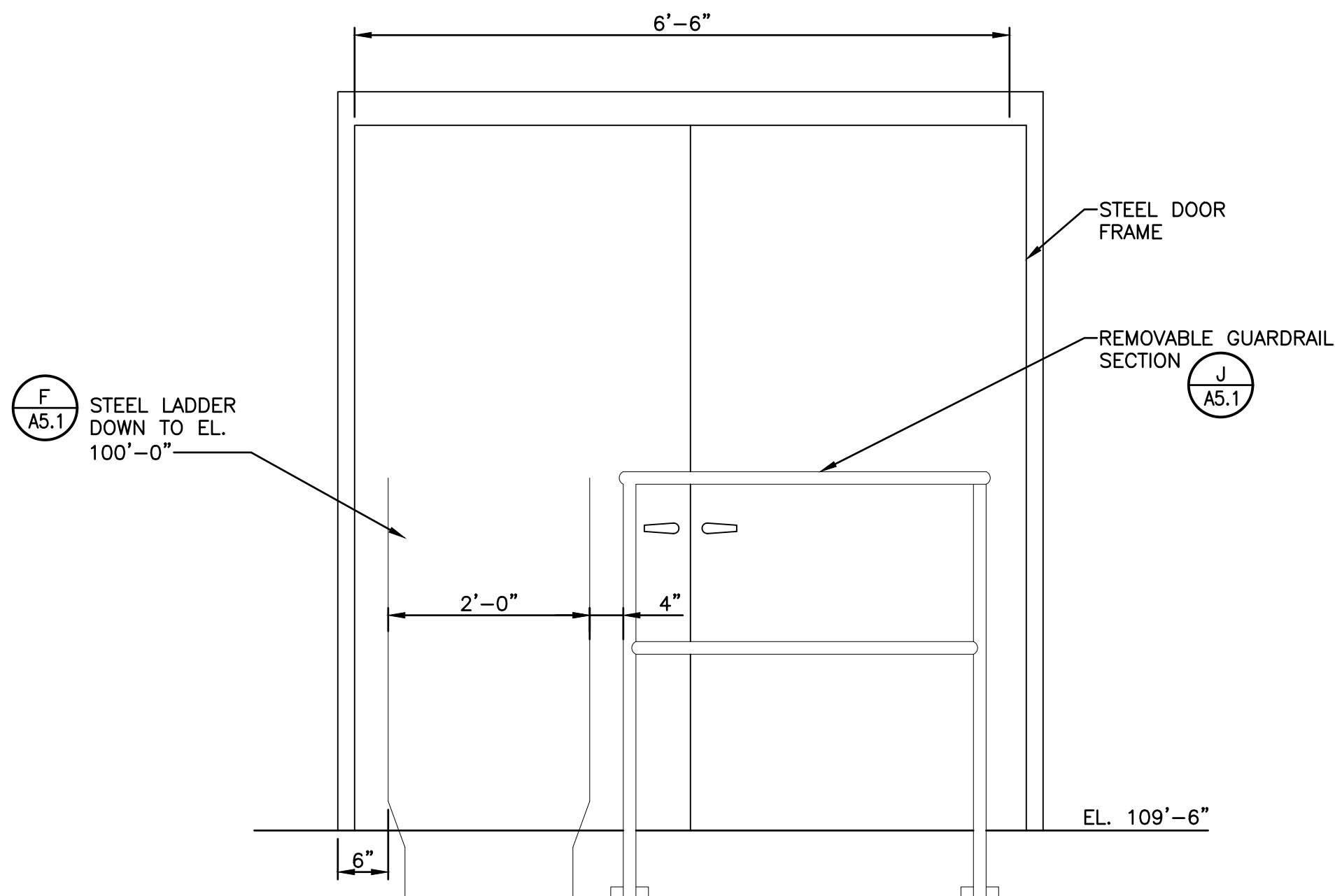


H SECTION

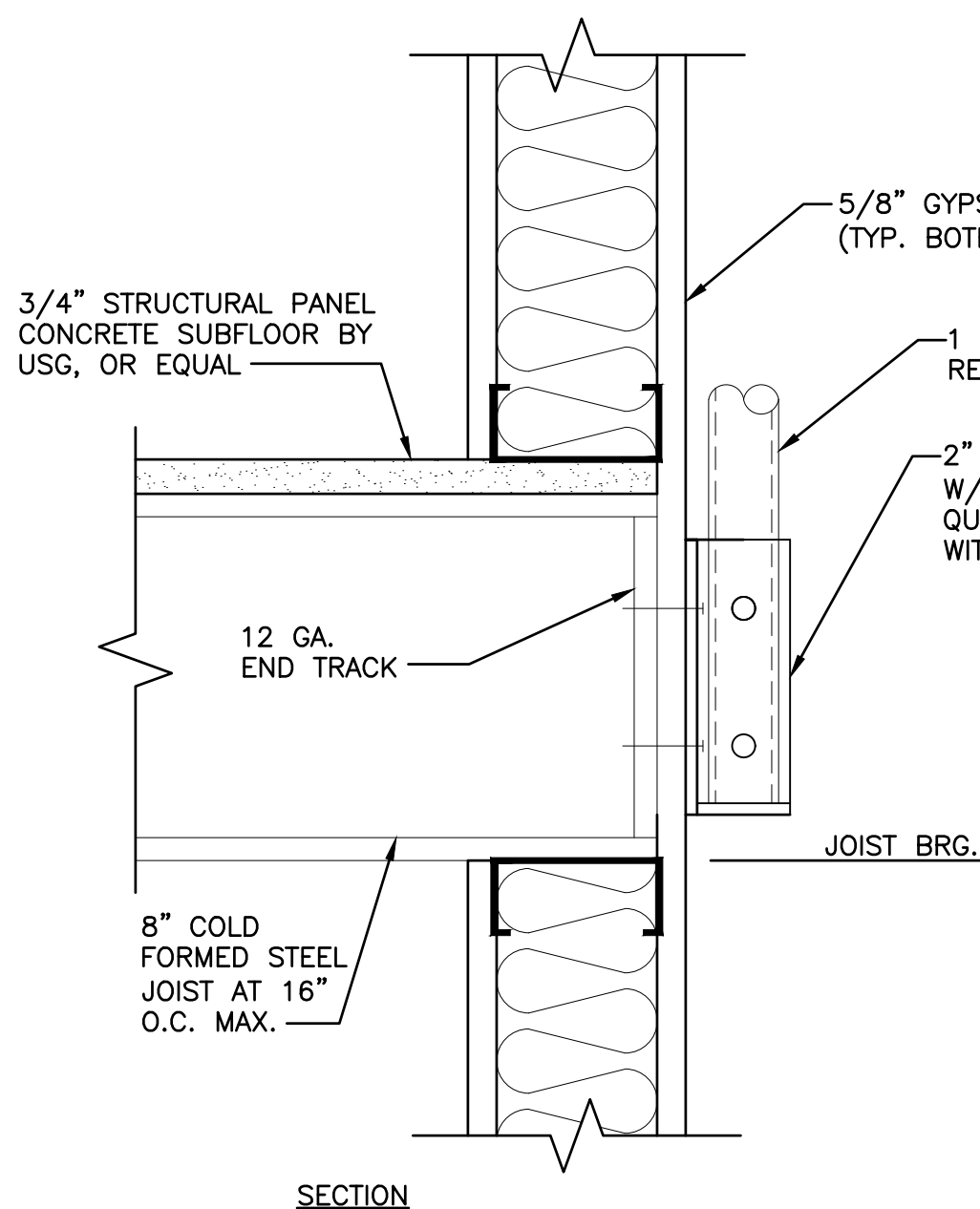


I PLAN

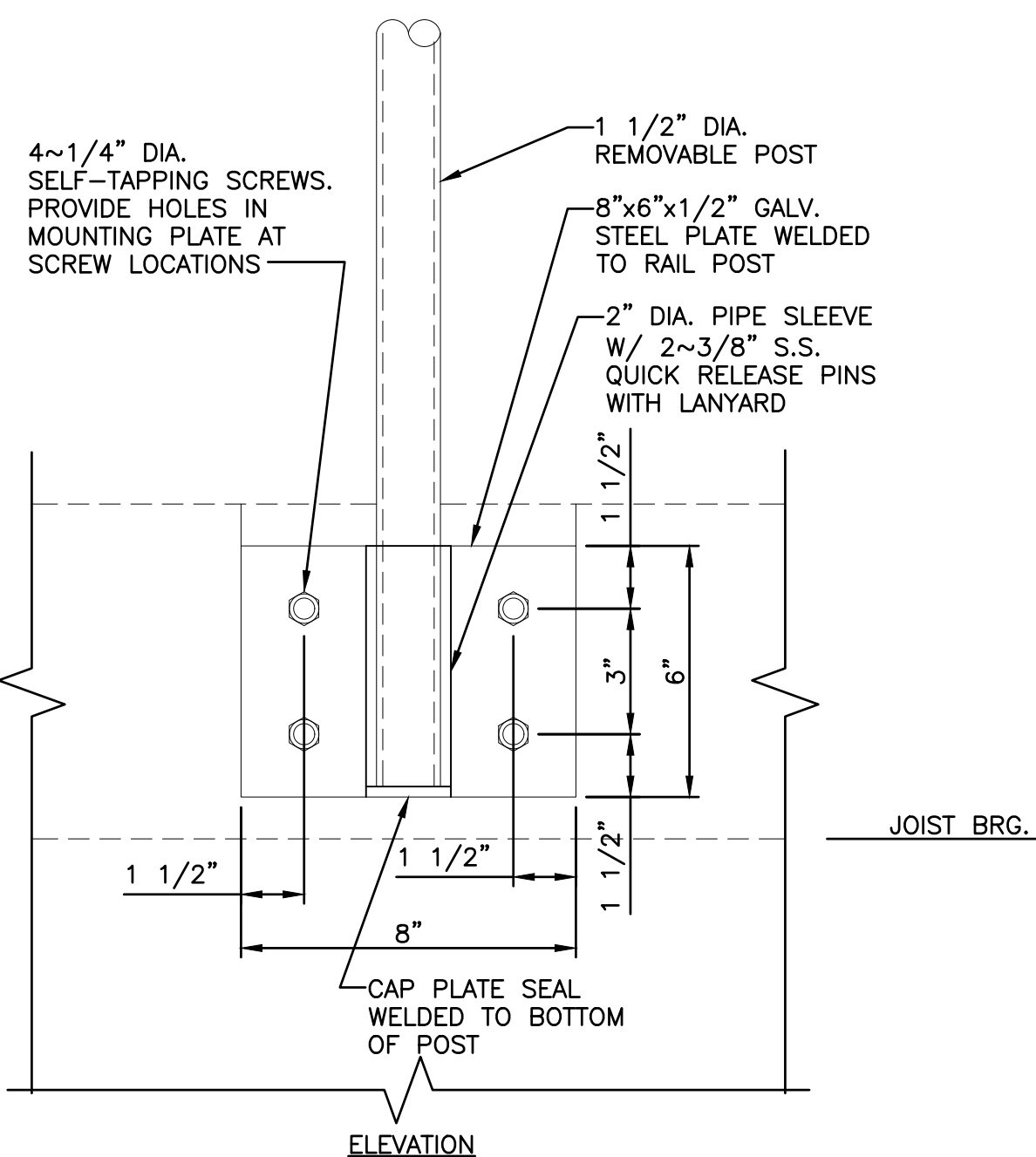
F TYPICAL FRAMING AT ROOF OPENINGS
A5.1 NO SCALE



H GUARDRAIL ELEVATION
A5.1



J GUARDRAIL FACE MOUNT
A5.1



K ELEVATION

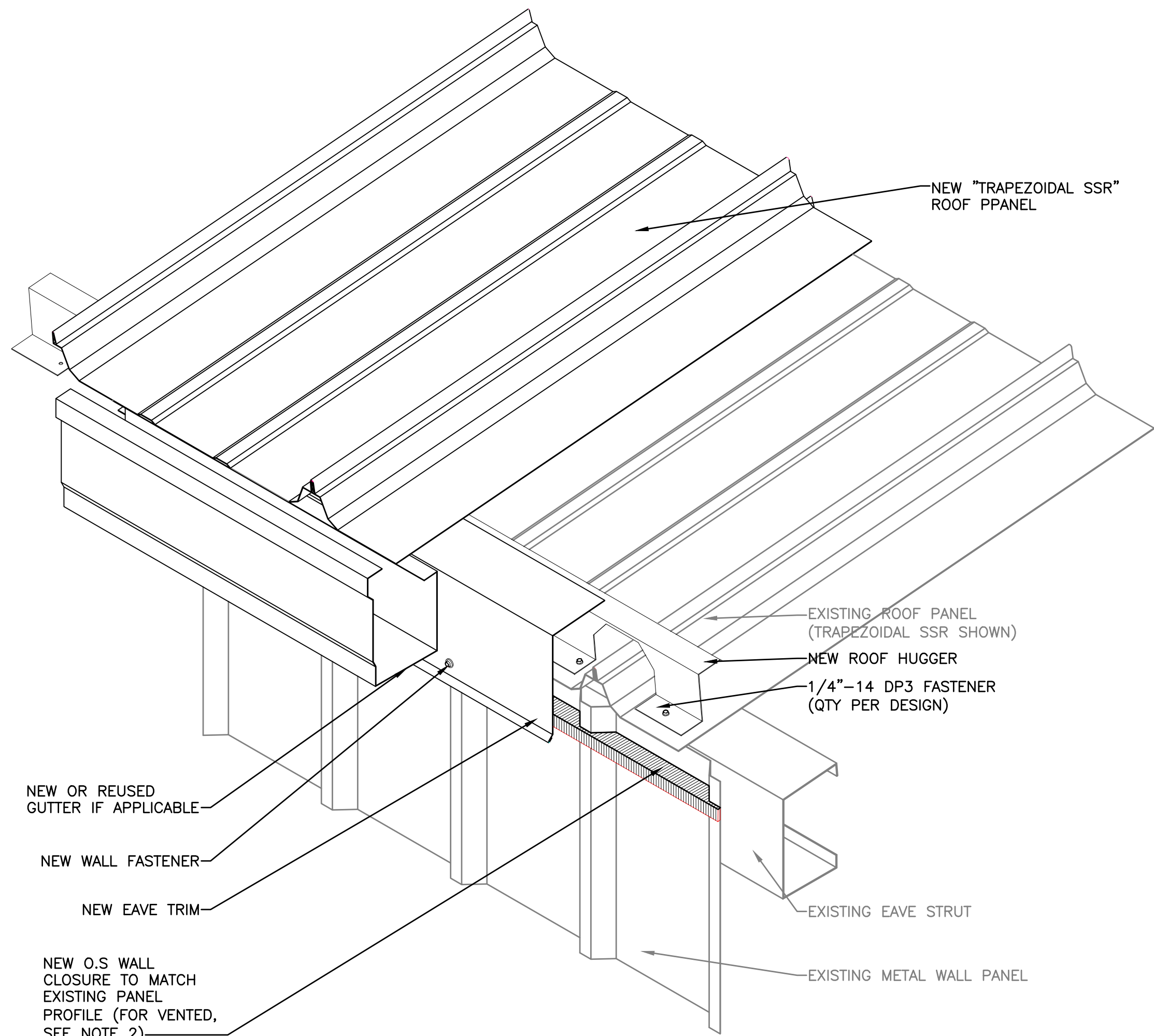
ARCHITECTURAL DETAILS - 1
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
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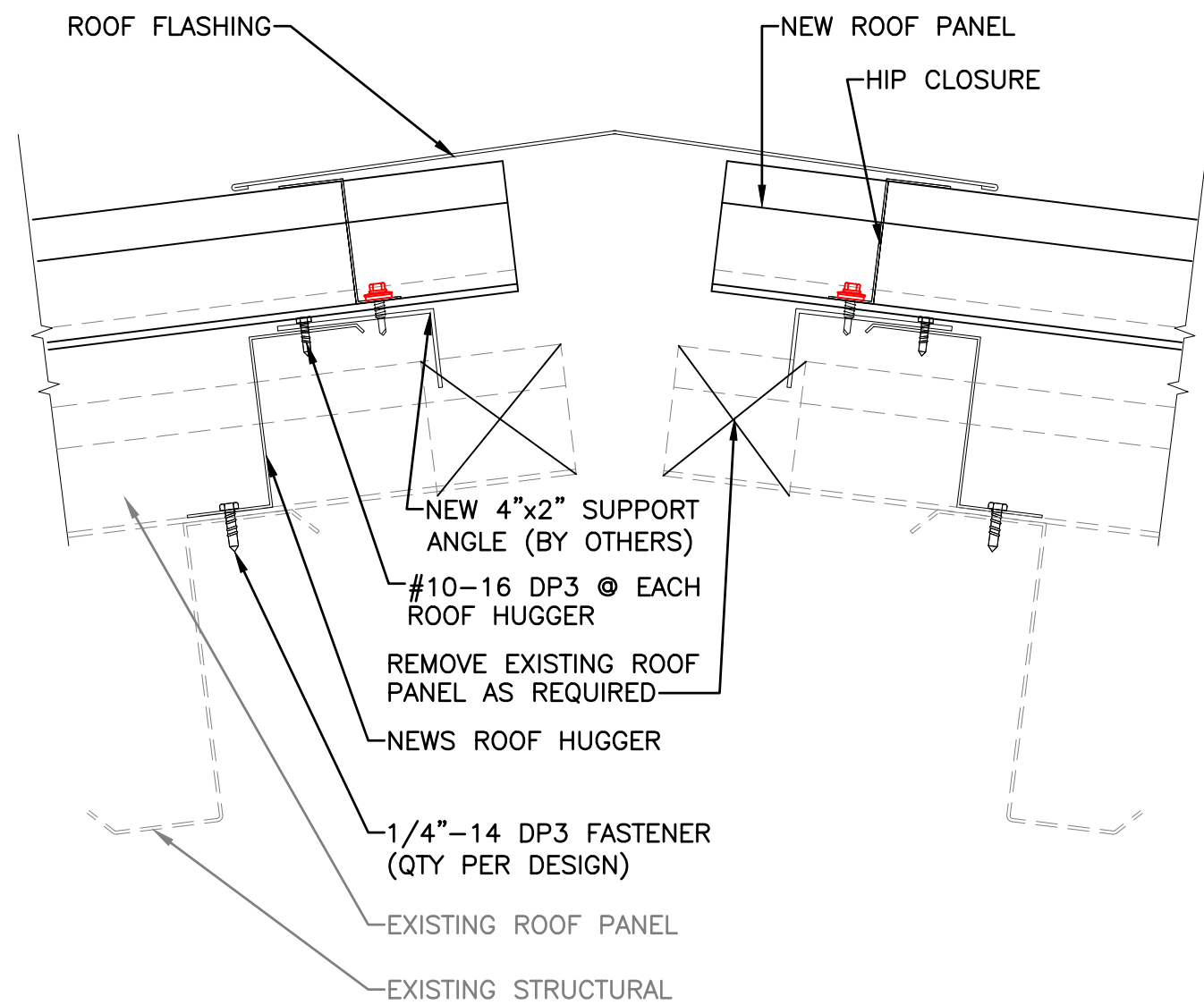
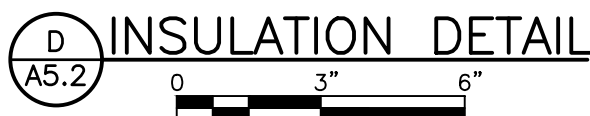
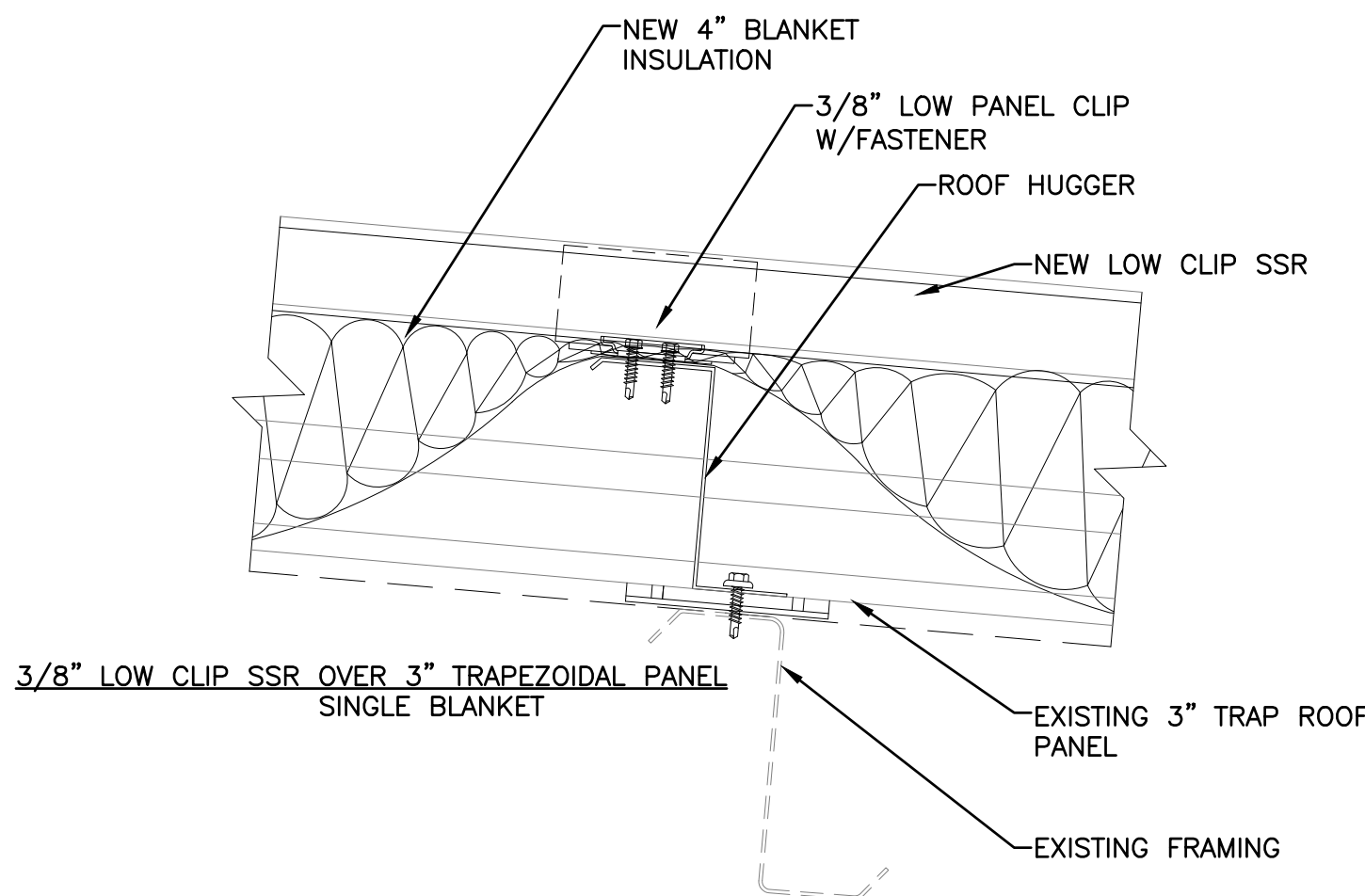
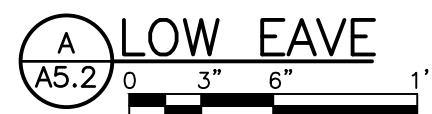


SHEET
12
A5.1



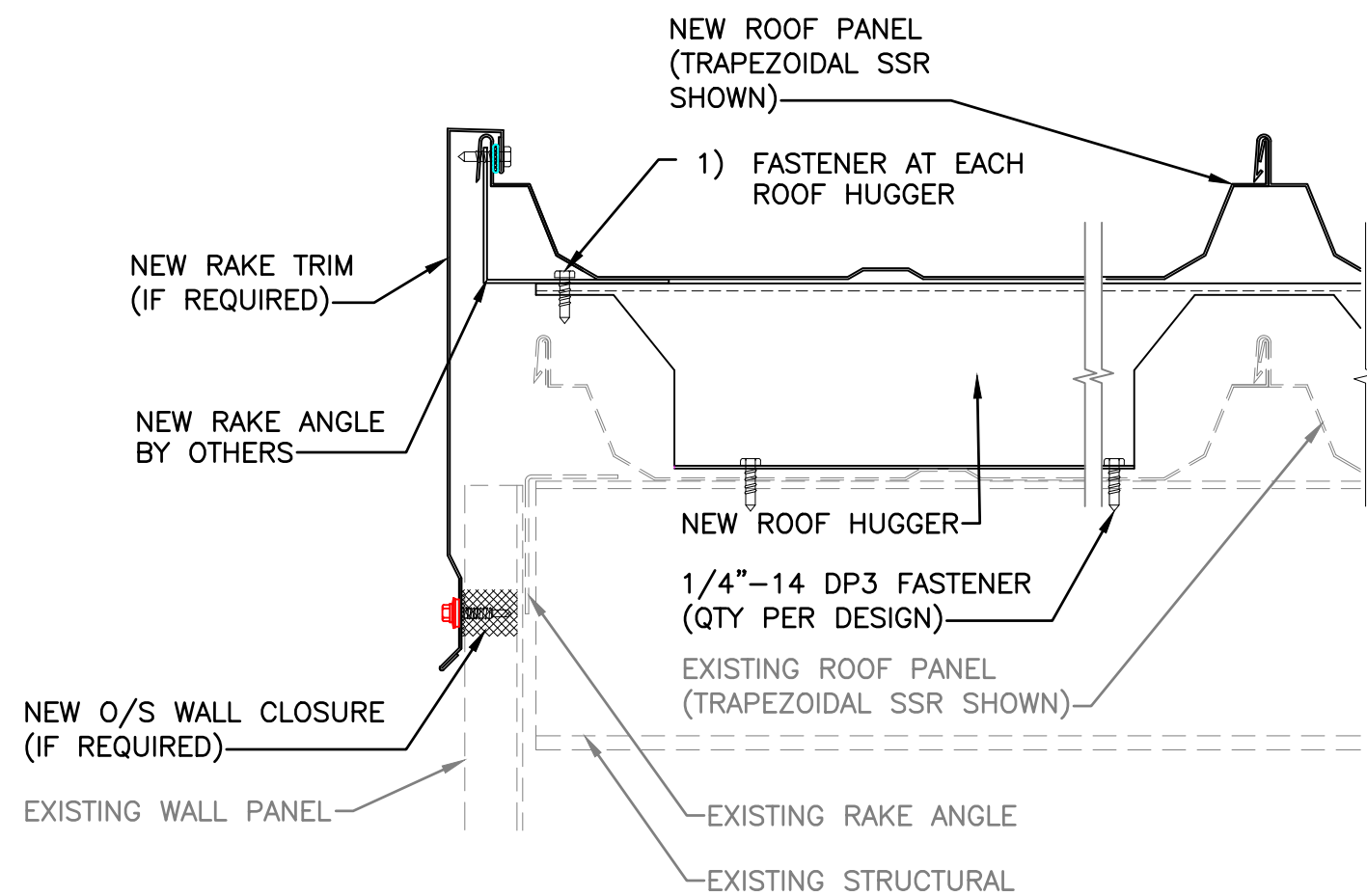
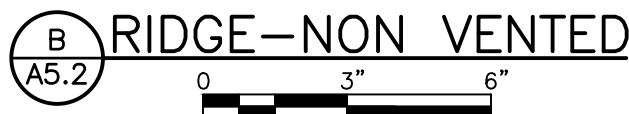
NOTES:

- ALL FASTENERS NOT BY ROOF HUGGER UNLESS NOTED OTHERWISE
- FOR VENTED LOW EAVE, USE "LP" VENTED CLOSURE AS MANUFACTURED BY MARCO INDUSTRIES - TULSA, OK OR OTHER AS PREFERRED.
- ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS.



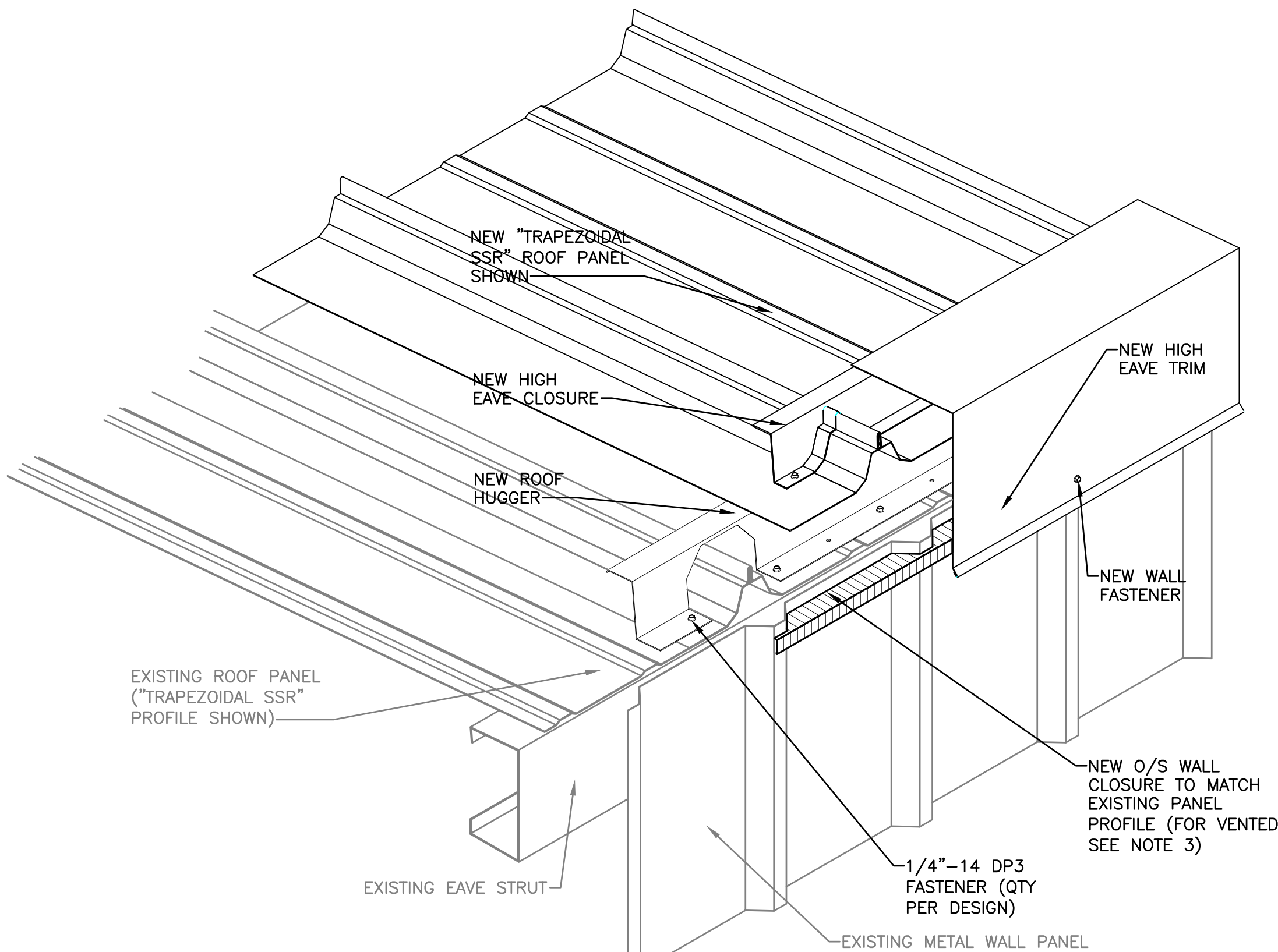
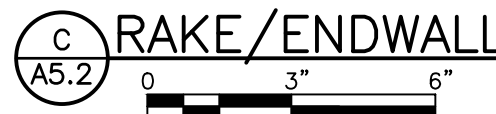
NOTES:

- FASTENERS NOT BY ROOF HUGGER UNLESS NOTED OTHERWISE.
- ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS.



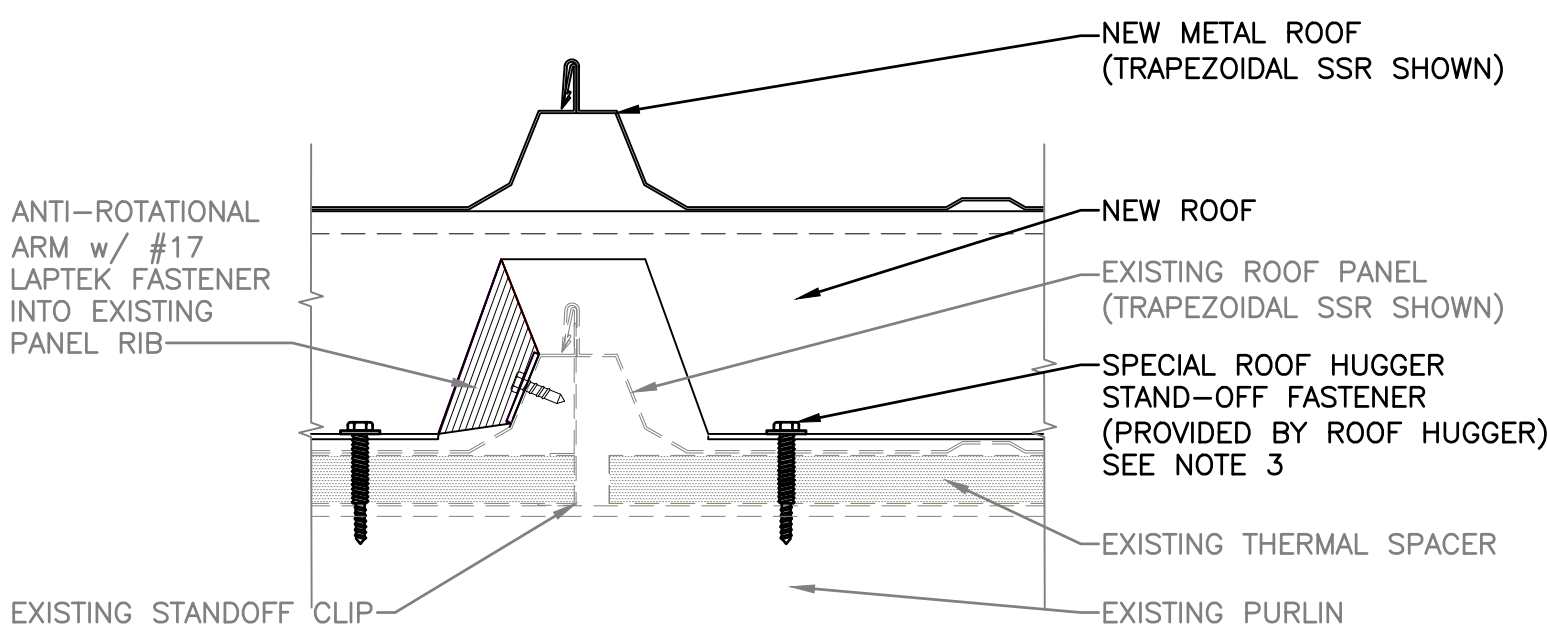
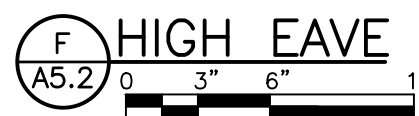
NOTES:

- ALL FASTENERS NOT BY ROOF HUGGER UNLESS NOTED OTHERWISE.
- ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS.
- IF OLD RAKE TRIM IS REMOVED, NEW RAKE TRIM MAY NEED TO EXTEND TO OLD TRIM LINE DUE TO WALL PANEL COLOR FADE.



NOTES:

- ALL FASTENERS NOT BY ROOF HUGGER UNLESS NOTED OTHERWISE.
- ALL NEW ROOF SYSTEMS INCLUDING PANEL, FASTENERS, TRIM AND ACCESSORIES TO BE INSTALLED PER THAT MANUFACTURER'S STANDARDS.
- FOR VENTED HIGH EAVE, USE "LP" VENTED CLOSURE AS MANUFACTURED BY MARCO INDUSTRIES - TULSA, OK OR OTHER AS PREFERRED.



DATE:	4/8/20								
NO.	1								
ISSUED FOR BID									
REVISIONS									

ARCHITECTURAL DETAILS - 2

PUBLIC WORKS FACILITY RENOVATION

VILLAGE OF MCFARLAND

MCFARLAND, WISCONSIN

JOB NO.
1426.004

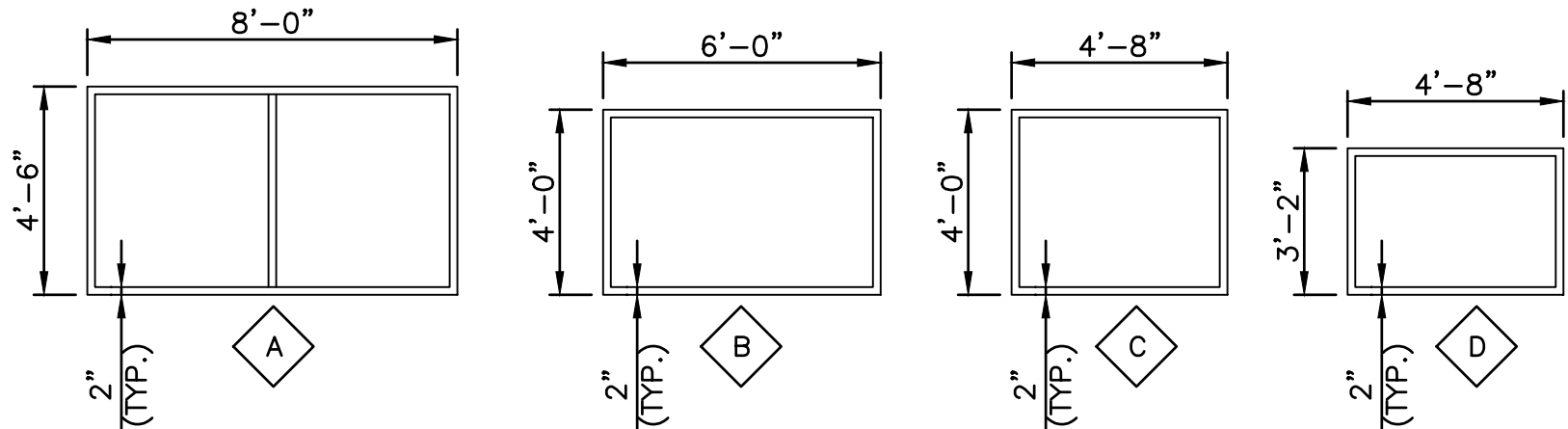
PROJECT MGR.
SCOTT HERKERT



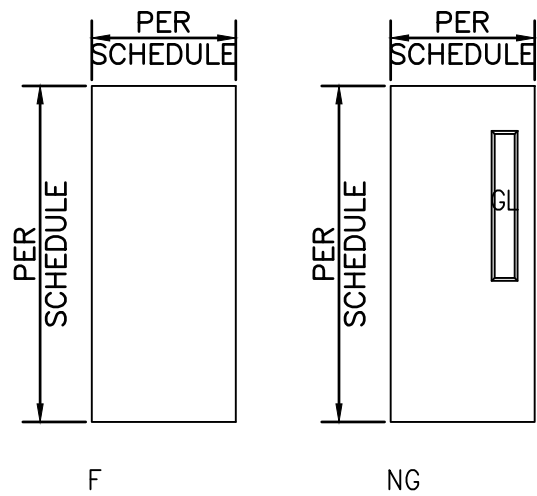
SHEET
13
A5.2

DOOR SCHEDULE																
DOOR NUMBER	DOOR						FRAME		LABEL	HARDWARE GROUP		LINTEL	DETAILS			NOTES
	SIZE (W x H)	MATERIAL	TYPE		SWING		TYPE	MATERIAL		ACTIVE	INACTIVE	TYPE	HEAD	JAMB	SILL	
100-OFFICE AND STORAGE																
100A	16'-0"x14'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			3,6
100B	16'-0"x16'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			3,6
100C	--	STL	F	--	LHR	--	1	STL	--	4	--	EXIST.	EXISTING			8
100D	3'-0"x7'-0"	STL	F	--	RHR	--	1	STL	--	2	--	EXIST.	EXISTING			9
100E	3'-0"x7'-0"	STL	F	--	RHR	--	2	STL	--	2	--	EXIST.	EXISTING			9
100F	3'-0"x7'-0"	STL	F	--	LHR	--	1	STL	--	5	--	EXIST.	EXISTING			10
101A	16'-0"x14'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			4,6
102A	16'-0"x16'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			3,7
102B	12'-0"x12'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			3,7,12
102C	16'-0"x16'-0"	STL	OHS	--	--	--	--	STL	--	ELECTRIC: 1/2 HP, 115V, 1 PHASE		--	EXISTING			2
102D	--	STL	F	--	LHR	--	2	STL	--	--	--	EXIST.	EXISTING			11
114A	3'-0"x7'-0"	WD	F	--	RH	--	1	STL	--	3	--	--	C/A6.1			5
120A	3'-0"x7'-0"	WD	NG	--	LH	--	1	STL	--	3	--	--	C/A6.1			5
120B	3'-0"x7'-0"	WD	NG	--	RH	--	1	STL	--	3	--	--	C/A6.1			5
122A	3'-0"x7'-0"	STL	F	--	LH	--	1	STL	--	3	--	--	C/A6.1			5
123A	--	AL	FG	--	LHR	--	--	AL	--	EXIST.	--	EXIST.	EXISTING			1
123B	3'-0"x7'-0"	WD	F	--	RH	--	1	STL	--	2	--	--	C/A6.1			5
200-MECHANICAL ROOM																
220A	(2)3'-4"x7'-0"	STL	F	--	RHR	LHR	1	STL	--	6	1	--	C/A6.1			5
LEGEND:																
		MATERIAL			TYPE			SWING								
	STL	=	STEEL		NG	=	NARROW GLASS		LH	=	LEFT HAND					
	AL	=	ALUMINUM		F	=	FLUSH		RH	=	RIGHT HAND					
	WD	=	WOOD		FG	=	FULL GLASS		LHR	=	LEFT HAND REVERSE					
					OHS	=	OVERHEAD SECTIONAL		RHR	=	RIGHT HAND REVERSE					
NOTES:																
1. RE-USE EXISTING ALUMINUM DOOR AND ENTRANCE AS SHOWN ON DRAWINGS.																
2. EXISTING OVERHEAD SECTIONAL DOOR AND FRAME TO REMAIN. PROVIDE NEW NEMA 12 INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS.																
3. PROVIDE NEW SECTIONAL OVERHEAD DOOR, NEMA 12 INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS. FIELD VERIFY EXISTING DIMENSIONS AND LAYOUTS.																
4. PROVIDE NEW SECTIONAL OVERHEAD DOOR, NEMA 4X INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS. FIELD VERIFY EXISTING DIMENSIONS AND LAYOUTS.																
5. SEE SPECIFICATIONS FOR HARDWARE GROUP.																
6. PROVIDE INSULATED SECTIONAL OVERHEAD DOOR																
7. PROVIDE UNINSULATED SECTIONAL OVERHEAD DOOR																
8. DOOR AND FRAME TO REMAIN; REPAINT. ADD ELECTRIC STRIKE, AND REPLACE THRESHOLD AND SWEEP.																
9. REPLACE DOOR AND FRAME AND INCLUDE HARDWARE PER GROUP DESIGNATION.																
10. REPLACE DOOR, EXISTING FRAME TO REMAIN AND ELECTRONIC STRIKE TO REMAIN. REPAINT FRAME AND INCLUDE HARDWARE PER GROUP DESIGNATION.																
11. DOOR, FRAME, AND ELECTRONIC STRIKE TO REMAIN. REPAIR EXTERIOR FRAME AND REPAINT ALL STEEL ITEMS. REPLACE THRESHOLD AND SWEEP.																
12. PROVIDE JACK SHAFT OPERATOR.																

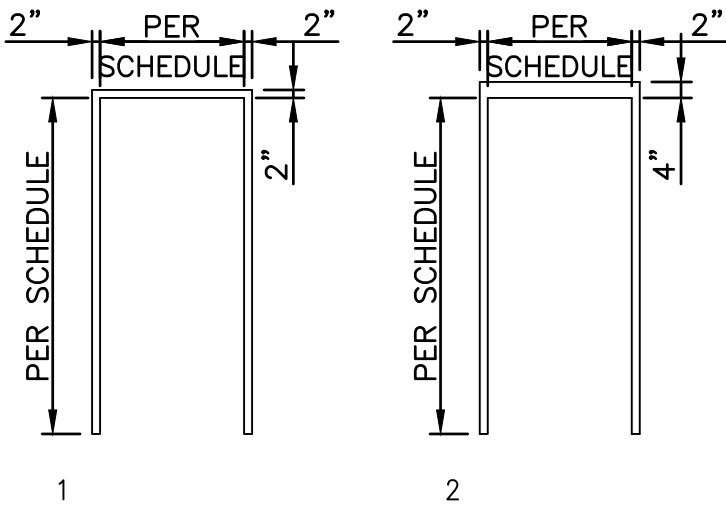
WINDOW SCHEDULE								
WINDOW NUMBER	SIZE (W x H)	SILL ELEVATION	FRAME MATERIAL	GLAZING TYPE	TYPE	SILL / JAMB / HEAD DETAILS	LINTEL TYPE	NOTES
A	8'-0"x4'-6"	3'-6"	AL	UNINSULATED	FIXED	A/A6.1	N/A	
B	6'-0"x4'-0"	3'-2"	AL	UNINSULATED	FIXED	A/A6.1	N/A	
C	4'-8"x4'-0"	3'-2"	AL	UNINSULATED	FIXED	A/A6.1	N/A	
D	4'-8"x3'-2"	4'-2"	AL	INSULATED	FIXED	B/A6.1	EXIST.	
LEGEND:								
AL = ALUMINUM								
NOTES:								



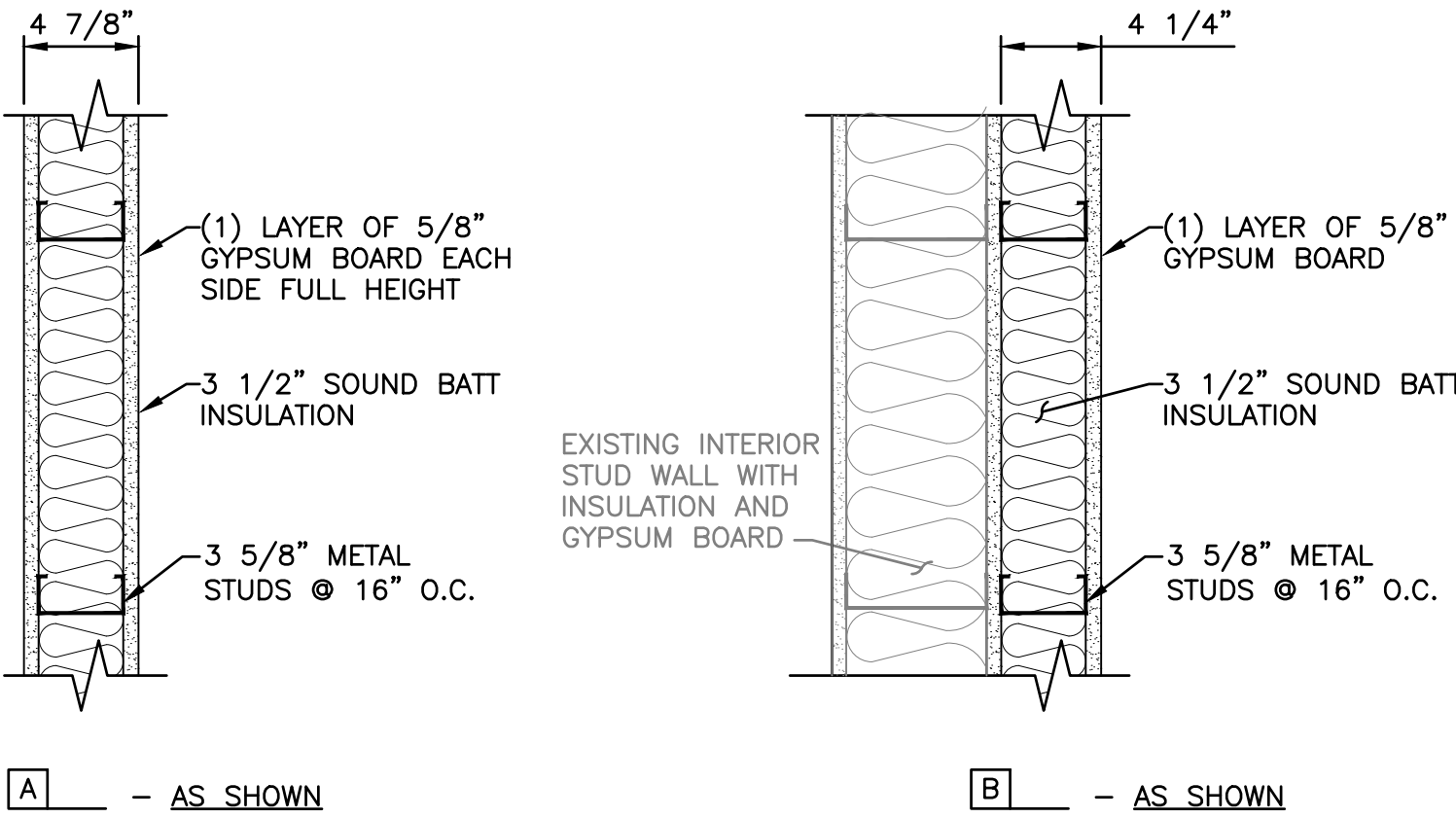
WINDOW TYPES
NO SCALE



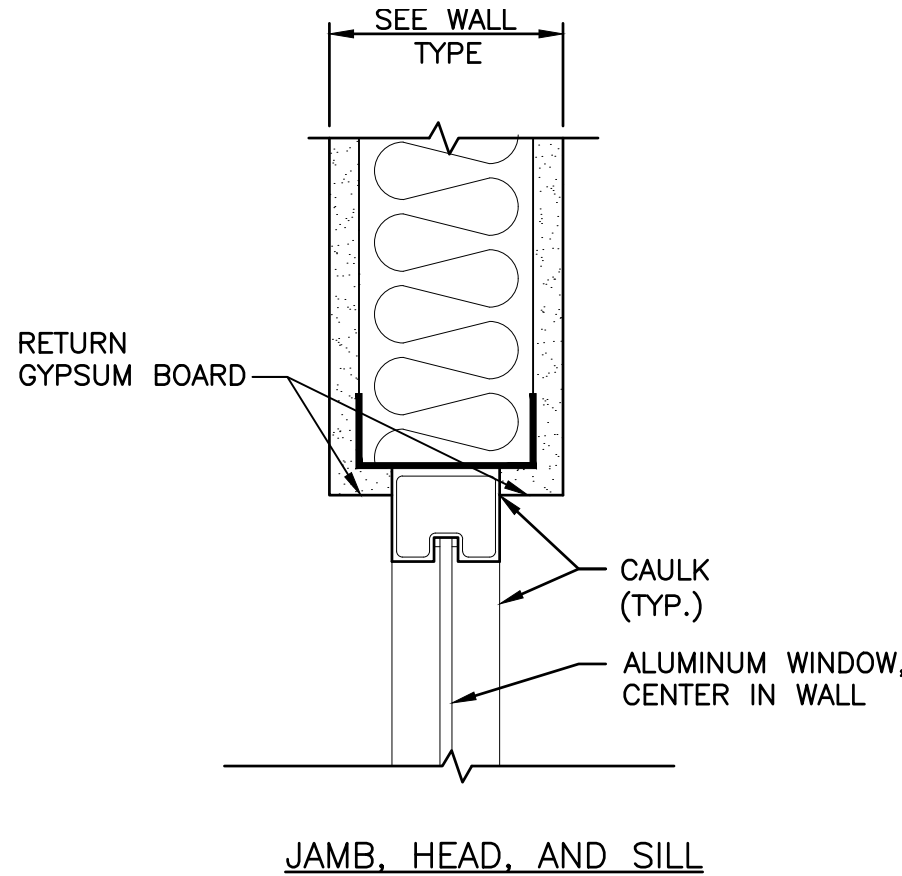
DOOR ELEVATIONS
NO SCALE



FRAME TYPES
NO SCALE

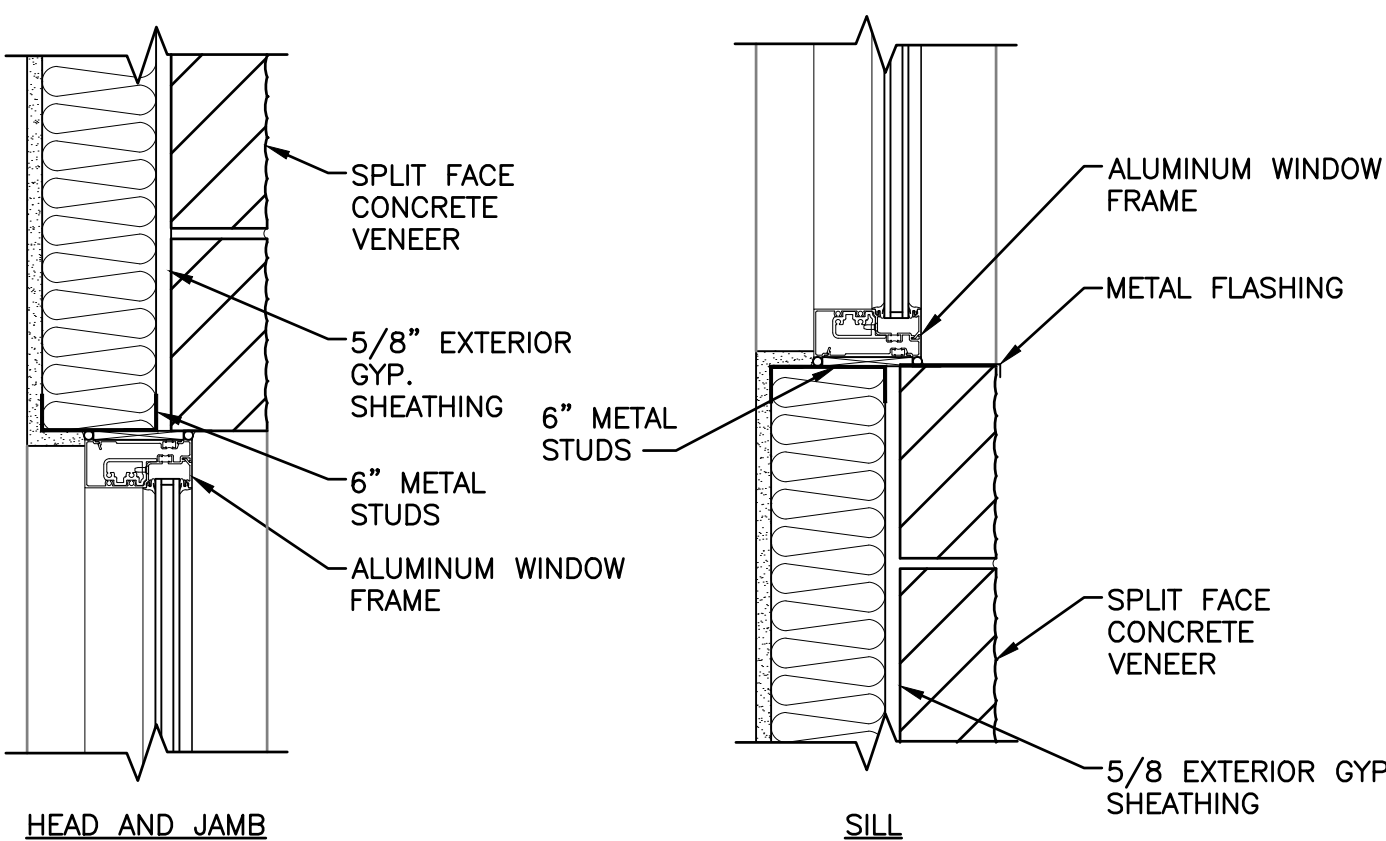


WALL TYPE
SCALE: 1'-1/2"=1'-0"

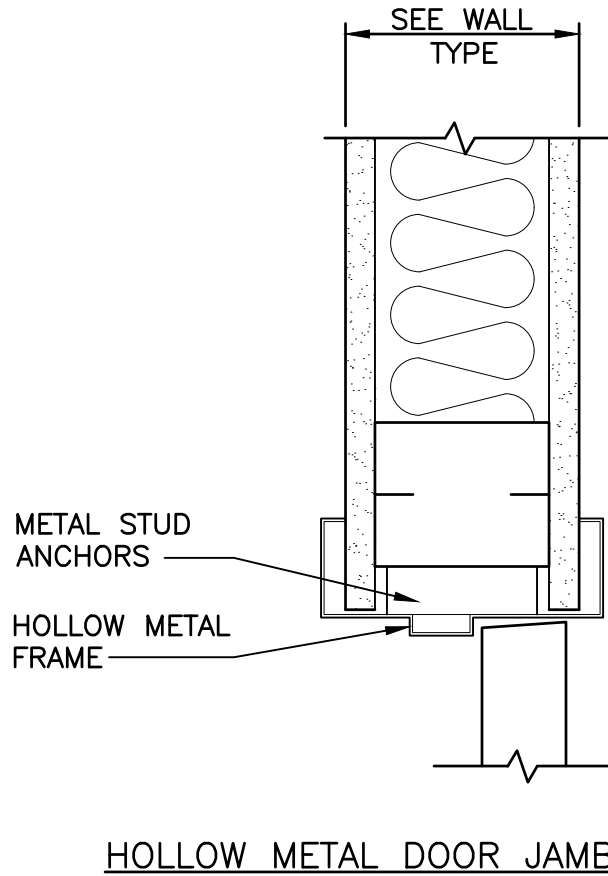


JAMB, HEAD, AND SILL

A
A6.1
INTERIOR WINDOW DETAIL
0 3 6



B
A6.1
EXTERIOR WINDOW DETAILS
NO SCALE



HOLLOW METAL DOOR JAMB AND HEAD

C
A6.1
INTERIOR DOOR DETAIL
0 3 6

DOOR AND WINDOW SCHEDULES AND DETAILS

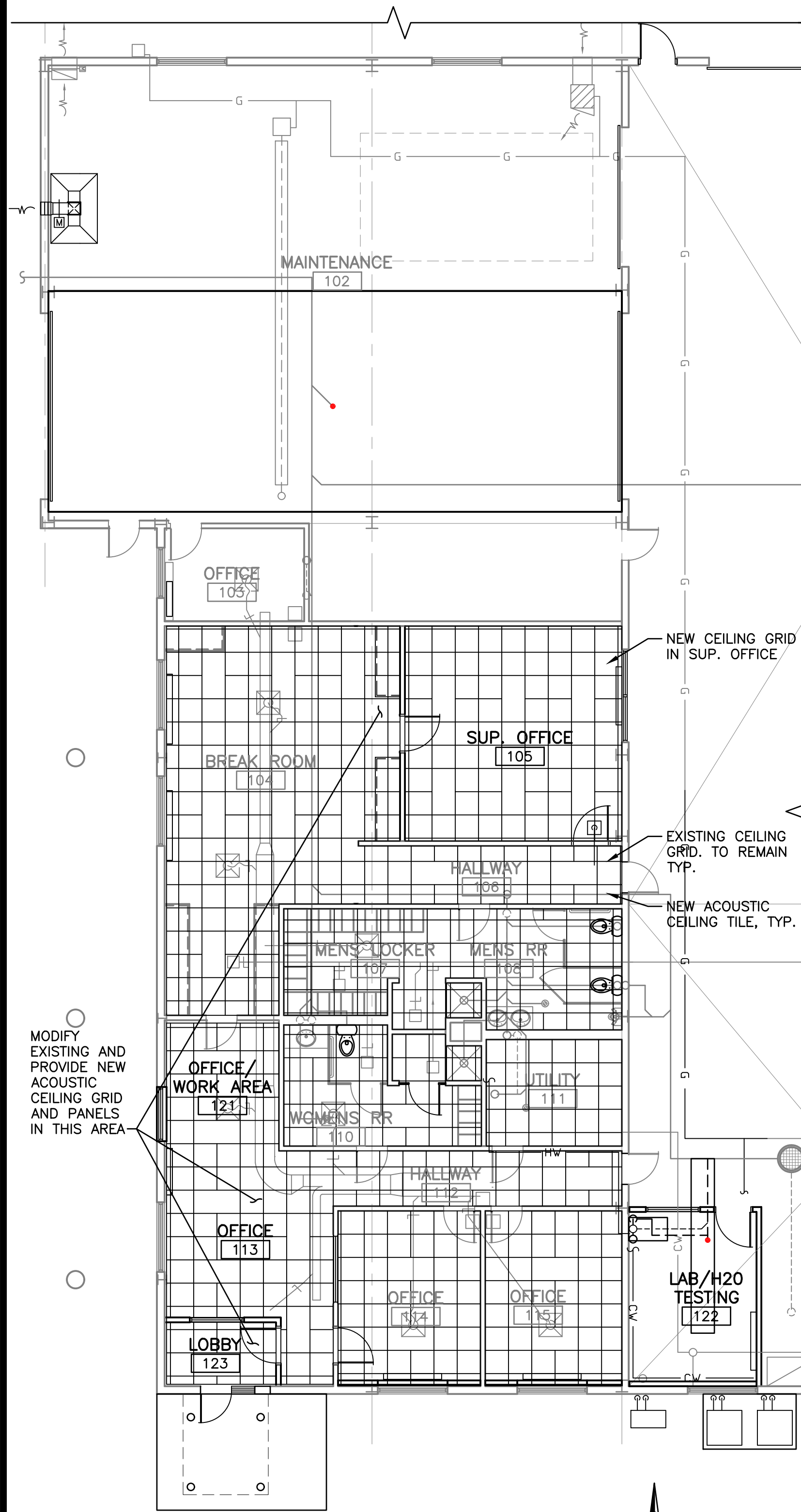
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

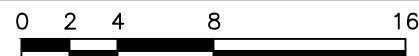
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A6.1



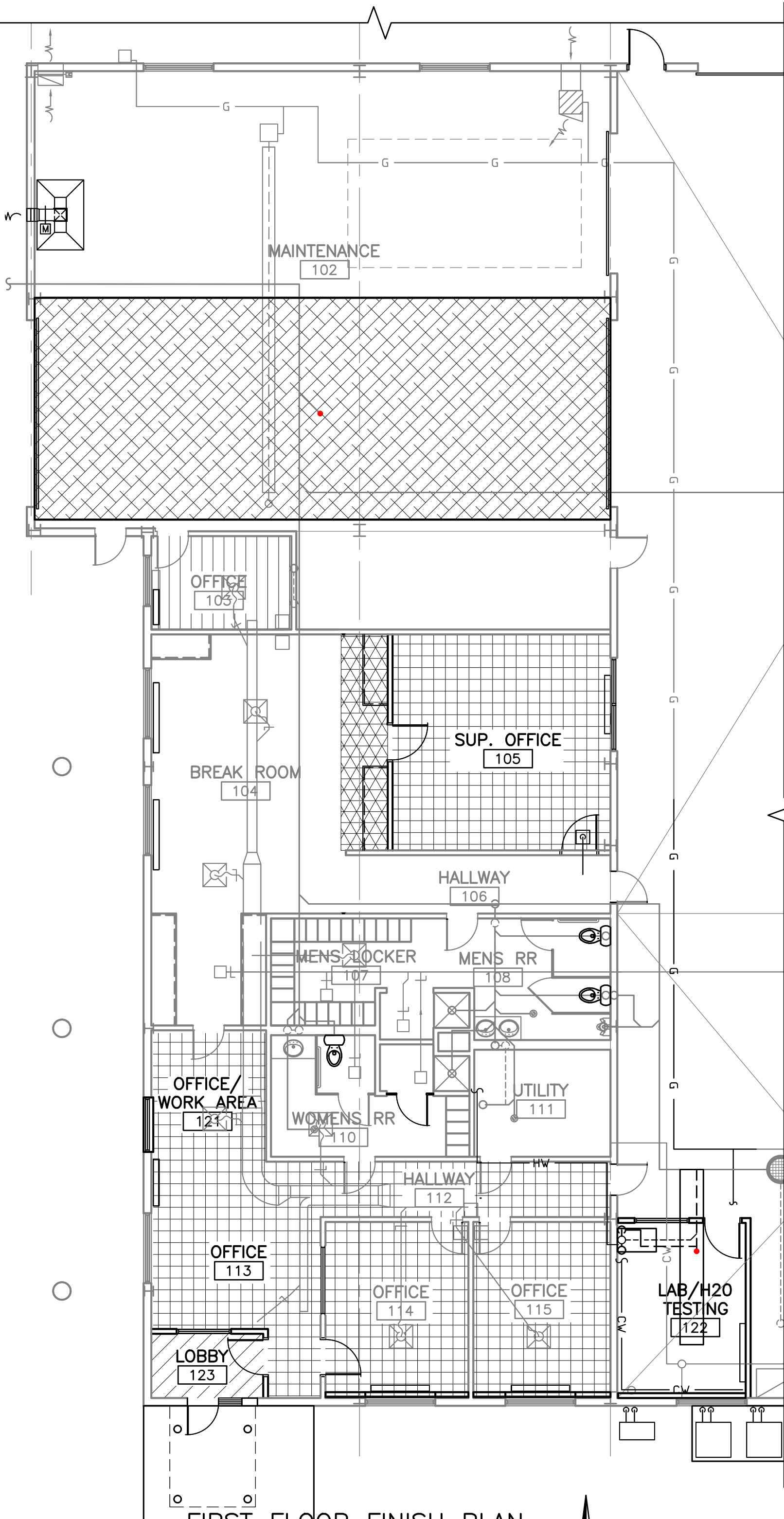
OFFICE REFLECTED CEILING PLAN



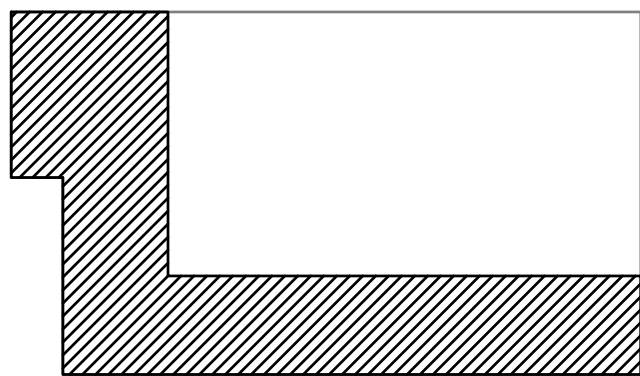
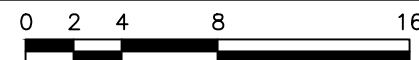
FLOOR FINISH LEGEND:

- [Blank Box] = EXISTING FLOOR OR NO NEW WORK
- [Cross-hatch Box] = SEALED CONCRETE
- [Grid Box] = CARPET TILE
- [Diagonal-hatch Box] = EPOXY (MATCH EXISTING)

- [Diagonal-hatch Box] = CERAMIC TILE
- [Vertical-hatch Box] = VINYL TILE



FIRST FLOOR FINISH PLAN



KEY PLAN
NO SCALE

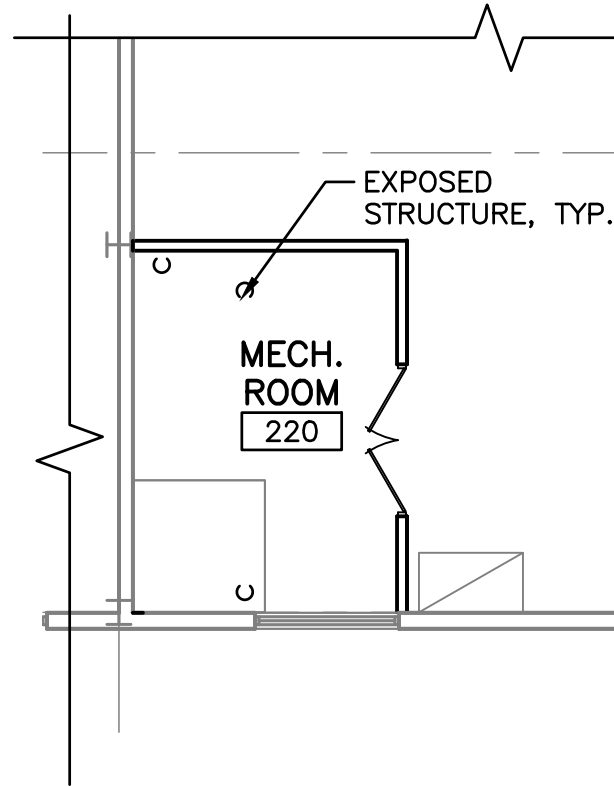
ROOM FINISH SCHEDULE										
ROOM NO.	ROOM NAME	FLOOR	BASE	N. WALL	E. WALL	S. WALL	W. WALL	CEILING		NOTES
								TYPE	HEIGHT	
100	VEHICLE STORAGE	--	--	--	--	--	--	--	--	
101	WASH BAY	--	--	--	--	--	--	--	--	
102	MAINTENANCE	F1	--	--	--	--	--	--	--	
103	OFFICE	F5	B1	W2	W2	W2	W2	C5	8'-0"	1
104	BREAK ROOM	F3	B1	W2	W2	W2	W2	C1	8'-0"	2,6,7
105	SUPERINTENDENT OFFICE	F2	B1	W2	W2	W2	W2	C1	8'-0"	3
106	HALLWAY	--	--	W2	W2	W2	W2	C1	8'-0"	6,7
107	MENS LOCKER	--	--	W2	W2	W2	W2	C3	8'-0"	4,7
108	MENS RESTROOM	--	--	W2	W2	W2	W2	C3	8'-0"	4,7
110	WOMEN	--	--	W2	W2	W2	W2	C3	8'-0"	4,7
111	UTILITY	--	--	W2	W2	W2	W2	--	8'-0"	7
112	HALLWAY	F3	B1	W2	W2	W2	W2	C1	8'-0"	7
113	OFFICE	F2	B1	W2	W2	W2	W2	C1	8'-0"	7
114	OFFICE	F2	B1	W2	W2	W2	W2	C1	8'-0"	7
115	OFFICE	F2	B1	W2	W2	W2	W2	C1	8'-0"	7
121	OFFICE/WORK AREA	F2	B1	W2	W2	W2	W2	C1	8'-0"	7
122	LAB H2O/TESTING	--	B1	W1	W1	W1	W4	C4	9'-0"	
123	LOBBY	F4	B1	W2	W2	W2	W2	C1	8'-0"	7
220	MECHANICAL ROOM	F6	B1	W2	W2	W4	W4	C2	VARIES	
221	STORAGE MEZZANINE	F1	--	W4	W4	W4	W4	C2	VARIES	5

LEGEND:

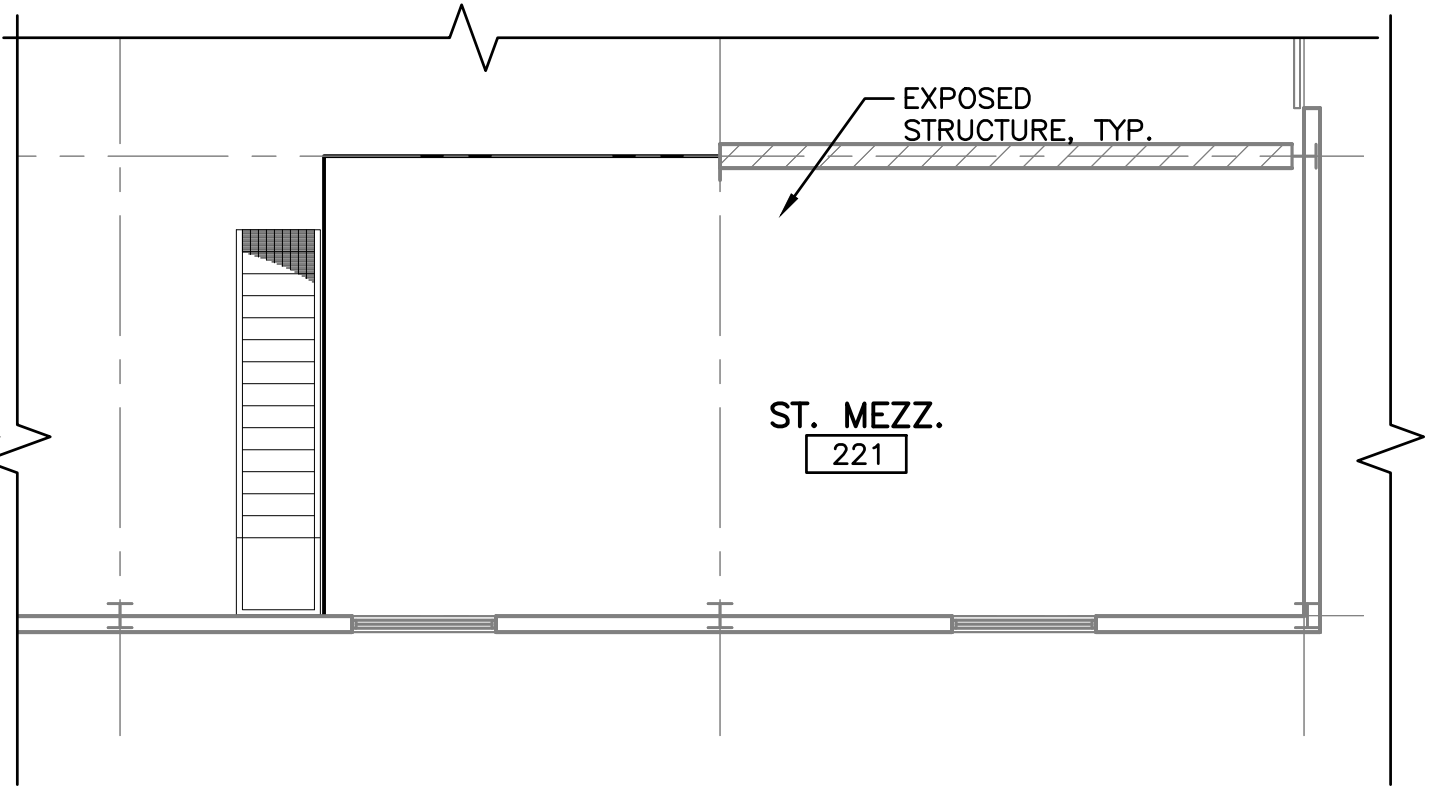
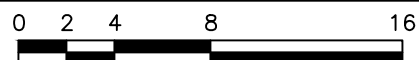
FLOOR		BASE		WALL		CEILING	
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
F1	SEALED CONCRETE	B1	VINYL BASE	W1	PAINT MOISTURE RESISTANT DRYWALL	C1	ACOUSTIC CEILING
F2	CARPET TILE			W2	PAINT NEW/EXISTING DRYWALL	C2	EXPOSED STRUCTURE
F3	EPOXY			W3	METAL PANEL	C3	MOISTURE RESISTANT ACOUSTIC CEILING
F4	CERAMIC TILE			W4	EXPOSED STRUCTURE	C4	PAINT MOISTURE RESISTANT DRYWALL
F5	VINYL TILE					C5	PAINT DRYWALL
F6	USG CONCRETE SUBFLOOR						

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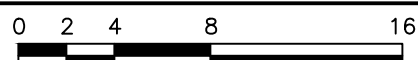
- REPLACE DAMAGED DRYWALL AS REQUIRED AND PAINT.
- ADD VINYL BASE AT EAST WALL ALONG WORKSTATION AREA.
- EXISTING CEILING HEIGHT AT 10'-0". INSTALL DROP ACOUSTICAL CEILING TO INTERIOR CEILING HEIGHT OF 8'-0".
- CLEAN AND SEAL EXISTING FLOOR TILE
- MAINTAIN A MIN. 7'-6" BELOW MEZZ. FOR TRUCK PARKING (WEST PORTION).
- NEW EPOXY FLOOR SYSTEM BY OTHERS.
- REPLACE CEILING TILE ONLY, GRID TO REMAIN AND BE MODIFIED AS REQUIRED.



REFLECTED CEILING PLAN



REFLECTED CEILING PLAN



OFFICE REFLECTED CEILING PLAN,
FLOOR FINISH PLAN, AND ROOM FINISH SCHEDULE

PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

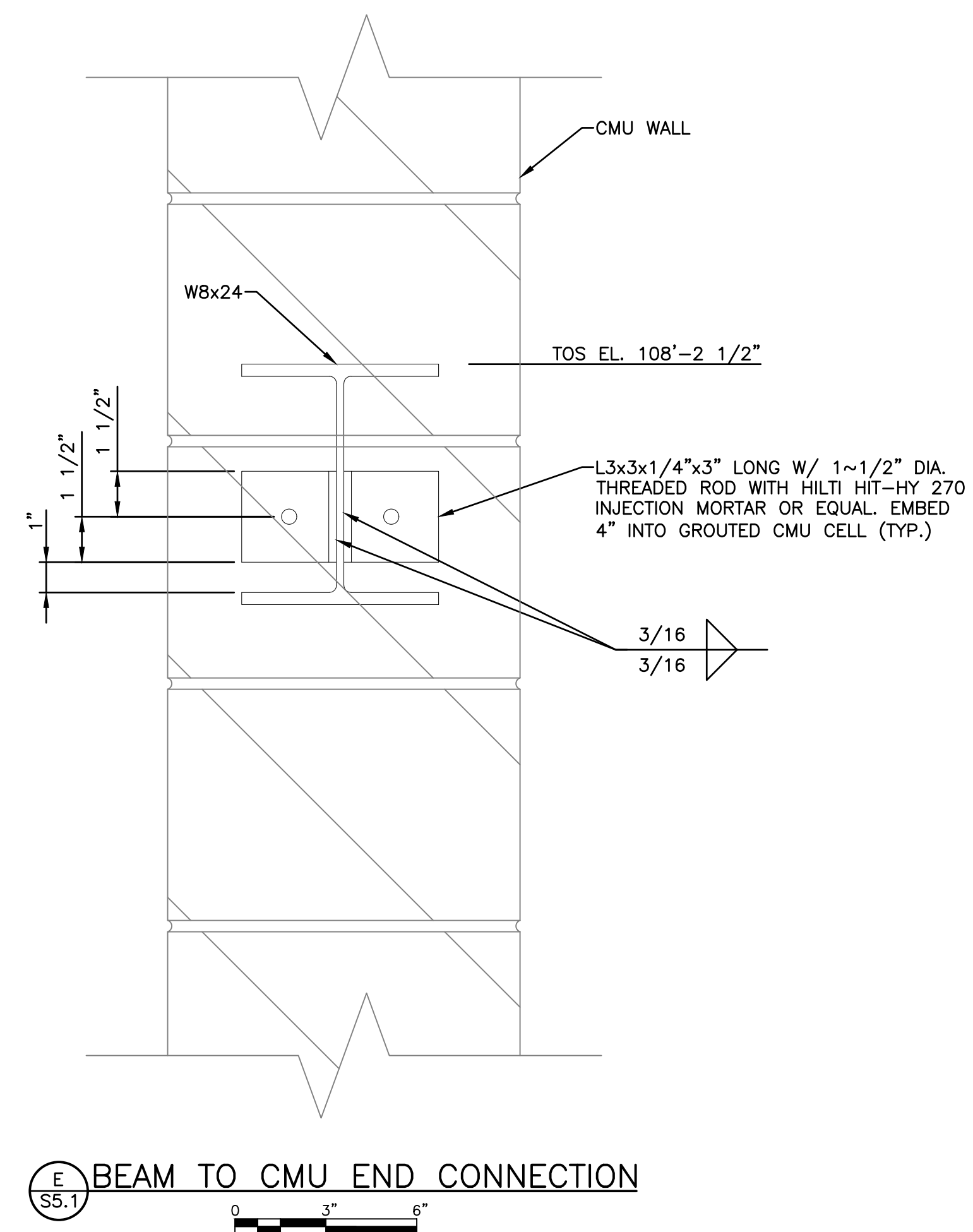
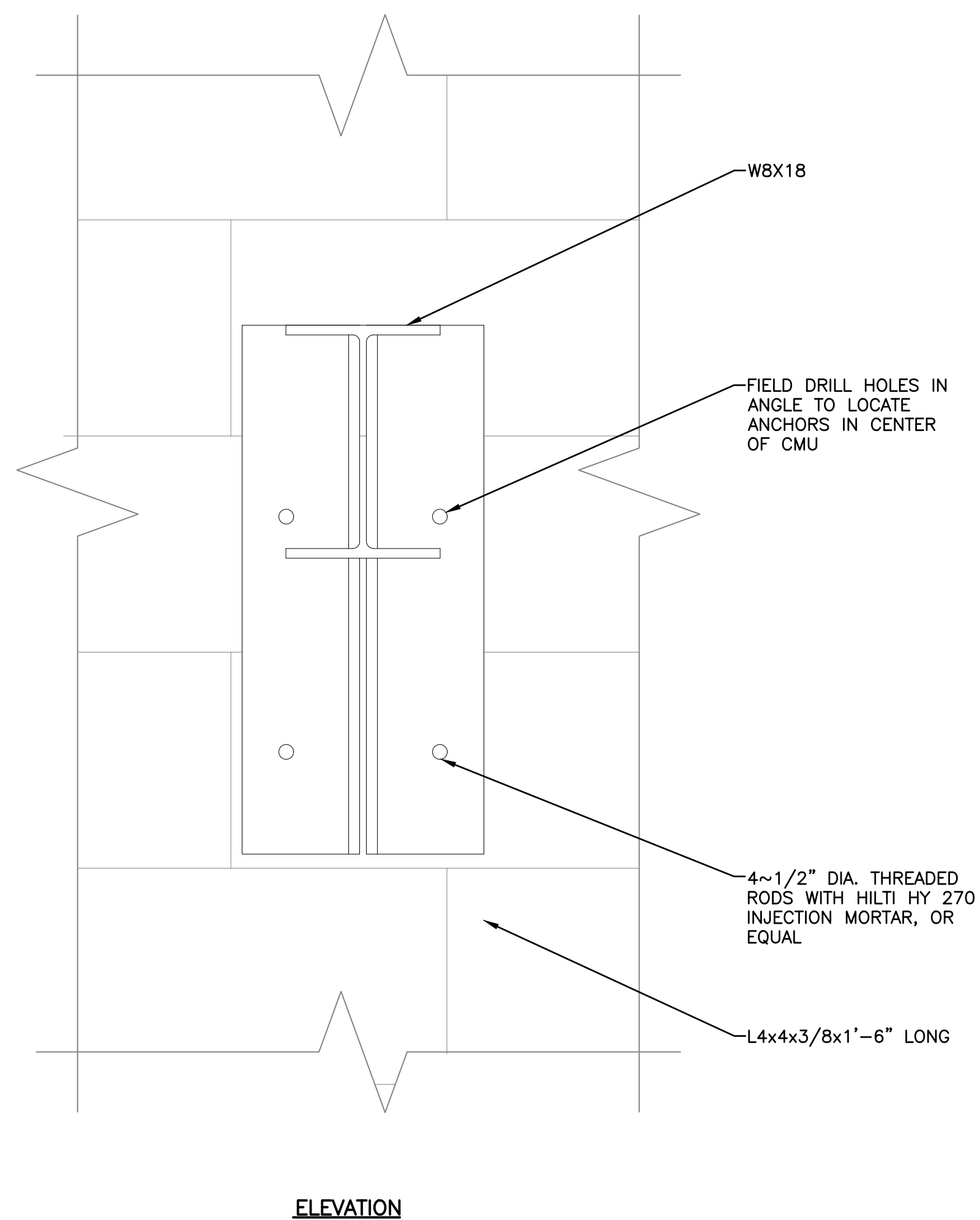
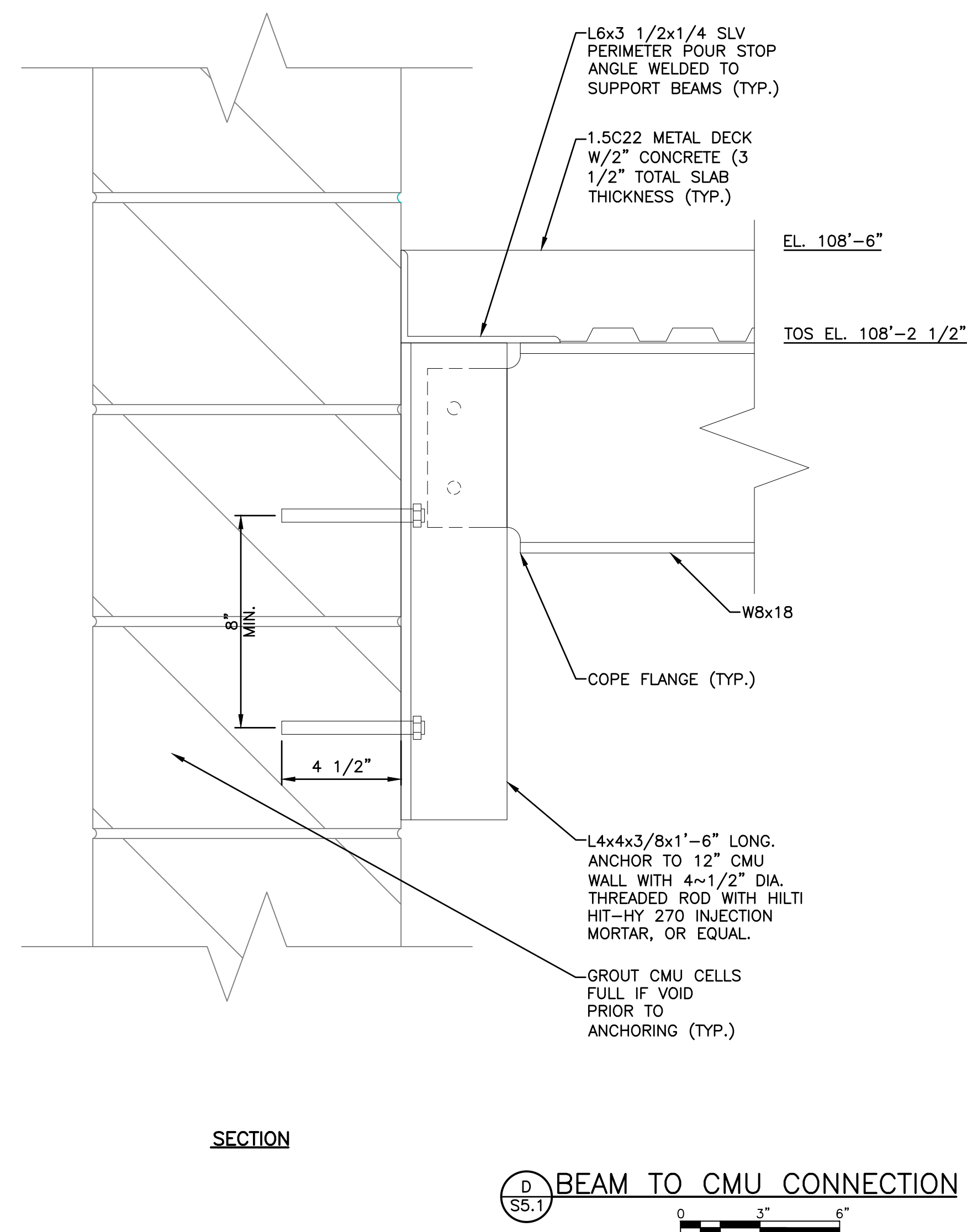
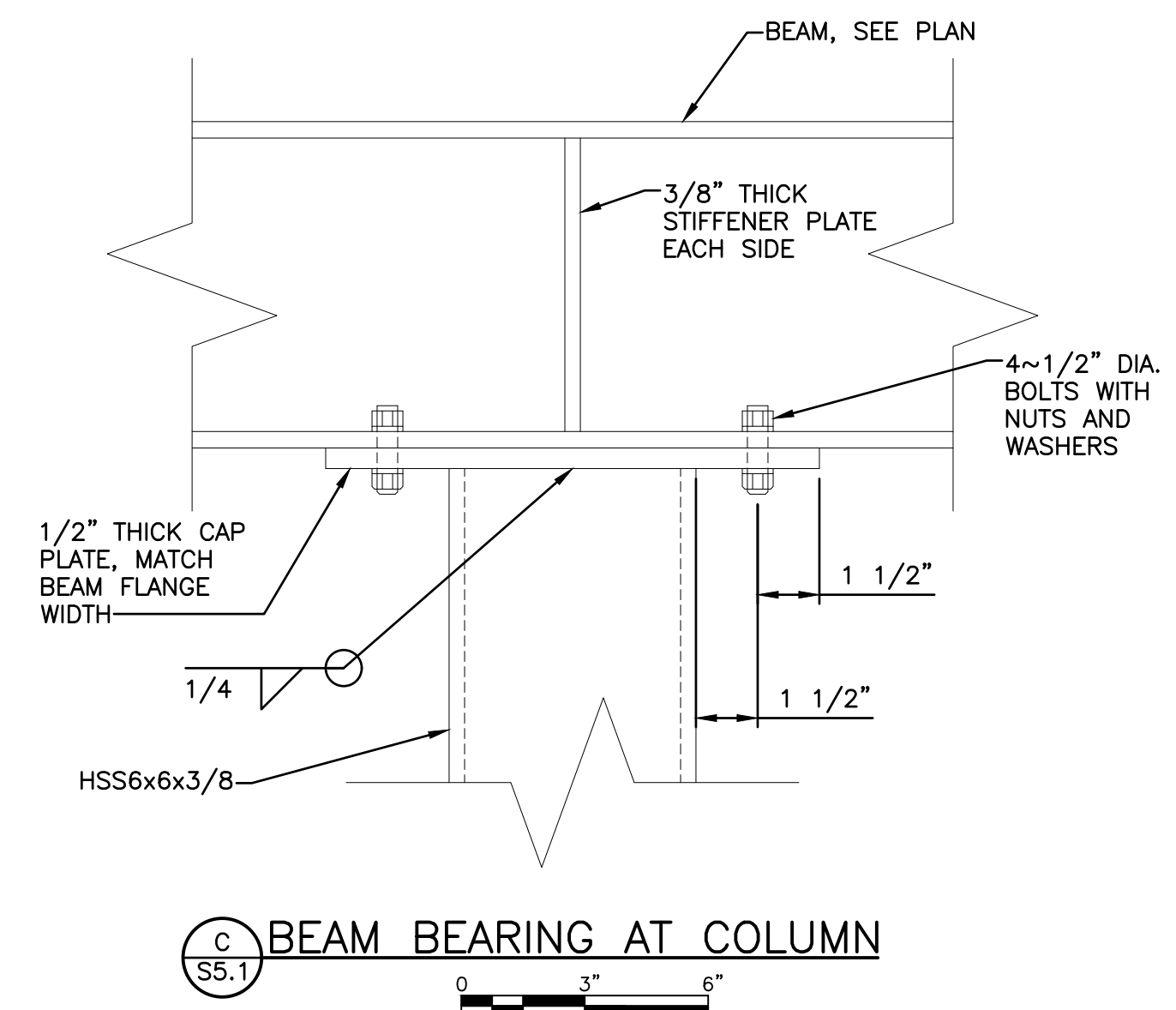
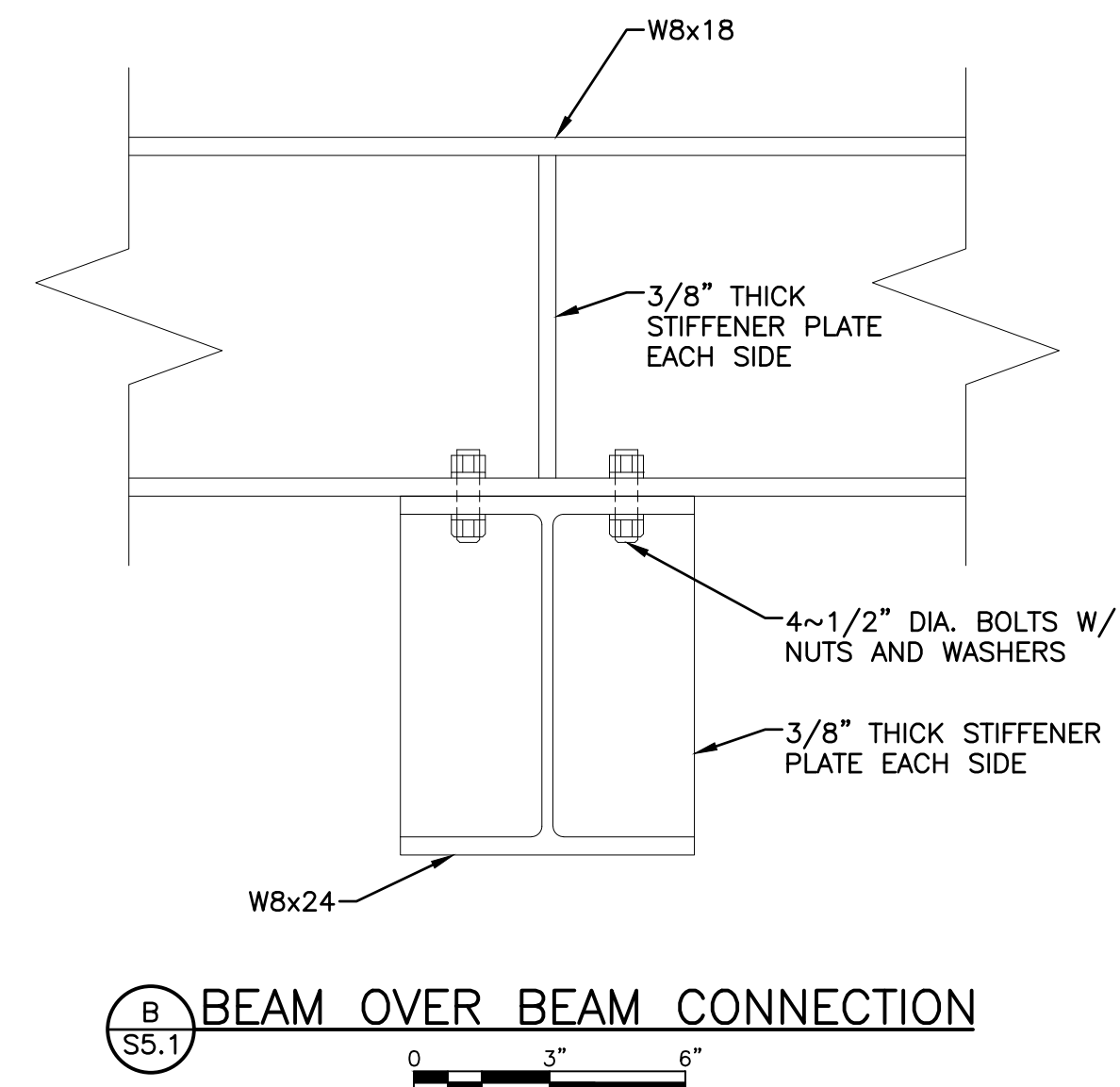
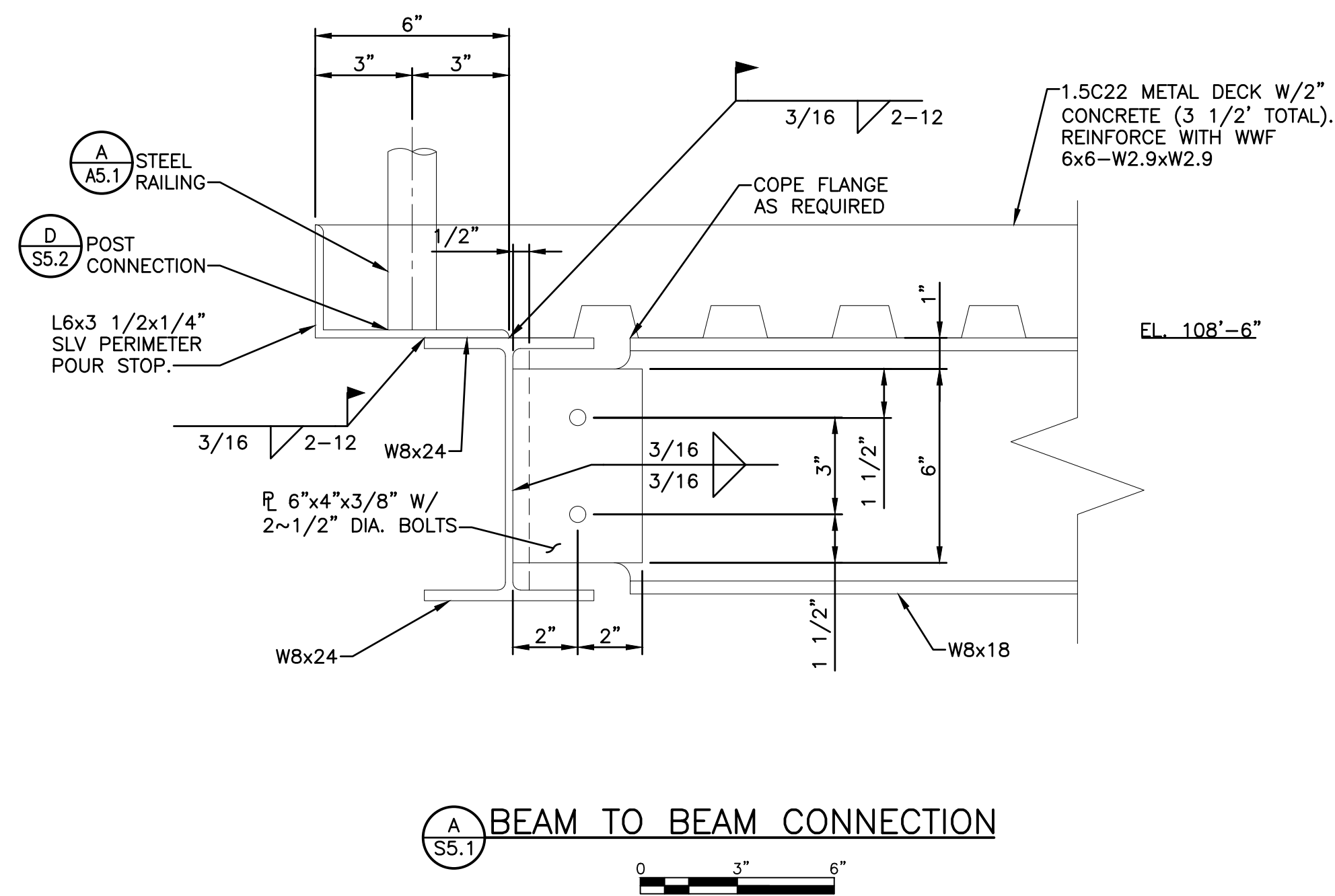
NO.	ISSUED FOR BID	REVISIONS				DATE:
1						4/8/20

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT

STRAND
ASSOCIATES®

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**STRUCTURAL
DETAILS - 1**

**PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

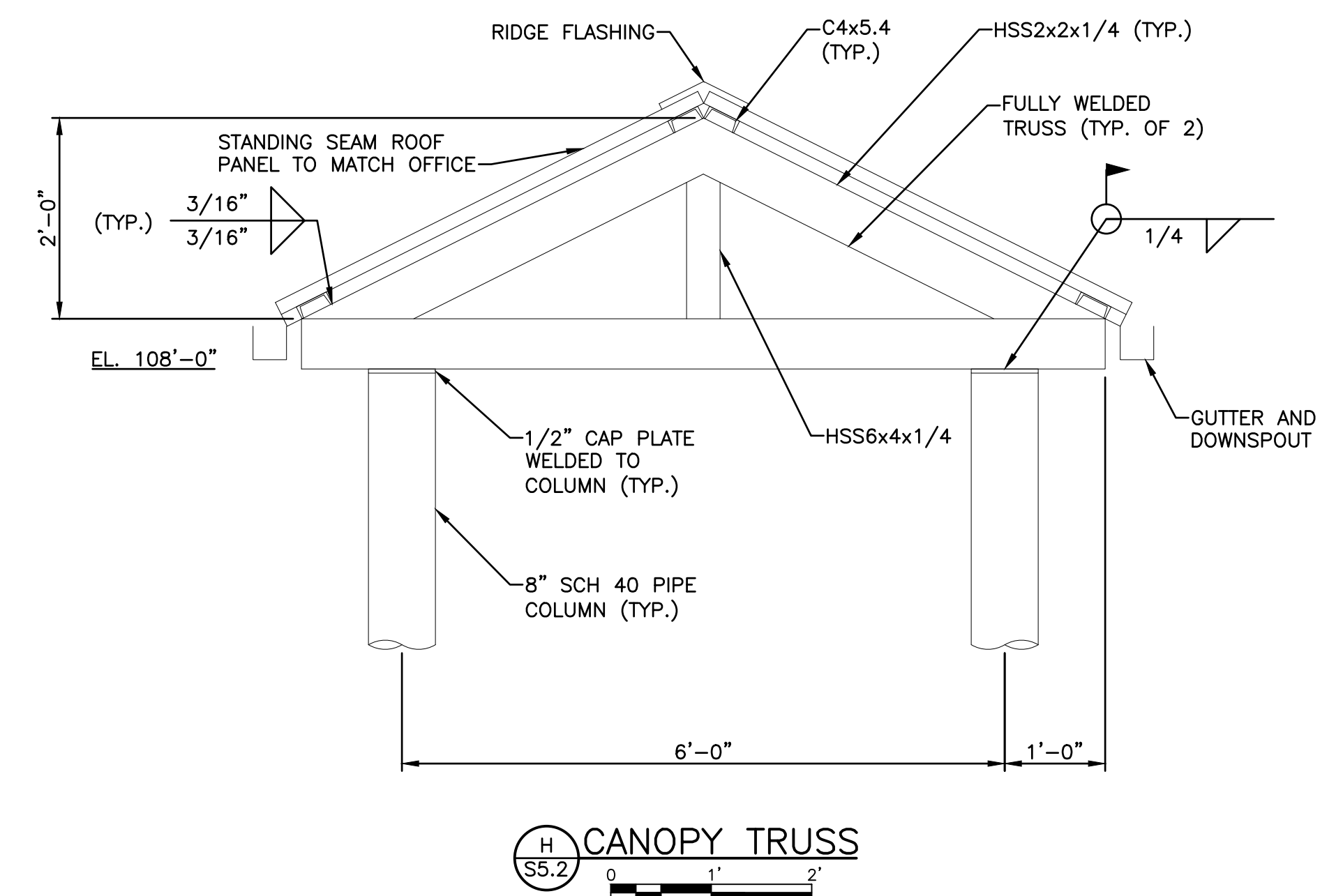
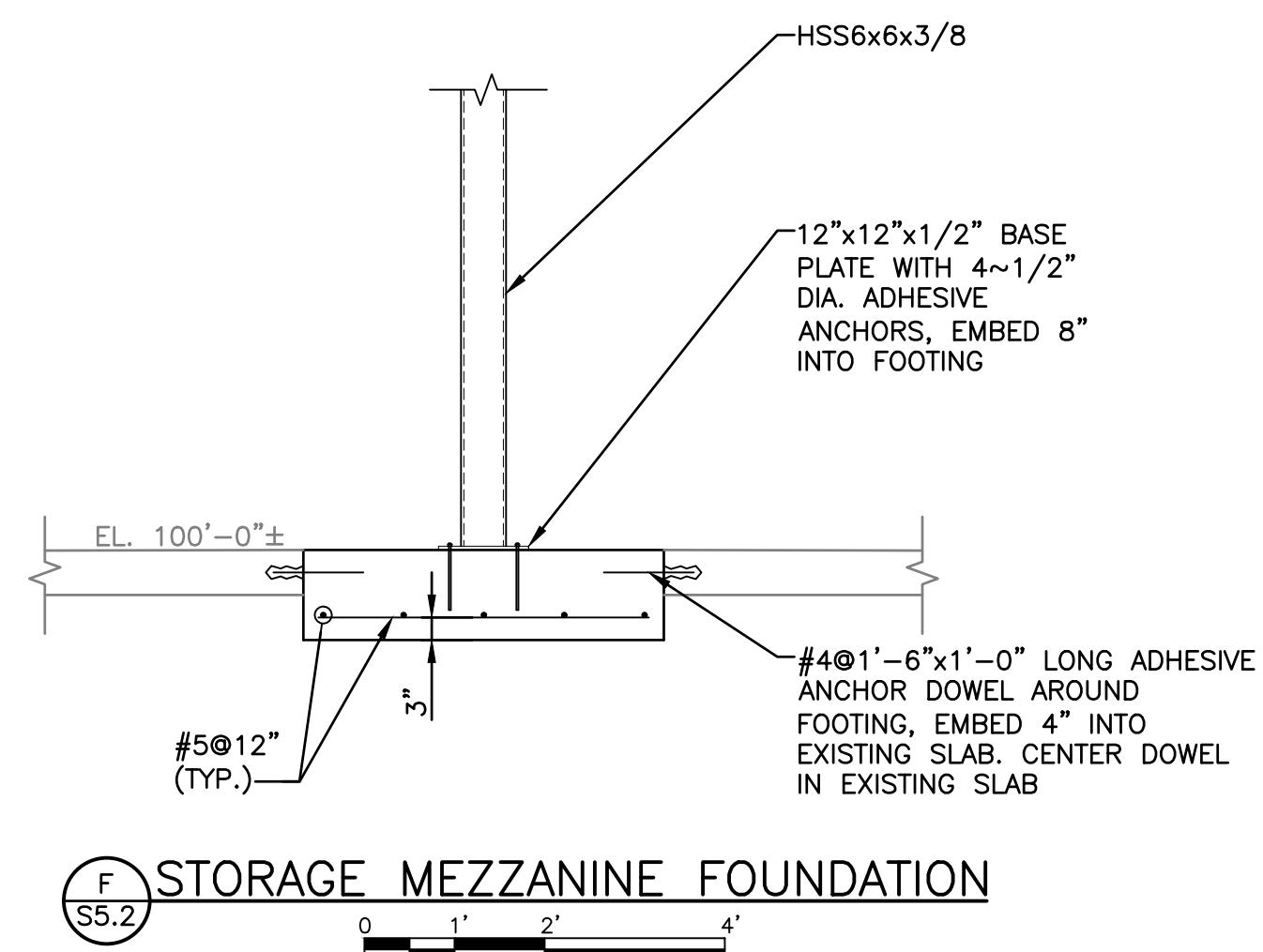
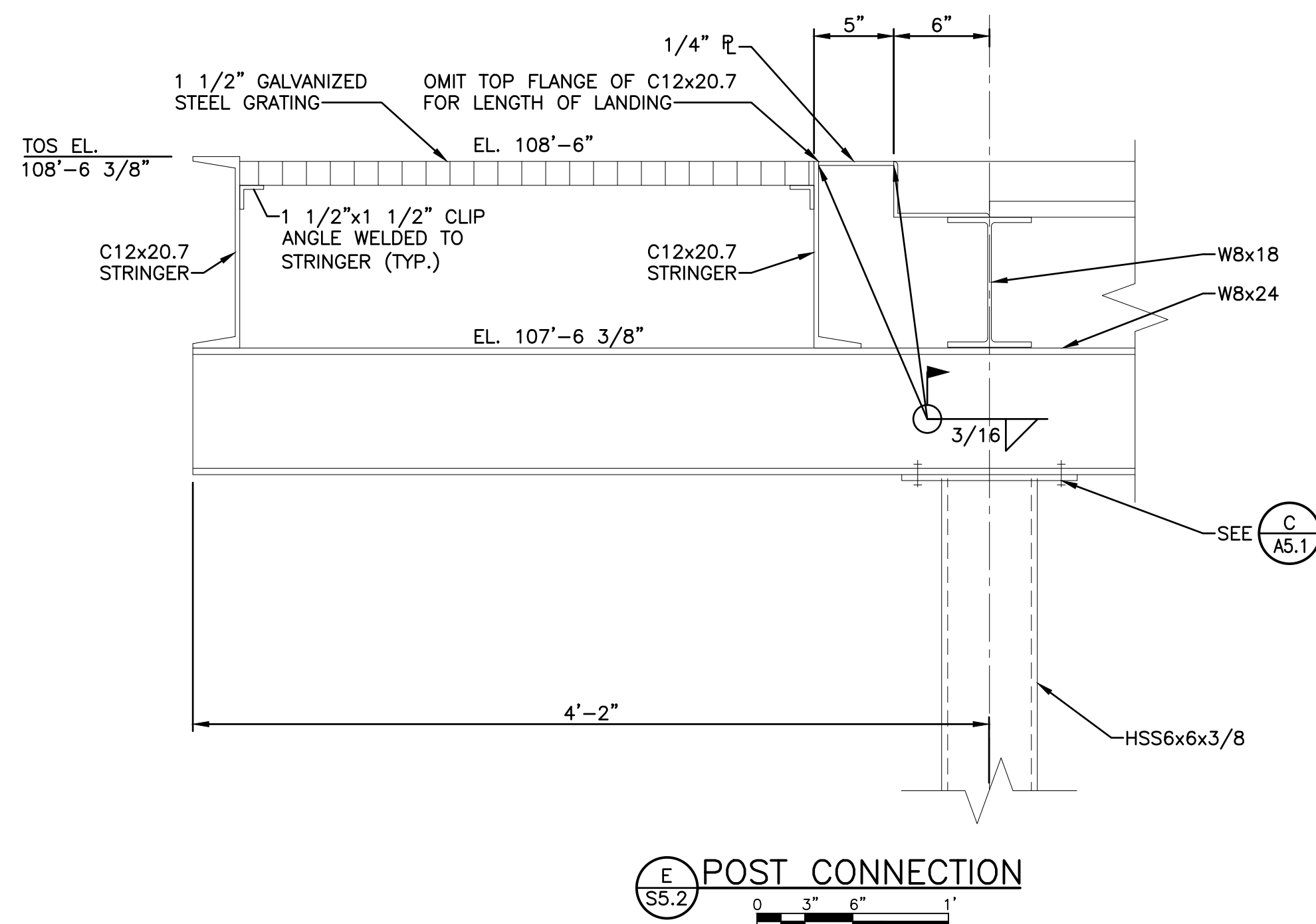
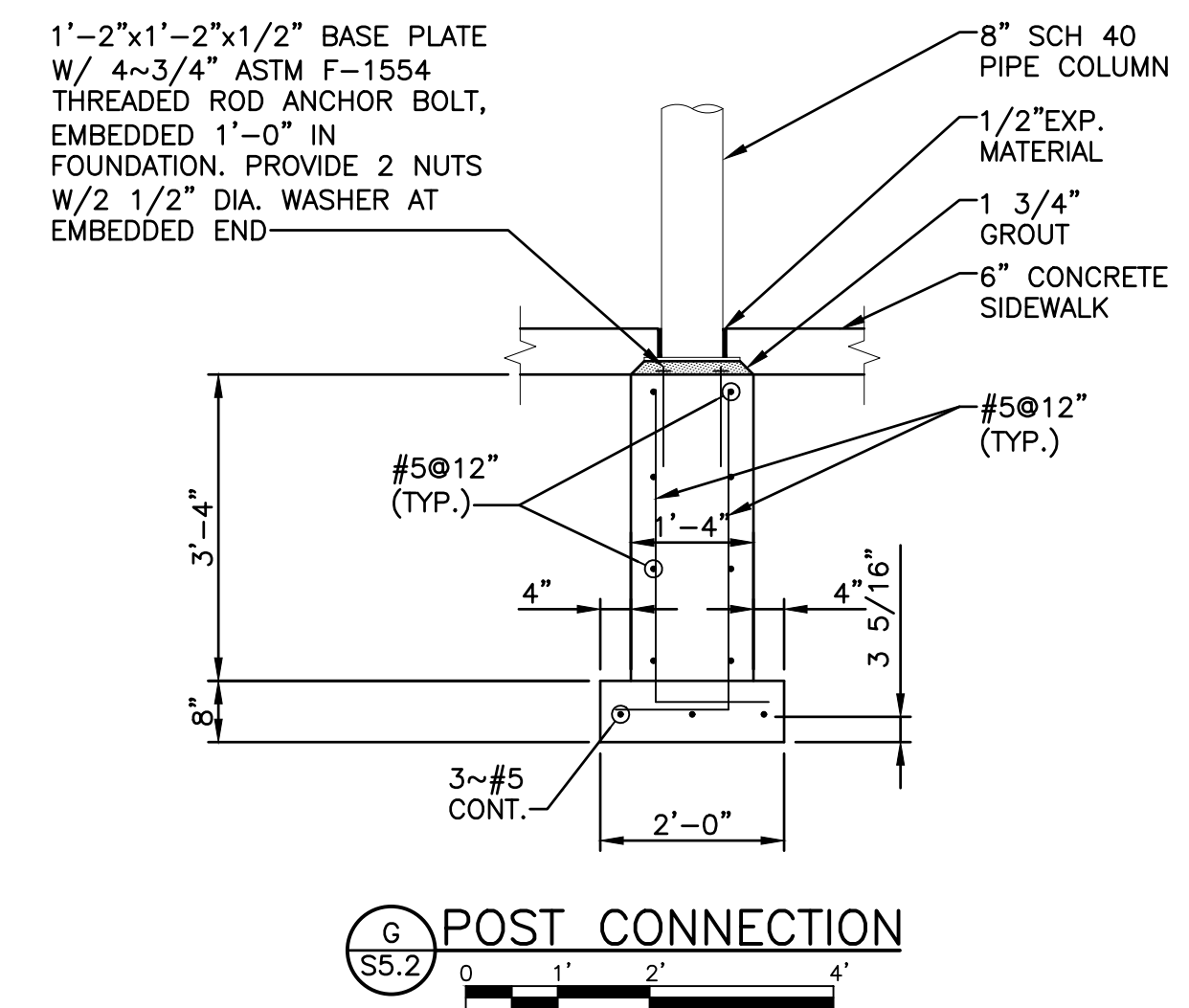
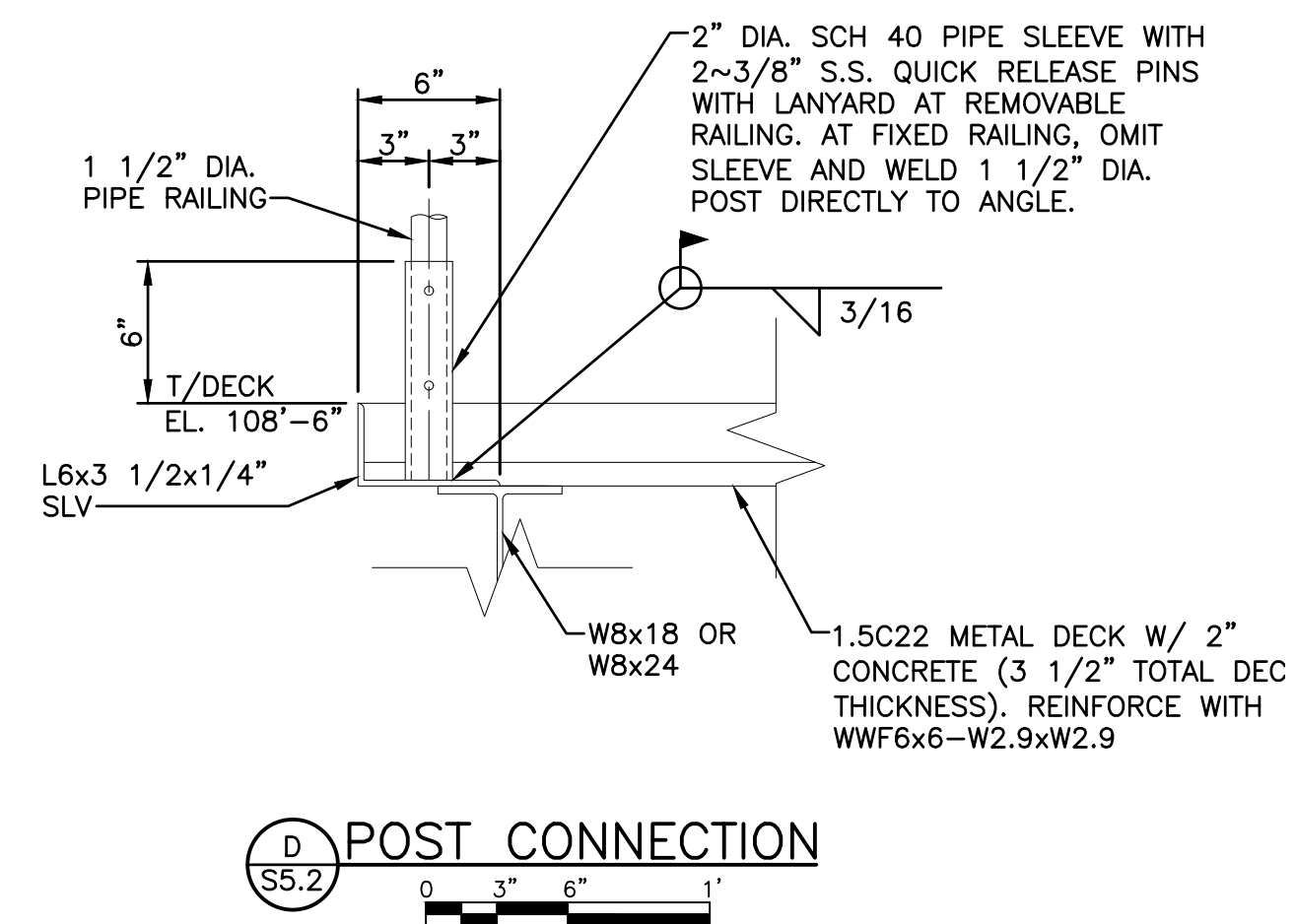
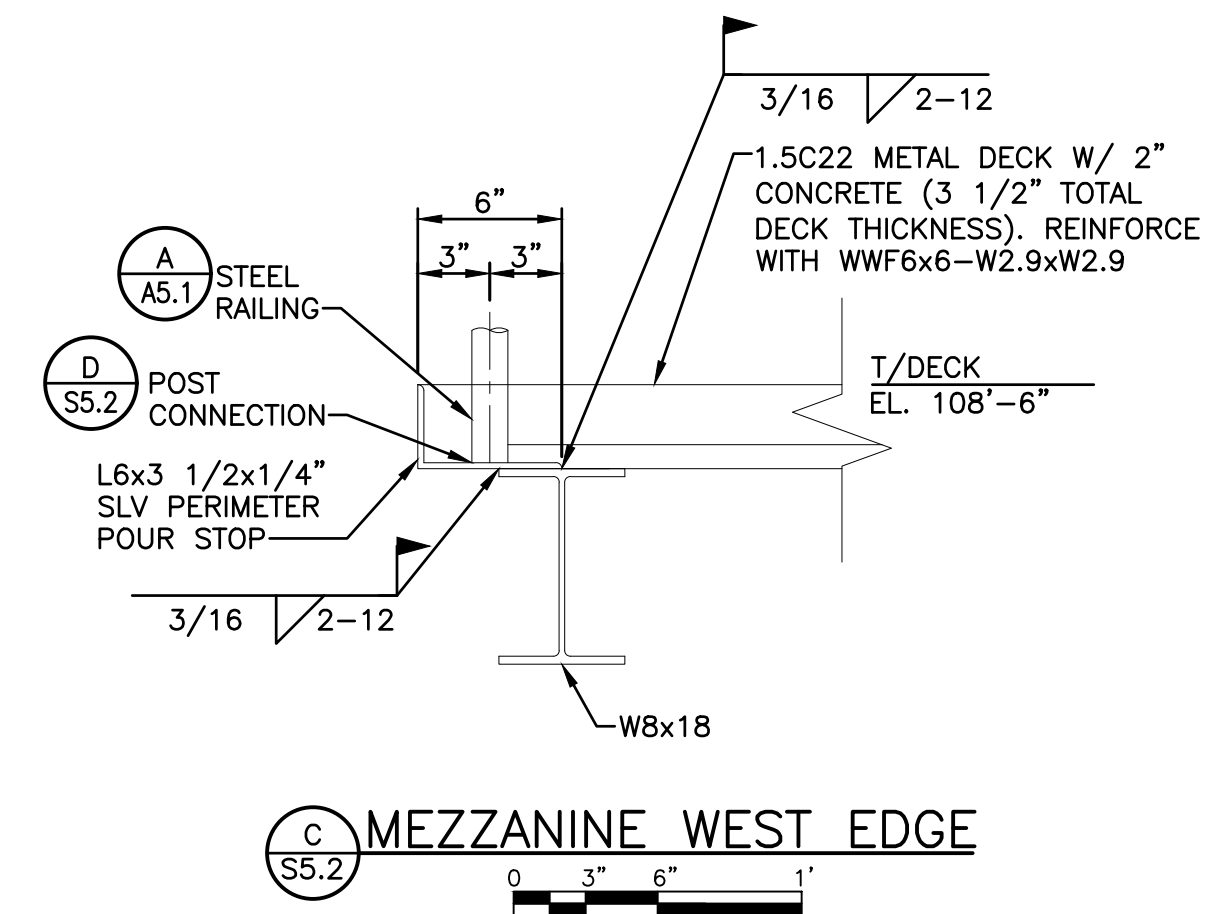
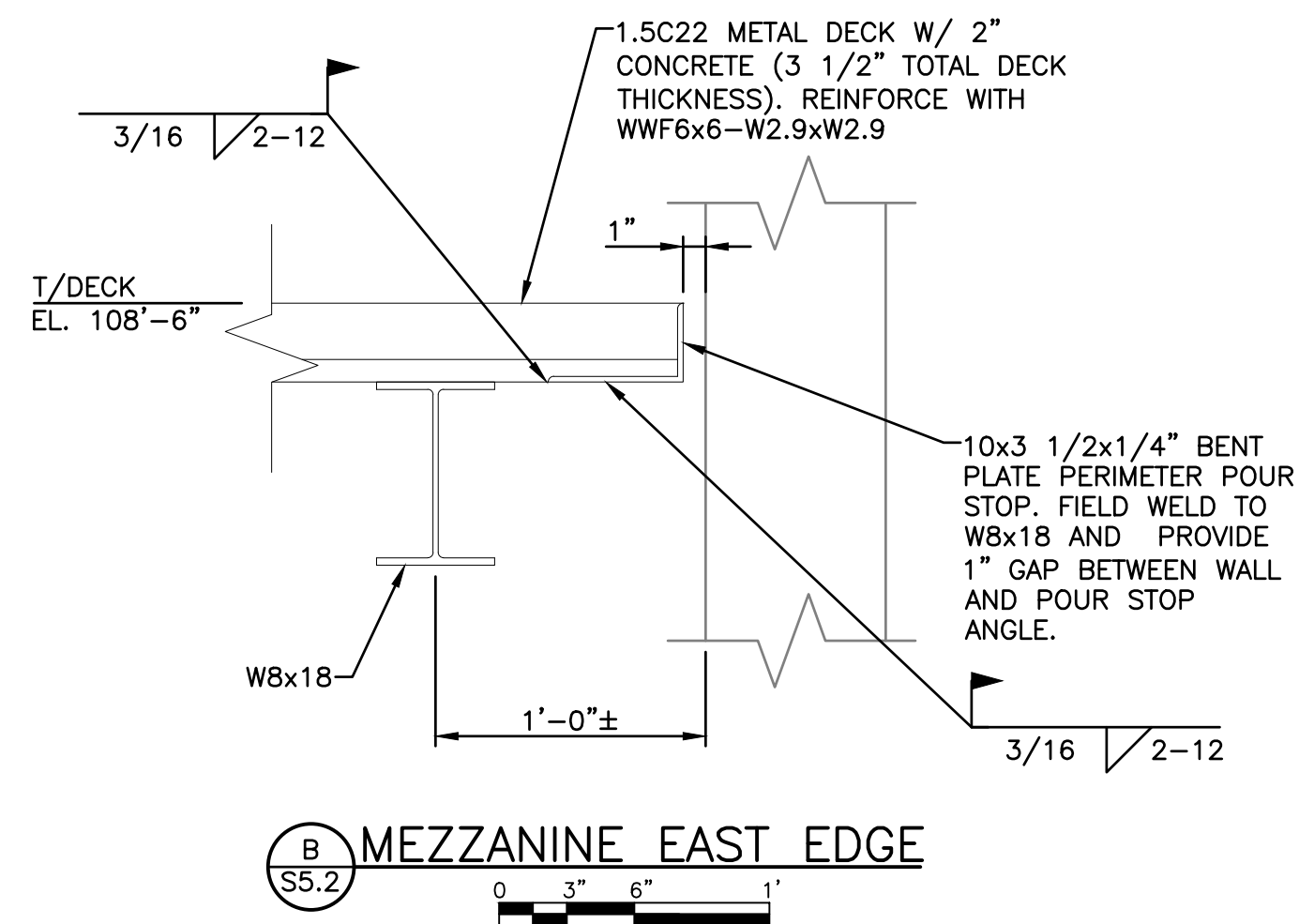
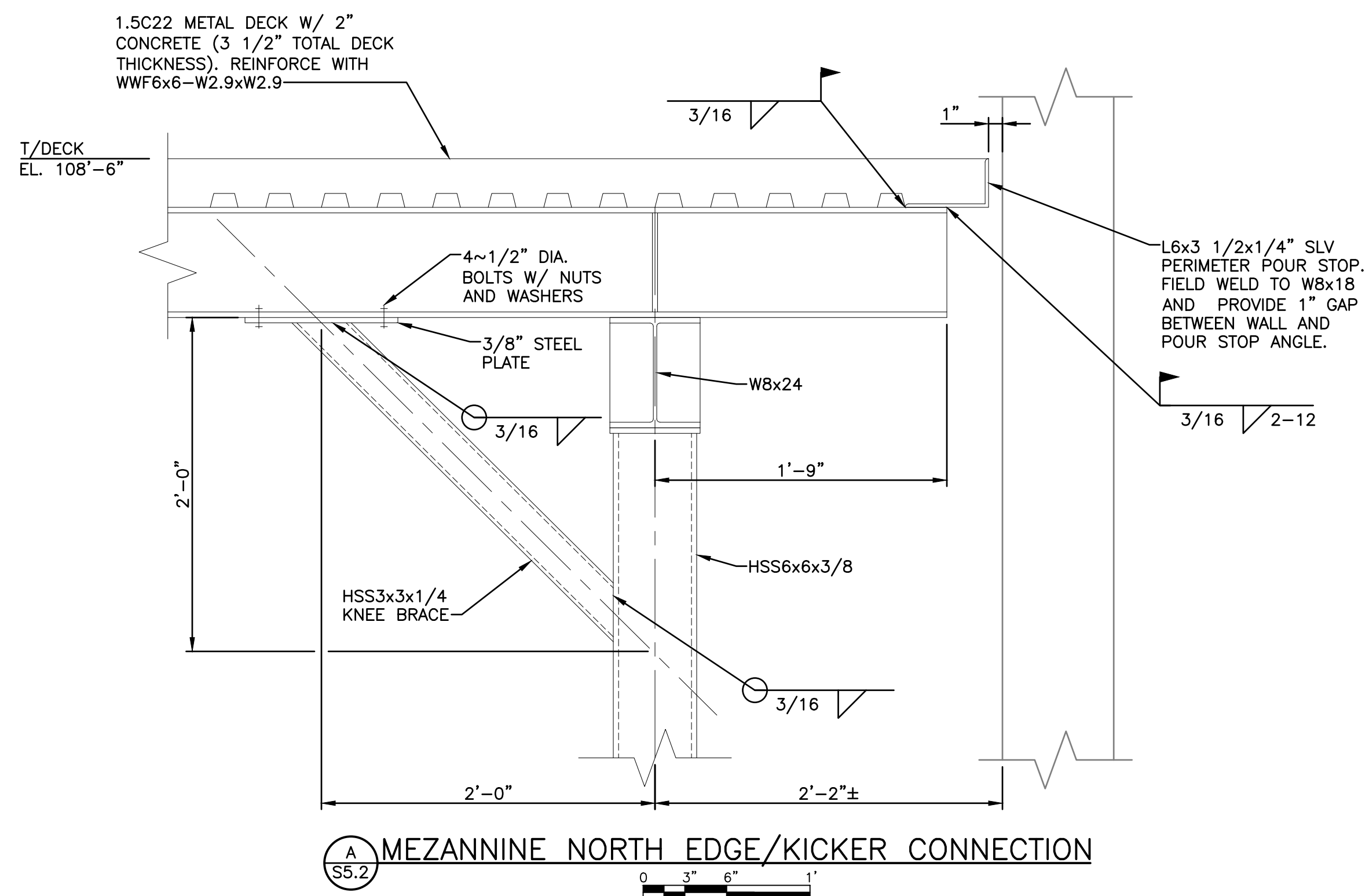
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**STRUCTURAL
DETAILS - 2**

**PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

DOB NO.
426.004

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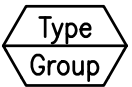
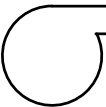
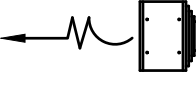
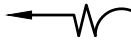
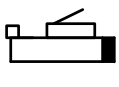
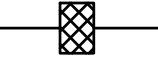
EQUIPMENT ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
BLR	BOILER
BB	BASEBOARD
CONV	CONVECTOR
CD	CEILING DIFFUSER
CHILL	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CHILLED WATER PUMP
DC	DRY COOLER
DH	DEHUMIDIFIER
DL	DRUM LOUVER
EBB	ELECTRIC BASEBOARD
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWB	ELECTRIC WALL HEATER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FTR	FINNED TUBE RADIATION
FUR	FURNACE
HC	HEATING COIL
HP	HEAT PUMP
HU	HUMIDIFIER
HUH	HOT WATER UNIT HEATER
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
L	LOUVER
MAU	MAKE-UP AIR UNIT
P	PUMP
PC	PUMPED CONDENSATE
RCP	RADIANT CEILING PANEL
RF	RETURN FAN
RG	RETURN GRILLE
RR	REGISTER
RTU	ROOFTOP UNIT
SD	SUCTION DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
SS	SPLIT SYSTEM
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILLE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE

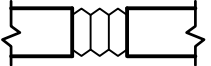
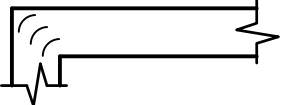
GENERAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AP	ACCESS PANEL
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSATE
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DG	DOOR GRILLE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WATER TEMPERATURE
FC	FAIL CLOSED
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
FVNR	FULL VOLTAGE NON REVERSING
GA	GAUGE
GPM	GALLONS PER MINUTE
HHW	HEATING HOT WATER
IPLV	INTEGRATED PART LOAD VALVE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
ODP	OPEN DRIP PROOF
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
TEFC	TOTALLY ENCLOSED FAN COOLED
WB	WET BULB

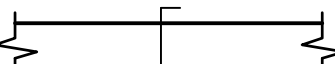
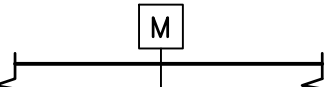
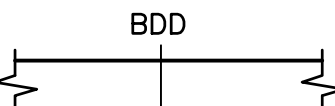
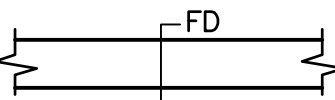
EQUIPMENT SYMBOLS

	EQUIPMENT TAG
	CONNECT TO EXISTING (TIE-IN NUMBER)
	BASE MOUNTED PUMP
	INLINE PUMP
	UNIT HEATER
	ROOF EXHAUST FAN
	AIR FLOW DIRECTION
	CEILING DIFFUSER WITH FLEXIBLE DUCT
	VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
	VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
	DUCT BOOST COIL

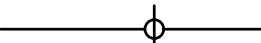
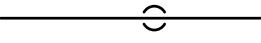
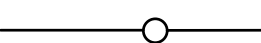
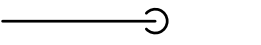
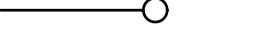
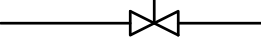
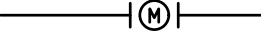
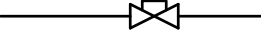
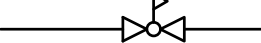
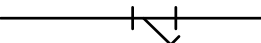
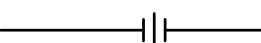
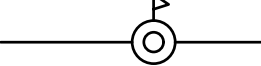
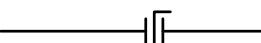
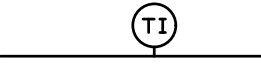
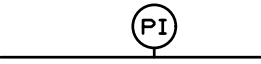
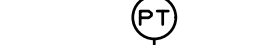
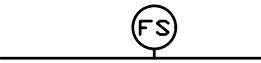
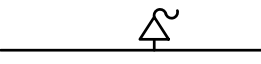
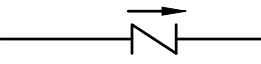
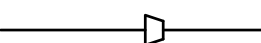
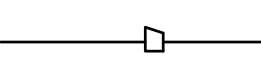
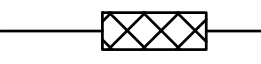
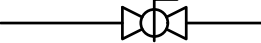
DUCTWORK SYMBOLS

	SUPPLY DUCT (UP OR SECTION)
	SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
	EXHAUST OR RETURN DUCT (UP OR SECTION)
	EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
	ROUND DUCTWORK UP
	ROUND DUCTWORK DOWN
	FLEXIBLE CANVAS CONNECTION
	TURNING VANES

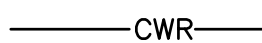
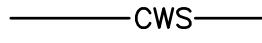
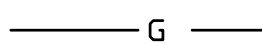
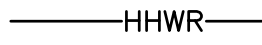
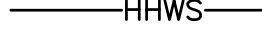
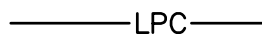
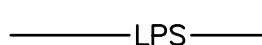
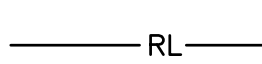
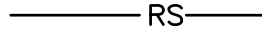
DAMPER SYMBOLS

	MANUAL VOLUME DAMPER
	AUTOMATIC DAMPER
	BACKDRAFT DAMPER
	1-1/2 HR. FIRE DAMPER

PIPING SYMBOLS

	BALL VALVE
	TEE DOWN
	TEE UP
	ELBOW DOWN
	ELBOW UP
	GATE VALVE
	GLOBE VALVE
	3-WAY VALVE
	METER
	GAS SHUTOFF PLUG VALVE
	BALANCING VALVE
	PRESSURE REDUCING VALVE
	STRAINER
	UNION
	GAS PRESSURE REGULATOR
	BUTTERFLY VALVE
	TEMPERATURE ELEMENT
	TEMPERATURE INDICATOR
	TEMPERATURE TRANSMITTER
	PRESSURE INDICATOR
	PRESSURE TRANSMITTER
	FLOW SWITCH
	MANUAL AIR VENT
	CHECK VALVE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	FLEXIBLE CONNECTOR
	TRIPLE DUTY VALVE
	FLOOR DRAIN

PIPING DESIGNATIONS

	CWR	CHILLED WATER RETURN
	CWS	CHILLED WATER SUPPLY
	G	GAS PIPING
	HHWR	HEATING HOT WATER RETURN
	HHWS	HEATING HOT WATER SUPPLY
	LPC	LOW PRESSURE CONDENSATE
	LPS	LOW PRESSURE STEAM
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION

FIELD MOUNTED CONTROLS

	T	THERMOSTAT
	H	ROOM HUMIDISTAT
	P	PRESSURE SENSOR
	S	ROOM SENSOR
	@	DUCT SMOKE DETECTOR

ACTUATORS

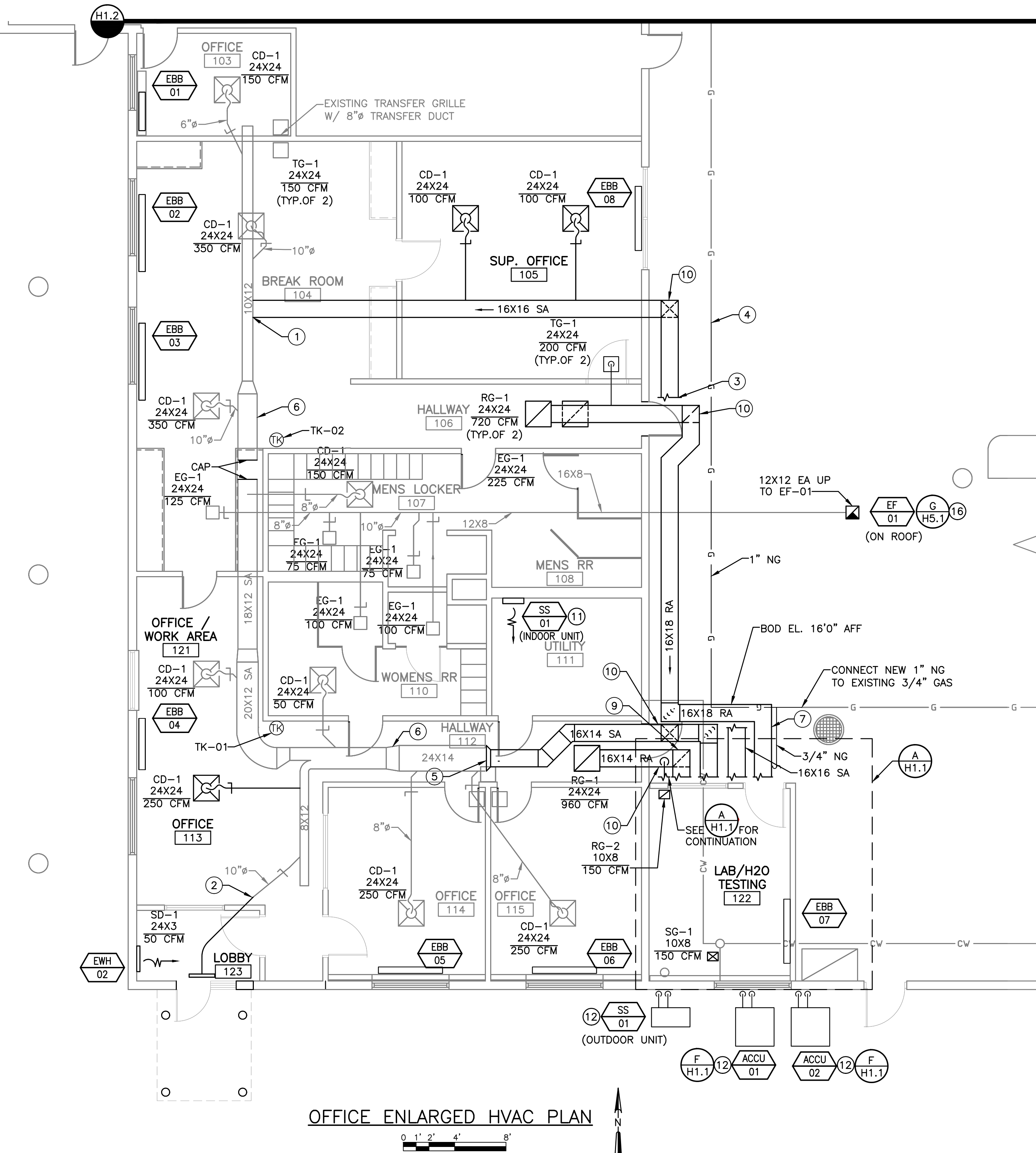
	M	MOTOR (ELECTRIC)
	P	PNEUMATIC
	S	SOLENOID

HVAC SYMBOLS AND ABBREVIATIONS
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

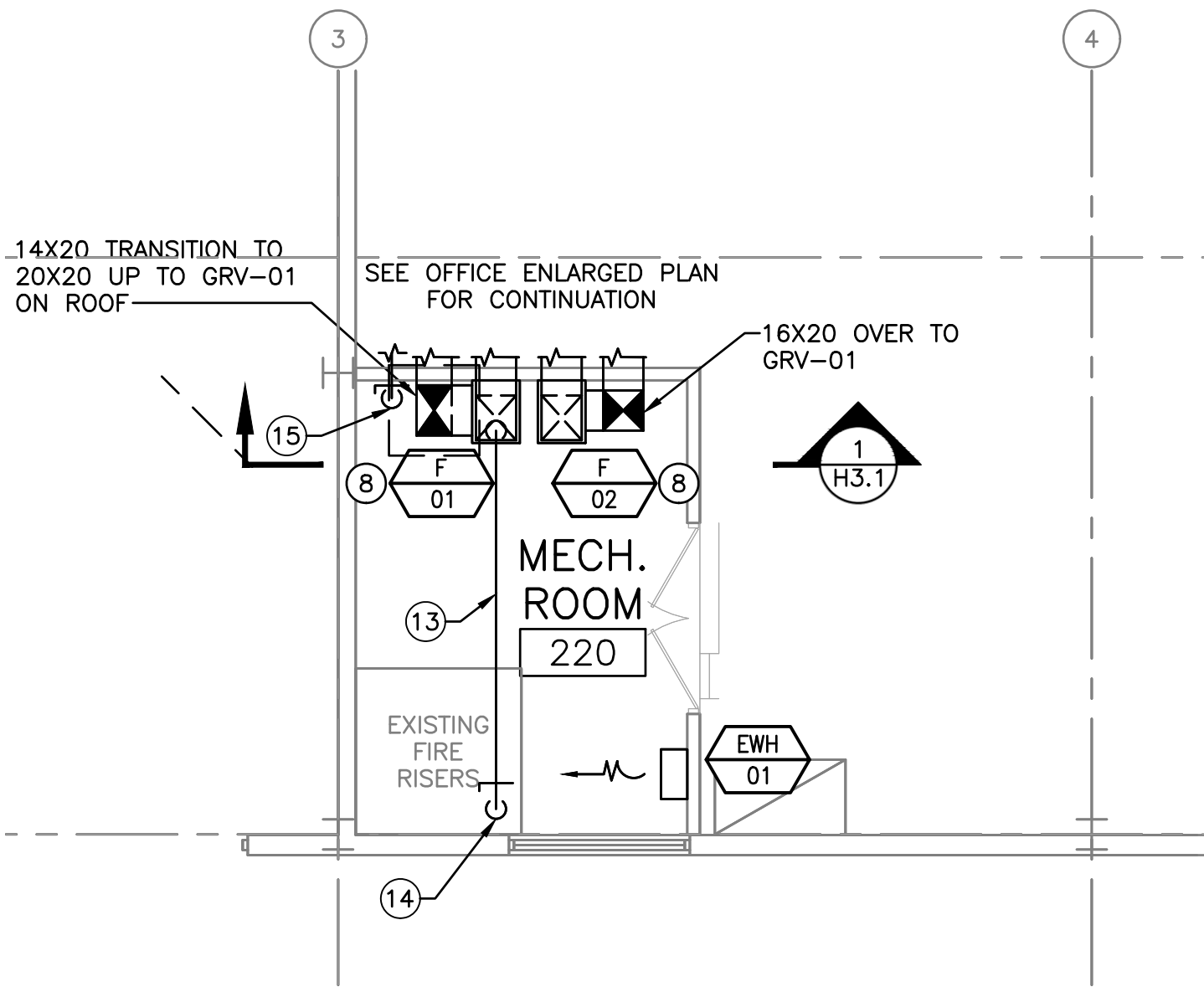
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OFFICE ENLARGED HVAC PLAN



MECHANICAL MEZZANINE PLAN

- GENERAL NOTES:
1. CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
 2. COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
 3. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
 4. ALL DUCT AND PIPE LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW PIPE ROUTING AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.
 5. COORDINATE AND PROVIDE ALL DUCTWORK TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS. FIELD VERIFY AND COORDINATE ALL DUCTWORK AND PIPING DIMENSIONS PRIOR TO FABRICATION.
 6. ROUTE DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. SUPPLY DUCTWORK SHALL BE ROUTED BELOW RETURN AND EXHAUST DUCTWORK UNLESS OTHERWISE NOTED.
 7. UNLESS OTHERWISE NOTED ALL EXISTING SUPPLY/RETURN/EXHAUST AIR TERMINALS SHALL REMAIN AND BE BALANCED TO AIRFLOW CALLED OUT ON DRAWINGS.

- KEY NOTES:
- ① TIE INTO EXISTING 10X12 SUPPLY DUCT.
 - ② TIE INTO EXISTING 10-INCH DIAMETER DUCT.
 - ③ ROUTE SUPPLY DUCT TIGHT BENEATH RETURN DUCT. BOD ELEVATION FOR SUPPLY DUCT 14'-0" AFF.
 - ④ INSTALL NEW 1-INCH NATURAL GAS LINE IN SAME LOCATION AS REMOVED LINE.
 - ⑤ CONNECT NEW 16X14 SA DUCT TO EXISTING 24X14 SA DUCT.
 - ⑥ PERFORM DUCT CLEANING ON EXISTING DUCTWORK. SEE SECTION 23 01 30 FOR DETAILS.
 - ⑦ INSTALL BAROMETRIC RELIEF DAMPER IN RETURN DUCTWORK.
 - ⑧ INSTALL SIDESTREAM FILTER NEAR RETURN INLET OF FURNACE.
 - ⑨ ADD BAROMETRIC RELIEF DAMPER IN VERTICAL SECTION OF RETURN DUCTWORK.
 - ⑩ OFFSET DUCTWORK DOWN SUCH THAT THE BOTTOM ELEVATION OF THE DUCT IS 9'-2". DUCTWORK SHALL PENETRATE WALL ABOVE ACOUSTICAL CEILING, BUT BELOW BOTTOM CORD OF TRUSSES.
 - ⑪ CONDENSATE DRAIN SHALL BE ROUTED TO MOP BASIN.
 - ⑫ REFRIGERANT PIPING SHALL BE ROUTED SO IT DOES NOT INTERFERE WITH HEADROOM OR ACCESS TO ANY VALVES OR OTHER ITEMS THAT SHALL BE ACCESSIBLE FOR MAINTENANCE.
 - ⑬ ROUTE 6-INCH DUCT FROM SUPPLY ON F-01. DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE WITHIN ROOM 220.
 - ⑭ SUPPLY DUCT SHALL PENETRATE FLOOR TO ROOM 122. DUCT SHALL TERMINATE AT THE CEILING OF ROOM 122 WITH SUPPLY GRILLE SG-1. BALANCE TO 150 CFM. COORDINATE PENETRATION WITH STRUCTURAL MEMBERS.
 - ⑮ 6-INCH RETURN DUCT SHALL PENETRATE FLOOR TO ROOM 122. DUCT SHALL TERMINATE AT THE CEILING OF ROOM 122 WITH RETURN GRILLE RG-2. BALANCE TO 150 CFM. COORDINATE PENETRATION WITH STRUCTURAL MEMBERS.
 - ⑯ REUSE EXISTING ROOF OPENING.

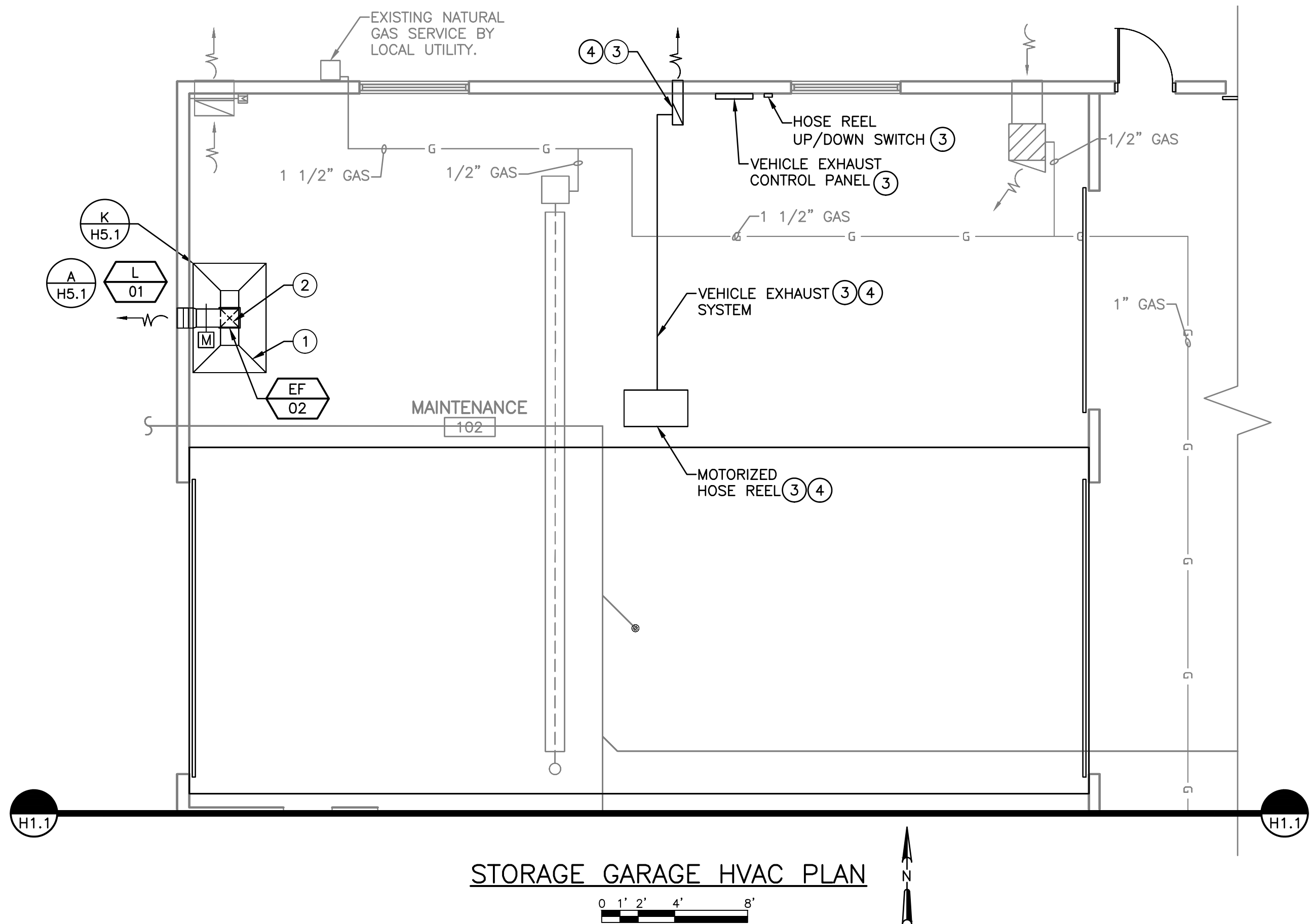
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OFFICE ENLARGED HVAC PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
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GENERAL NOTES:

1. CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
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3. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
4. ALL DUCT AND PIPE LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW PIPE ROUTING AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.
5. COORDINATE AND PROVIDE ALL DUCTWORK TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS. FIELD VERIFY AND COORDINATE ALL DUCTWORK AND PIPING DIMENSIONS PRIOR TO FABRICATION.
6. ROUTE DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. SUPPLY DUCTWORK SHALL BE ROUTED BELOW RETURN AND EXHAUST DUCTWORK UNLESS OTHERWISE NOTED.

KEY NOTES:

- ① 6'0" WIDE BY 4'-0" DEEP WELDING HOOD. HOOD SHALL BE CONSTRUCTED OF MINIMUM 18 GAGE GALVANIZED DUCTWORK AND MOUNTED 4'-0" ABOVE WELDING TABLE. OUTLET AT PEAK OF HOOD SHALL BE 12"x12". WELDING HOOD SHALL BE SUPPORTED FROM THE CEILING WITH THREADED ROD.
- ② ROUTE 12"x12" DUCTWORK FROM OUTLET ON WELDING HOOD TO INLET OF EF-02. EF-02 SHALL BE SUPPORTED FROM ABOVE. PROVIDE THE GROUND WITH VIBRATION ISOLATION.
- ③ THIS EQUIPMENT SHALL BE FURNISHED BY THE MANUFACTURER AND INSTALLED BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT MANUFACTURER TO VERIFY EQUIPMENT IS INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- ④ EQUIPMENT SHALL BE MOUNTED AS HIGH AS POSSIBLE AND SUPPORTED FROM THE ROOF. COORDINATE FINAL MOUNTING LOCATION WITH OWNER PRIOR TO INSTALLATION.

STORAGE GARAGE HVAC PLAN

PUBLIC WORKS FACILITY RENOVATION

VILLAGE OF MCFARLAND

MCFARLAND, WISCONSIN

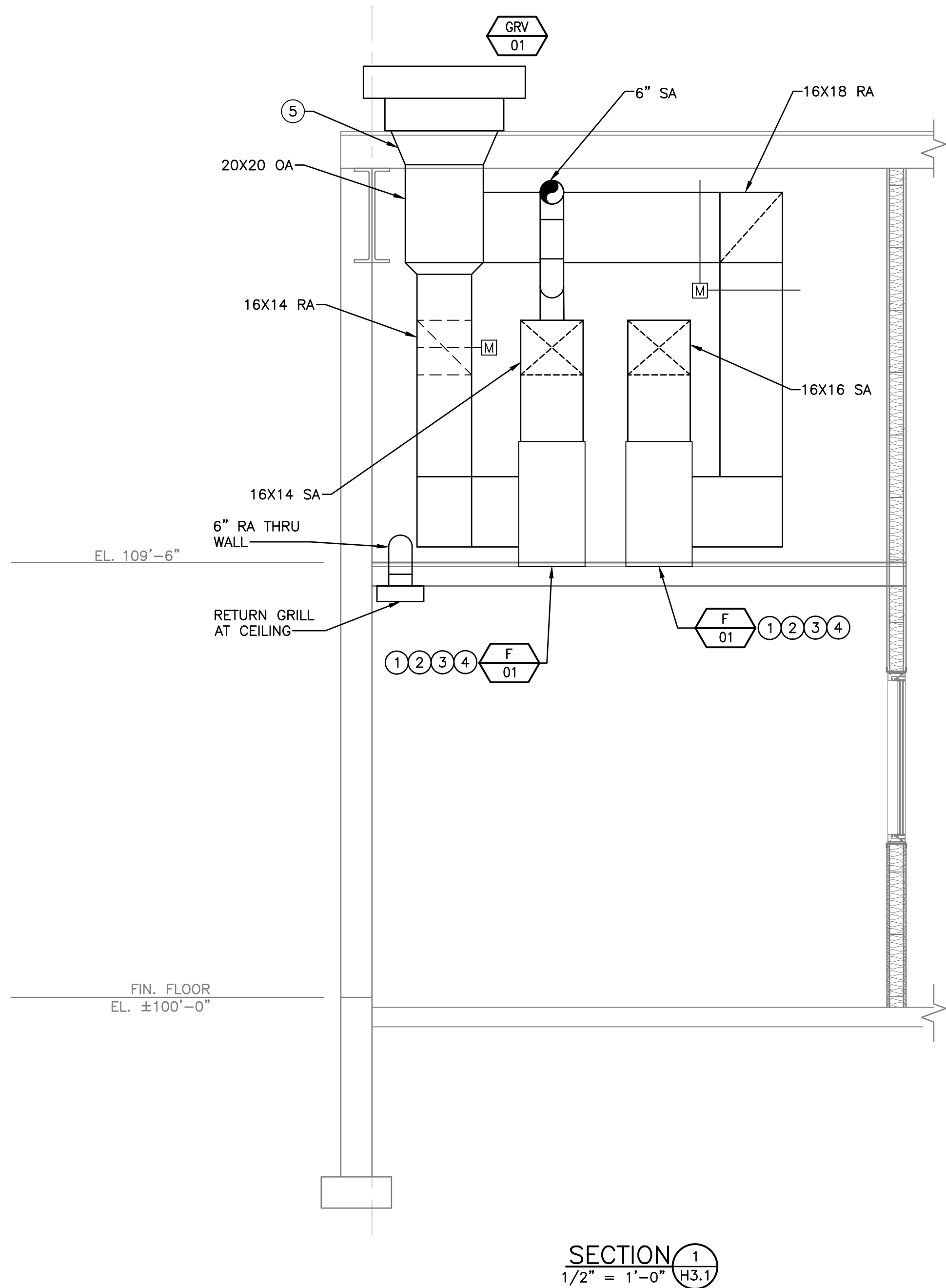
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 2. COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
 3. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
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 5. COORDINATE AND PROVIDE ALL DUCTWORK TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS. FIELD VERIFY AND COORDINATE ALL DUCTWORK AND PIPING DIMENSIONS PRIOR TO FABRICATION.
 6. ROUTE DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. SUPPLY DUCTWORK SHALL BE ROUTED BELOW RETURN AND EXHAUST DUCTWORK UNLESS OTHERWISE NOTED.

- KEY NOTES:
- ① INSTALL SIDE ACCESS FILTER NEAR RETURN INLET OF FURNACE.
 - ② ROUTE CONDENSATE PIPING THROUGH FLOOR TO HUB DRAIN IN H2O TESTING ROOM BELOW. PIPE ROUTING SHALL NOT IMPEDE ACCESS TO EQUIPMENT OR MEZZANINE SPACE. INSTALL IN ACCORDANCE WITH
 - ③ ROUTE REFRIGERANT PIPES FROM F-01 AND F-02 TIGHT TO WALLS TO ACCU-01 AND ACCU-02. ROUTING SHALL NOT IMPEDE ACCESS TO EQUIPMENT OR MEZZANINE SPACE.
 - ④ ROUTE COMBUSTION AIR INTAKE AND EXHAUST VENT PIPING UP THROUGH CEILING. OFFSET PIPING TO AROUND DUCTWORK AND UP THROUGH ROOF PER EXHAUST PIPING SHALL TERMINATE A MINIMUM 3'-0" ABOVE GRAVITY ROOF VENTILATOR GRV-01.
 - ⑤ CONTRACTOR SHALL COORDINATE ROOF OPENING LOCATION AND ROOF CURB WITH ROOFING CONTRACTOR.
 - ④ CONTRACTOR SHALL ROUTE NATURAL GAS PIPING TO EACH FURNACE. PIPING SHALL BE 3/4" SIZE UNTIL CONNECTION ON UNIT. EACH FURNACE SHALL HAVE DEDICATED REGULATOR AND SHUTOFF VALVE. REGULATOR SHALL BE VENTED TO THE OUTSIDE. INSTALL PIPING IN ACCORDANCE WITH DETAIL

HVAC SECTIONS

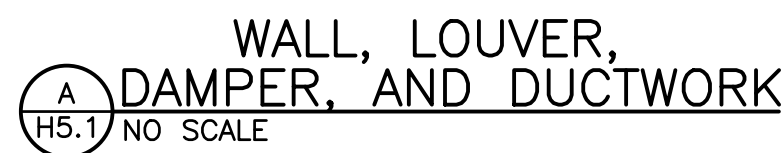
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

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SCOTT HERKERT



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FURNACE SCHEDULE																									
UNIT NO. F—	LOCATION	SERVICE	TRANE MODEL NO.	FAN SECTION				FILTER TYPE	HEATING SECTION					COOLING COIL SECTION					ELECTRICAL				OPERATING WEIGHT (LBS.)	REMARKS	
				AIRFLOW (CFM)	MINIMUM OUTSIDE AIR (CFM)	EXTERNAL STATIC PRESS. (IN. OF W. C.)	SUPPLY FAN MOTOR SIZE (HP)		HEATING TYPE	GAS INPUT (MBH)/EFF.	EAT (°F)	LAT (°F)	GAS TRAIN PRESSURE (IN W.C.)	TRANE INDOOR MODEL NO.	EAT DB/WB (°F)	LAT DB/WB (°F)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	REFRIGERANT	VOLTS	PHASE	FLA			DISCONNECT BY
01	MECH. RM 220	OFFICE BUILDING	4PXC+SPX1B	960	190	0.9	1/2	MERV 8	NATURAL GAS	60/96%	53	90	5 TO 13"	4PXC+S9X1B	77/65	55/55	23.1	34	R-410A	115	1	10.3	DIV. 26	130	
02	MECH. RM 220	OFFICE BUILDING	4TXC+S9V2C	1,400	465	0.9	1	MERV 8	NATURAL GAS	80/96%	41	90	5 TO 13"	4PXC+S9X1B	79/67	55/55	34.3	48	R-410A	115	1	13.9	DIV. 26	150	

FAN SCHEDULE																
UNIT NO.	LOCATION	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	EXT. S.P. (IN. W.C.)	MOTOR SIZE (HP)	FAN TYPE	MOTOR TYPE	DRIVE	SOUND POWER (SONES)	ELECTRICAL			OPERATING WEIGHT (LBS.)	REMARKS	
											VOLTAGE	PHASE	STARTER BY			DISCONNECT BY
EF-01	ROOF	RESTROOMS	G-095-VG	665	0.5	0.15	CENTRIFUGAL EXHAUST	ECM	DIRECT	9.5	115	1	MANUFACTURER	MANUFACTURER	38	
EF-02	ROOF	WELDING HOOD	SQ-98-VG	600	0.5	0.75	INLINE	ECM	DIRECT	13.9	115	1	MANUFACTURER	MANUFACTURER	42	

AIR COOLED CONDENSING UNIT SCHEDULE																	
UNIT NO. ACCU—	LOCATION	SERVICE	TRANE MODEL NO.	NOMINAL CAPACITY (TONS)	COMPRESSORS		REFRIGERANT			ELECTRICAL					SEER	OPERATING WEIGHT (LBS.)	REMARKS
					NO. OF COMPRESSORS	COMPRESSOR TYPE	REFRIGERANT	SUCTION LINE SIZE (IN.)	LIQUID LINE SIZE (IN.)	VOLTAGE	PHASE	MCA	BREAKER SIZE	DISCONNECT BY			
01	EXTERIOR	F-01	4TTA3036	3	1	SCROLL	R-410A	0.75	0.375	208	3	14	20	DIV. 26	14	200	
02	EXTERIOR	F-02	4TTA4048	4	1	SCROLL	R-410A	0.875	0.375	208	3	18	30	DIV. 26	15	190	

SPLIT SYSTEM SCHEDULE															
UNIT NO. SS—	LOCATION	SERVICE	DAIKIN MODEL NO.		FAN SECTION			COOLING COIL SECTION			ELECTRICAL			OUTDOOR/INDOOR OPERATING UNIT WEIGHT (LBS.)	REMARKS
			(INDOOR UNIT)	(OUTDOOR UNIT)	SUPPLY AIR (CFM)	QUANTITY	MOTOR SIZE (HP)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EAT DB/WB (°F)	VOLTAGE	PHASE	MCA		
01	UTILITY ROOM 111	ELECTRICAL ROOM	FTKB12AXVJU	RKB12AXVJU	360	1	0.17	8.2	11	85	208	1	7.7	60/20	①

① PROVIDE PRECHARGED REFRIGERANT PIPING KIT, SIZE AND LENGTH AS REQUIRED.

WALL LOUVER SCHEDULE													
UNIT NO. L—	LOCATION	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	WIDTH (IN)	HEIGHT (IN)	BLADE DEPTH (IN)	MAX. APD (IN WG)	FACE VEL. (FPM)	FREE AREA (SQ. FT.)	SCREEN		REMARKS
											TYPE	LOCATION	
01	MAINTENANCE 102	WELDING HOOD EXHAUST	ESD—635	600	18	18	6	0.08	728	0.82	INSECT	EXTERIOR	

ELECTRIC WALL HEATER SCHEDULE										
UNIT NO. EWH—	LOCATION	Q—MARK MODEL NO.	CAPACITY (WATTS)	CAPACITY (BTU)	ELECTRICAL					REMARKS
					VOLTAGE	PHASE	FLA	BREAKER SIZE	DISCONNECT BY	
01	MECH. ROOM 220	CWH1101DSAF	1000	3,412	120	1	8.4	15	MANUFACTURER	
02	LOBBY 123	CWH1101DSAF	1000	3,412	120	1	8.4	15	MANUFACTURER	

DESIGN CONDITIONS				
APPLICABLE BUILDING CODE: WISCONSIN SPS 364		SUMMER EXTERIOR: 87°F DB / 75°F WB WINTER EXTERIOR: -15°F DB		
OCCUPANCY TYPE	VENTILATION	SUMMER INTERIOR (DB/WB)	WINTER INTERIOR (DB)	REMARKS
OFFICE BUILDING	7.5 CFM / PERSON	75/62.5	70	
LOCKERROOM	0.5 CFM / SF	75/62.5	70	
RESTROOMS	75 CFM / FIXTURE	75/62.5	70	

GRAVITY ROOF VENTILATOR SCHEDULE											
UNIT NO. GRV—	LOCATION	SERVICE	GREENHECK MODEL NO.	THROAT WIDTH (IN.)	THROAT LENGTH (IN.)	AIRFLOW (CFM)	STATIC PRESSURE (IN. W.C.)	THROAT VELOCITY (FPM)	THROAT AREA (SQ. FT)	OVERALL HEIGHT (IN.)	REMARKS
01	ROOF	OA INTAKE	GRSI	30.5	30.5	2,360	0.055	469	5.03	20.5	

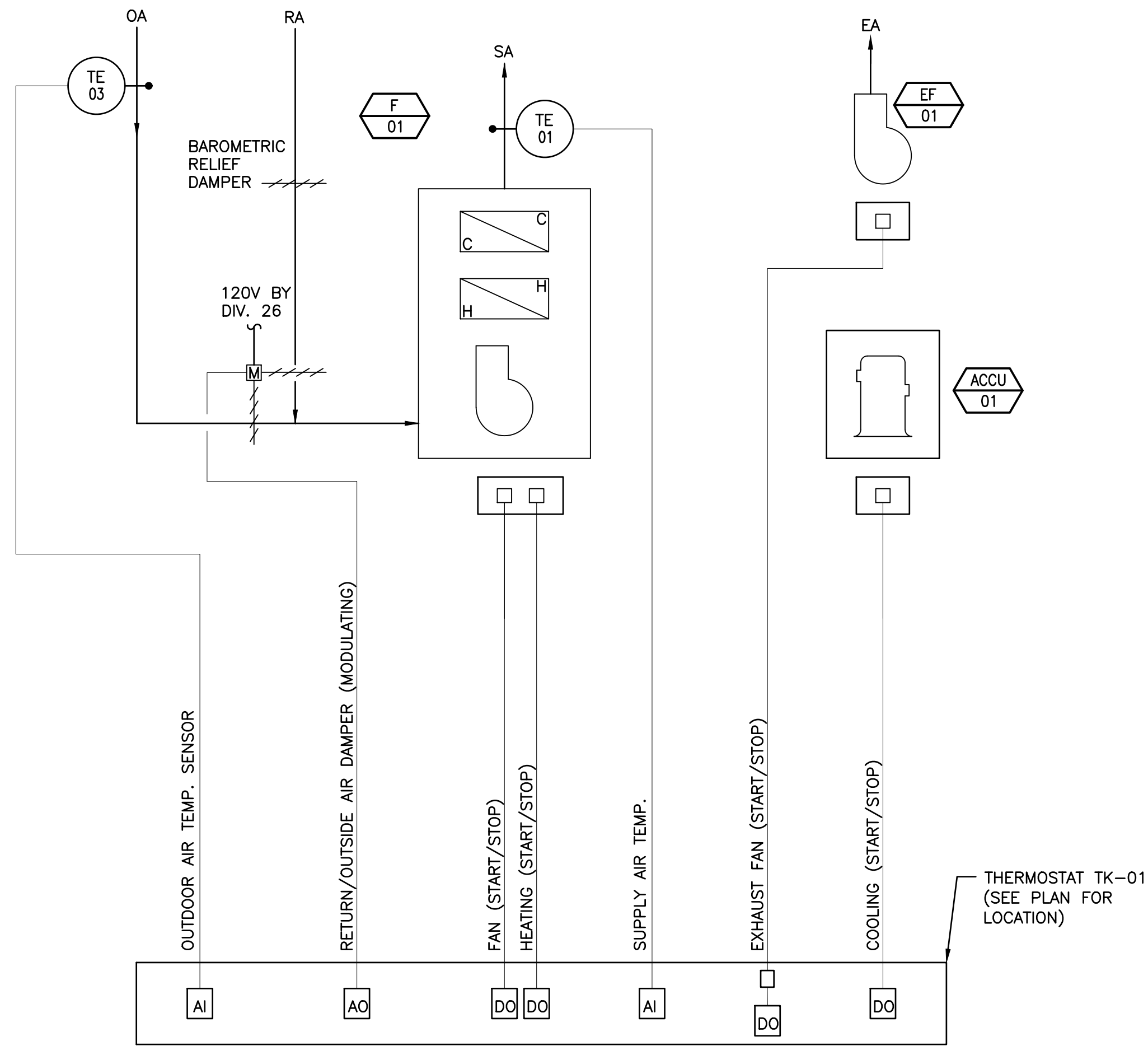
ELECTRIC BASEBOARD HEATER SCHEDULE									
UNIT NO. EBB—	LOCATION	Q-MARK MODEL NO.	CAPACITY (WATTS)	LENGTH OF UNIT	ELECTRICAL			DISCONNECT BY	REMARKS
					VOLTAGE	PHASE	FLA		
01	OFFICE 103	2513W	750	3'	120	1	6.3	MANUFACTURER	
02	BREAK ROOM 104	2516W	1,500	6'	120	1	12.6	MANUFACTURER	
03	BREAK ROOM 104	2516W	1,500	6'	120	1	12.6	MANUFACTURER	
04	OFFICE / WORK AREA 121	2514W	1,000	4'	120	1	8.4	MANUFACTURER	
05	OFFICE 114	2515W	1,250	5'	120	1	10.5	MANUFACTURER	
06	OFFICE 115	2515W	1,250	5'	120	1	10.5	MANUFACTURER	
07	LAB/H2O TESTING 122	2515W	1,250	5'	120	1	10.5	MANUFACTURER	
08	SUP. OFFICE 105	2515W	1,250	5'	120	1	10.5	MANUFACTURER	

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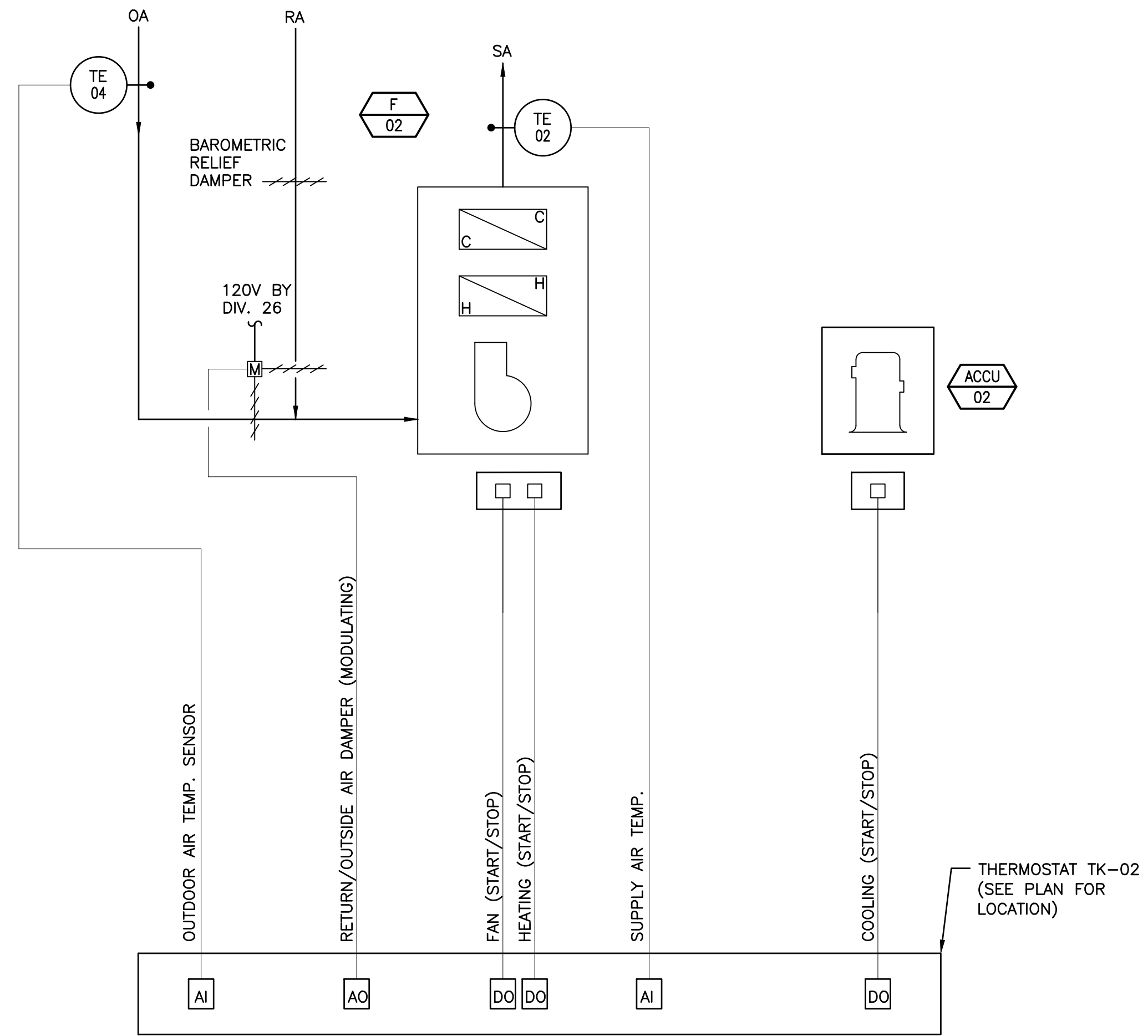
HVAC SCHEDULES

PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO. 1426.004
PROJECT MGR. SCOTT HERKERT
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FURNACE F-01 CONTROLS
NO SCALE



FURNACE F-02 CONTROLS
NO SCALE

NOTE: DIVISION 26 TO PROVIDE
ALL WIRING AND CONDUIT.

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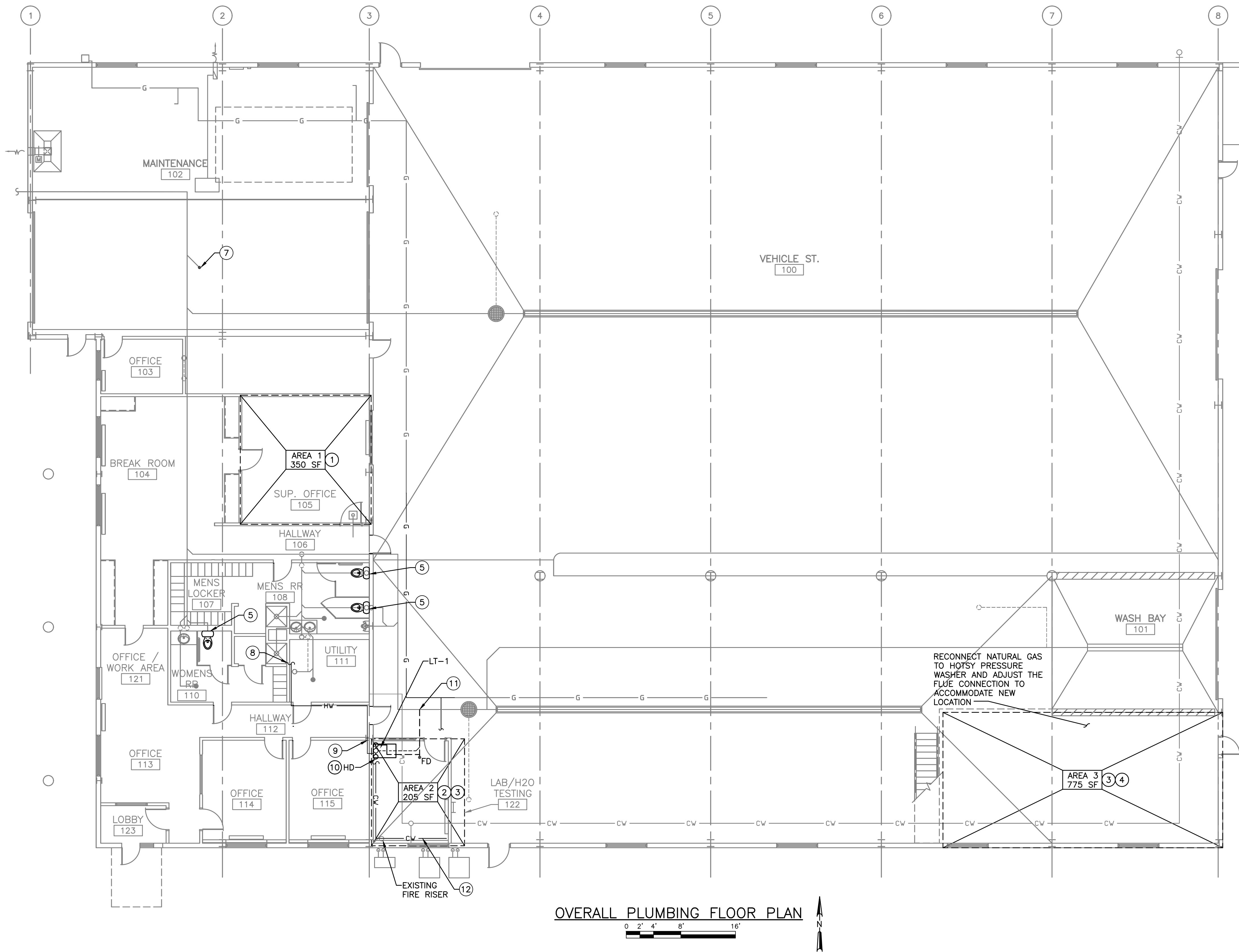
CONTROLS SCHEMATICS
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

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SCOTT HERKERT

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- GENERAL NOTES:**
1. VERIFY ALL CEILING HEIGHTS AT SITE, PRIOR TO INSTALLATION.
 2. FIRE PROTECTION CONTRACTOR SHALL PERFORM WATER FLOW TEST AT FIRE HYDRANT PRIOR TO FINAL SPRINKLER DESIGN.
 3. FIRE PROTECTION HYDRAULIC CALCULATIONS FOR AUTOMATIC SPRINKLER SYSTEM SHALL INCORPORATE MINIMUM 10 PSI SAFETY FACTOR.
 4. ALL LEAKAGE EVIDENCED BY TESTING SHALL BE REPAIRED BY TIGHTENING OR REPLACING FITTING OR EQUIPMENT ONLY.
 5. ALL REPAIRS SHALL BE AT THE CONTRACTORS EXPENSE. CAULKING, WRAPPING OR OTHER MEANS OF REPAIR SHALL NOT BE PERMITTED.
 6. ALL PIPE PENETRATIONS THROUGH WALL SHALL BE SLEEVED AND SEALED TO MAKE WATERTIGHT AND MAINTAIN FIRE RATING.
 7. SPRINKLERS NEAR HEATERS AND LOCATED WITHIN HEATER ZONES AS DEFINED BY NFPA-13, LATEST EDITION, SHALL BE HIGH TEMPERATURE RATED.
 8. THE COMPLETE INSTALLATION AND TESTING OF THE AUTOMATIC SPRINKLER SYSTEM SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF NFPA.
 9. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL REQUIRED PIPING OFFSETS FOR COMPLETE SYSTEM INSTALLATION.

- KEY NOTES:**
- ① PIPING CURRENTLY ROUTED IN THE ATTIC SPACE ABOVE OFFICE AREA.
 - ② AREA HAS A MEZZANINE ABOVE. MEZZANINE AREA IS ENCLOSED. SPRINKLER HEADS THAT SERVE THE LOWER LEVEL SHALL NOT PENETRATE THE MEZZANINE FLOOR. SPRINKLER PROTECTION SHALL BE PROVIDED ABOVE AND BELOW THE MEZZANINE AREA.
 - ③ SPACE UNDER THE MEZZANINE IS DESIGNED FOR A ORDINARY GROUP 2 HAZARD AND SHALL NOT BE USED TO STORE COMBUSTIBLES OR FLAMMABLE AND/OR COMBUSTIBLE LIQUIDS IN EXCESS OF THOSE QUANTITIES PERMITTED BY NFPA 13 OR NFPA 30.
 - ④ AREA HAS A MEZZANINE ABOVE. MEZZANINE AREA IS OPEN TO THE VEHICLE STORAGE AREA. SPRINKLER HEADS THAT SERVE THE LOWER LEVEL SHALL NOT PENETRATE THE MEZZANINE FLOOR. SPRINKLER PROTECTION SHALL BE PROVIDED ABOVE AND BELOW THE MEZZANINE AREA.
 - ⑤ PROVIDE NEW WATER CLOSET. NEW WATER CLOSET-SHALL MATCH STYLE AND DIMENSIONS OF REMOVED UNIT. NEW WATER CLOSET SHALL BE PRESSURE ASSIST STYLE. INSTALL IN SAME LOCATION AS REMOVED UNIT.
 - ⑥ PROVIDE NEW HOSE BIB TO SERVE LAB/H2O TESTING ROOM. PIPING FOR NEW HOSE BIB SHALL TIE INTO EXISTING WATER SUPPLY DOWNSTREAM OF EXISTING WATER METER. COORDINATE FINAL LOCATION WITH OWNER.
 - ⑦ PROVIDE NEW FLOOR DRAIN. NEW FLOOR DRAIN SHALL TIE INTO EXISTING DRAIN PIPE. DRAIN CONNECTIONS SHALL BE SOLVENT WELD OR LINK SEAL. RUBBER COUPLINGS ARE NOT PERMITTED.
 - ⑧ CONNECT TO EXISTING HOT WATER SUPPLY.
 - ⑨ ROUTE PIPING ABOVE ACOUSTICAL CEILING. PROVIDE OFFSETS AS REQUIRED.
 - ⑩ HUB DRAIN FOR EXISTING FIRE PROTECTION RISER DRAIN AND CONDENSATE FROM FURNACE UNITS. PROVIDE 4-INCH FUNNEL.
 - ⑪ CONNECT NEW UNDER FLOOR DRAIN TO EXISTING DRAIN PIPING.
 - ⑫ CONNECT TO EXISTING COLD WATER SUPPLY. ROUTE PIPING TIGHT TO WALL TO LAUNDRY TRAY.

OVERALL PLUMBING AND FIRE PROTECTION FLOOR PLAN

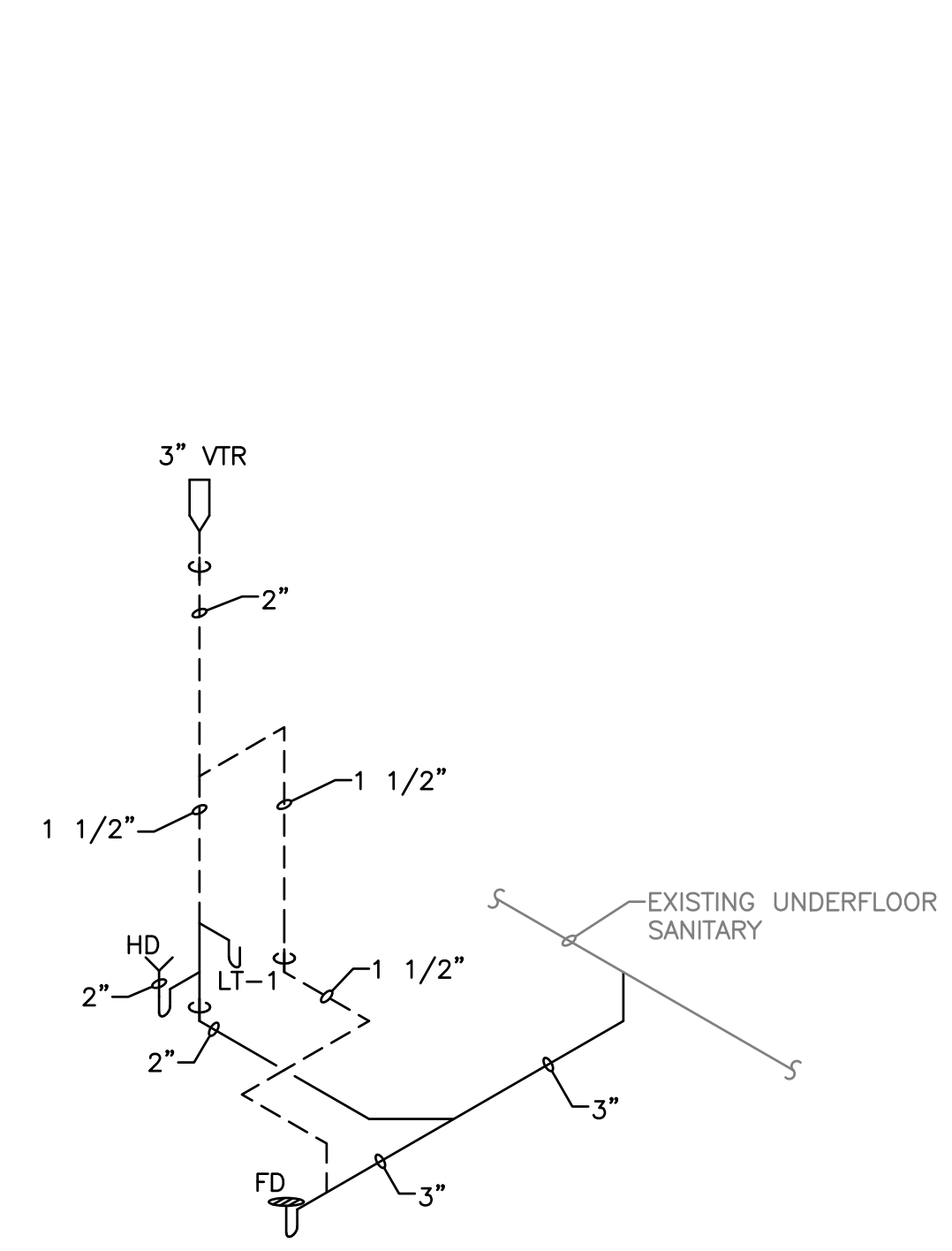
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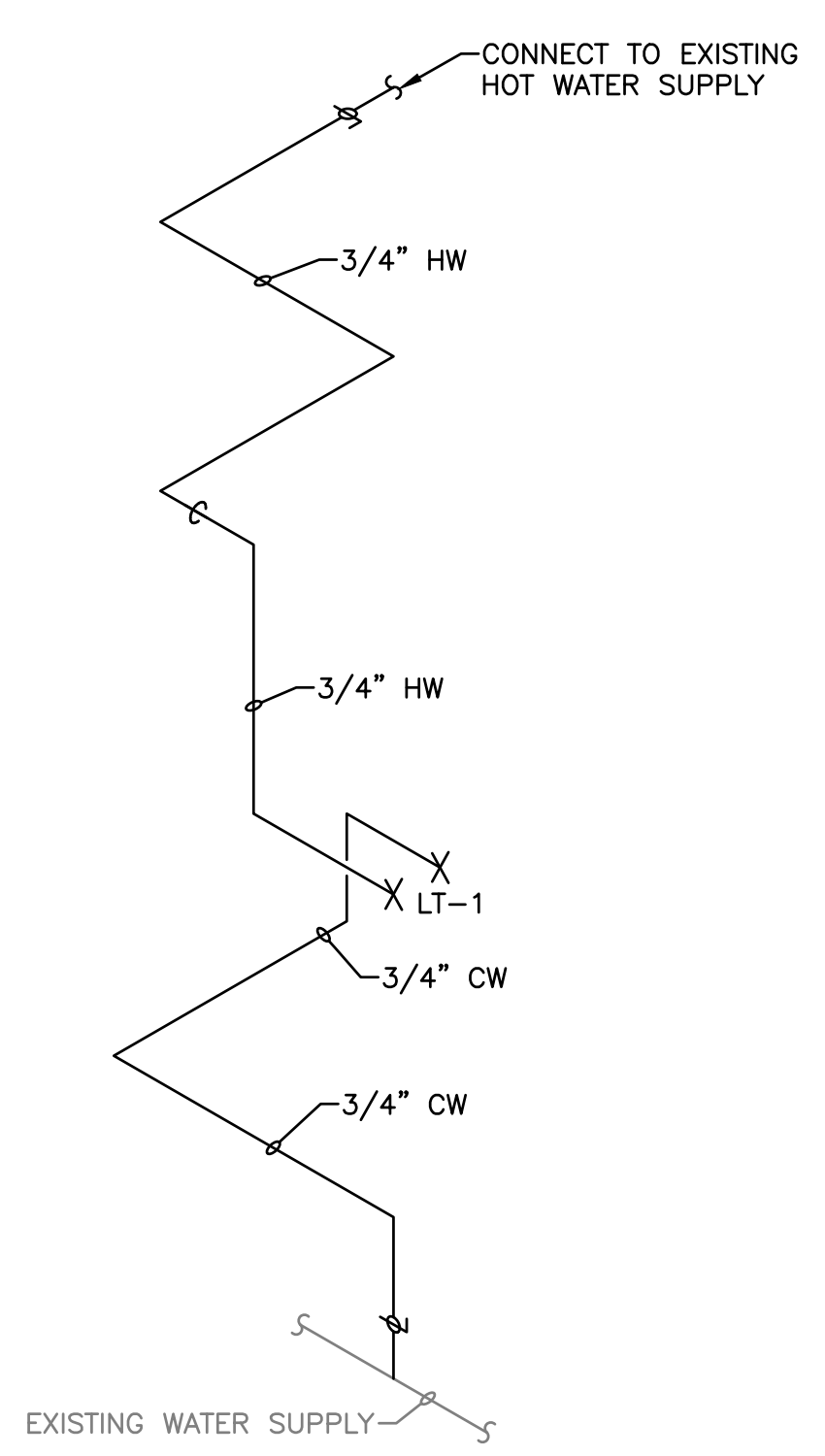
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WASTE AND VENT SCHEMATIC
NO SCALE



WASTE SUPPLY SCHEMATIC
NO SCALE

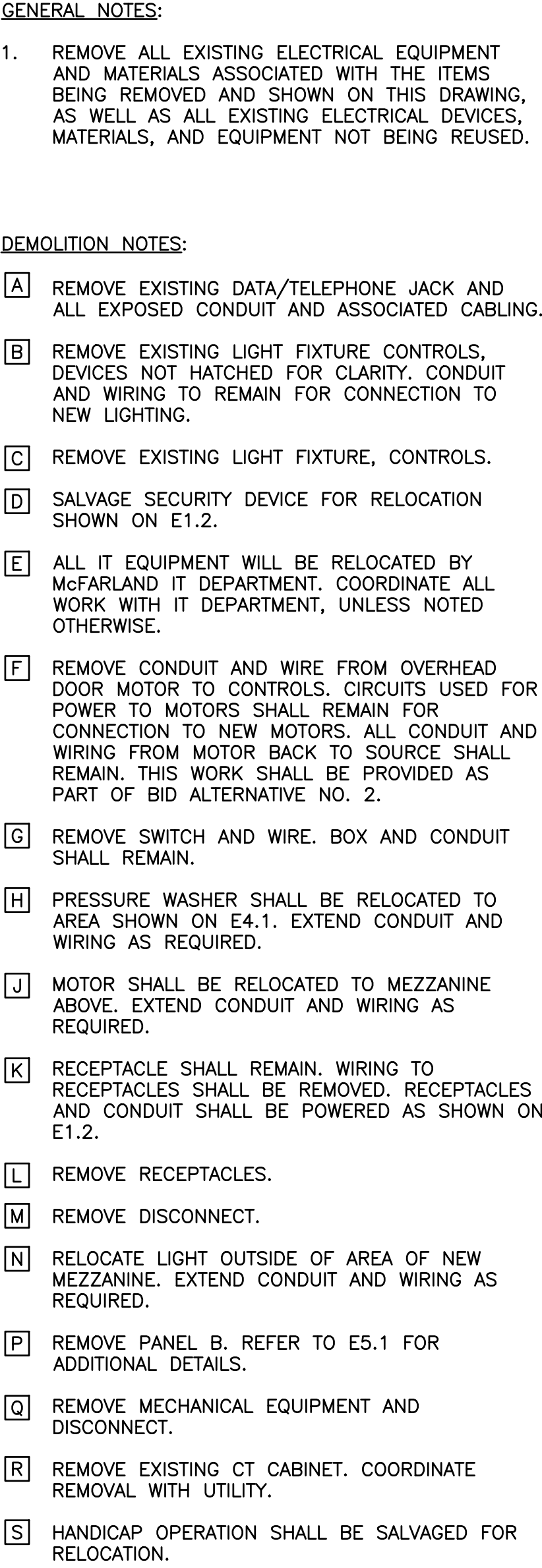
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PLUMBING SCHEMATICS
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

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**ELECTRICAL
DEMOLITION FLOOR PLAN**

**PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.
1426.004

PROJECT MGR.
OTT HERKERT



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ELECTRICAL SYMBOLS

LIGHTING

	FIXTURE SYMBOL (TYPICAL) A=INDICATES FIXTURE TYPE 2=INDICATES CIRCUIT NUMBER b=INDICATES SWITCHING SOLID CIRCLE INDICATES ALWAYS ON
	SURFACE OR PENDANT MOUNTED
	WALL MOUNTED
	1X4 SURFACE OR PENDANT MOUNTED LINEAR
	1X8 SURFACE OR PENDANT MOUNTED LINEAR
	LINEAR WALL MOUNTED
	1X4 RECESSED LINEAR
	2X2 RECESSED LINEAR
	2X4 RECESSED LINEAR
	RECESSED CAN
	EXIT, SURFACE, PENDANT OR RECESSED
	EXIT, WALL
	EMERGENCY LIGHTING
SWITCHES	
	SINGLE POLE
	TWO POLE
	THREE WAY
	FOUR WAY
	KEYED
	DIMMER
	MANUAL MOTOR SWITCH (3 PHASE)
	WEATHER PROOF
	SWITCH WITH PILOT LIGHT
	LIGHTING CONTROL STATION
	PHOTOCELL

EQUIPMENT AND WIRING

	GROUND CONNECTION (ONE-LINE DIAGRAM)
	TRANSFORMER
	DISCONNECT, F=FUSED, B=CIRCUIT BREAKER, BLANK=NON-FUSED
	MOTOR STARTER MAGNETIC
	CIRCUIT BREAKER COMBINATION STARTER
	JUNCTION BOX
	LINE VOLTAGE THERMOSTAT
	LINE VOLTAGE THERMOSTAT W/REMOTE BULB
	480V LOAD, REFER TO MCC SCHEDULE FOR EQUIPMENT NUMBER
	VARIABLE FREQUENCY DRIVE

SITE SYMBOLS

	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	CABLE TELEVISION SERVICE
	TELEPHONE SERVICE
	FIBER OPTIC CABLE
	UTILITY POLE

POWER SYMBOLS

	CIRCUIT NUMBER (TYPICAL)
	OTHERWISE SHOWN PANEL DESIGNATION (TYP.) INDICATES WEATHERPROOF
	DUPLEX, 125 VOLT, WP INDICATES WEATHERPROOF
	DUPLEX, 125 VOLT, ABOVE FURNITURE
	DOUBLE DUPLEX, 125 VOLT, ABOVE FURNITURE
	DOUBLE DUPLEX, 125 VOLT
	SINGLE CONVENIENCE, 125 VOLT FOR ELECTRIC WATER COOLER
	EXPLOSION-PROOF, ABOVE FURNITURE
	EXPLOSION-PROOF
	FIXED EQUIPMENT CONNECTION
	POWER OUTLET, VOLTAGE & AMPERAGE AS INDICATED
	AUTOMATIC TRANSFER SWITCH (ONE-LINE DIAGRAM)
	CIRCUIT BREAKER (ONE-LINE DIAGRAM)
	METER (ONE-LINE DIAGRAM)
	PANELBOARD

FIRE ALARM AND DETECTION SYMBOLS

	FIRE ALARM CONTROL PANEL
	FIRE ANNUNCIATOR CONTROL PANEL
	STROBE; WALL MOUNT - ADA RATED
	STROBE CANDELA RATING 80" AFF
	HORN STROBE; WALL MOUNT - ADA RATED
	STROBE CANDELA RATING 80" AFF
	SPEAKER STROBE; WALL MOUNT - ADA RATED
	STROBE CANDELA RATING 80" AFF
	HORN; WALL MOUNT - ADA RATED
	SPEAKER; WALL MOUNT - ADA RATED
	STROBE; CEILING MOUNT - ADA RATED
	STROBE CANDELA RATING
	HORN STROBE; CEILING MOUNT - ADA RATED
	STROBE CANDELA RATING
	SPEAKER STROBE; CEILING MOUNT - ADA RATED
	STROBE CANDELA RATING
	AREA OF RESCUE ASSISTANCE
	EMERGENCY TELEPHONE SYSTEM
	HEAT DETECTOR; CEILING MOUNT
	SMOKE DETECTOR; CEILING MOUNT
	ELEVATOR RECALL SMOKE DETECTOR
	NITROUS OXIDE SENSOR
	CARBON MONOXIDE SENSOR
	SWITCH INDICATION
	DUCT SMOKE DETECTOR
	DUCT SIZE
	REMOTE TEST SWITCH
	SWITCH INDICATION
	FIRE ALARM PULL STATION
	SPRINKLER FLOW SWITCH
	SPRINKLER VALVE TAMPER SWITCH
	FIRE ALARM BELL

INSTRUMENTATION EQUIPMENT

	ANALYSIS ELEMENT
	ANALYSIS INDICATING TRANSMITTER, *: DO=DISSOLVED OXYGEN, PH=PH, TRB=TURBIDITY, TSS=TOTAL SUSPENDED SOLIDS, GD=GAS DETECTOR, CA=CHLORINE ANALYZER, OP=OXYGEN PURITY, ORP=OXYGEN-REDUCTION POTENTIAL, LEL=LOWER EXPLOSIVE LIMIT, PR=PROXIMITY, MST=MOISTURE
	CONTROL SWITCH DEVICE TYPE (SEE MCC SCHEDULE)
	DENSITY ELEMENT
	DENSITY INDICATING TRANSMITTER
	FLOW ELEMENT
	FLOW INDICATING TRANSMITTER, *: M=MAGNETIC, TM= THERMAL MASS DP=DIFFERENTIAL PRESSURE, U=ULTRASONIC
	FLOW SWITCH *: P=PADDLE, T=THERMAL, C=CAPACITANCE, A=AIR FLOW
	HAND SWITCH *: SS=SAFETY SWITCH
	POWER ELEMENT (CURRENT XFMR, POTENTIAL XFMR)
	CURRENT SWITCH
	POWER INDICATING TRANSMITTER
	TIME SWITCH
	LEVEL ELEMENT
	LEVEL INDICATING TRANSMITTER, *: S=SUBMERSIBLE, U=ULTRASONIC, R=RADAR, TL=TANK LEVEL/RING PRESSURE TYPE, F=FLANGE MOUNTED)
	LEVEL SWITCH, *: C=CONDUCTANCE, F=BALL FLOAT, V=VIBRATING FORK, B=BUILDING FLOODING
	LEVEL TRANSDUCER S=SUBMERSIBLE
	DIFFERENTIAL PRESSURE INDICATING TRANSMITTER
	PRESSURE ELEMENT
	PRESSURE INDICATING TRANSMITTER
	PRESSURE SWITCH
	SPEED SWITCH
	TEMPERATURE CONTROLLER
	TEMPERATURE ELEMENT, *: R=RTD, T=THERMOCOUPLE
	TEMPERATURE INDICATING TRANSMITTER
	TEMPERATURE CONTROL STATION
	TEMPERATURE SWITCH
	TEMPERATURE TRANSMITTER
	VIBRATION ELEMENT
	VIBRATION INDICATING TRANSMITTER
	WEIGHT ELEMENT
	TORQUE SWITCH
	WEIGHT TRANSMITTER (SCALE)
	PRESENCE/ABSENCE DETECTOR
	POSITION SWITCH, *: D=DOOR, L=LIMIT, P=PROXIMITY
	SOLENOID VALVE
	GAS DETECTION SYSTEM HORN; WALL MOUNT
	GAS DETECTION SYSTEM STROBE; WALL MOUNT

TECHNOLOGY SYMBOLS

	DATA JACK
	PHONE JACK
	POTS ANALOG PHONE AND DATA JACKS * = # OF JACKS
	WALL MOUNT VOIP PHONE JACK 54" AFF
	WALL MOUNT POTS ANALOG PHONE JACK 54" AFF
	2-POST DATA RACK
	COAX CABLE JACK
	POWER POLE
	PA SYSTEM HORN; 10'-0" AFF
	PA SYSTEM SPEAKER
	SPEAKER; CEILING MOUNT A=SPEAKER TYPE
	KEY PAD
	GLASS BREAK DETECTOR
	MOTION SENSOR
	PUSH BUTTON
	ELECTRIC STRIKE
	MAGNETIC LOCK
	INTERCOM STATION
	OCCUPANCY SENSOR, CEILING, OR WALL SEE SPECIFICATION FOR SENSOR TYPE
	CARD READER
	REMOTE VOLUME CONTROL
	FIXED SECURITY CAMERA
	PAN, TILT, ZOOM SECURITY CAMERA

DUCTWORK SYMBOLS

	SUPPLY DUCT (UP OR SECTION)
	SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
	EXHAUST DUCT (UP OR SECTION)
	EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
	ROUND DUCTWORK UP
	ROUND DUCTWORK DOWN
	FLEXIBLE CANVAS CONNECTION
	TURNING VANES

DAMPER SYMBOLS

	AUTOMATIC DAMPER
	BACKDRAFT DAMPER
	MANUAL VOLUME DAMPER
	1-1/2 HR. FIRE DAMPER

FIELD MOUNTED HVAC CONTROLS

	THERMOSTAT
	ROOM HUMIDISTAT
	PRESSURE SENSOR
	ROOM SENSOR
	DUCT SMOKE DETECTOR
	PRESSURE GAUGE

ACTUATORS

	MOTOR (ELECTRIC)
	PNEUMATIC
	SOLENOID

EQUIPMENT SYMBOLS

	ACCUMULATOR
	AIR FLOW DIRECTION
	BASE MOUNTED PUMP
	BLOWER
	CEILING DIFFUSER WITH FLEXIBLE DUCT
	CENTRIFUGAL PUMP
	CONNECT TO EXISTING
	DRIP TRAP
	DUCT BOOST COIL
	EQUIPMENT TAG
	FLAME ARRESTER
	FLAME CELL
	FLAME TRAP ASSEMBLY
	GRINDER
	INLINE PUMP
	POSITIVE DISPLACEMENT PUMP
	ROOF EXHAUST FAN
	UNIT HEATER
	VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
	VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
	FLOATING MIXER
	SCREW CONVEYOR

ELECTRICAL SYMBOLS

PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT

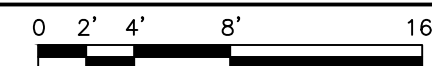
STRAND
ASSOCIATES®

SHEET
29
E0.1

1. ALL 120/208V EQUIPMENT/LIGHTING SHALL BE POWERED FROM PANEL B UNLESS NOTED OTHERWISE. PANEL B IS IN THE UTILITY ROOM AS SHOWN ON SHEET E4.1.
2. ALL FIRE ALARMS DEVICES TO BE WIRED TO FACP/NAC IN UTILITY ROOM.

- ① OVERHEAD GARAGE DOOR CONTROLS FURNISHED AS SPECIFIED IN DIVISION 8 AND INSTALLED BY DIVISION 26. REFER TO DIVISION 8 OF SPECIFICATIONS FOR OPERATING DESCRIPTION AND ADDITIONAL CONTROLS TO BE WIRED BY DIVISION 26. MOTOR DISCONNECT SHALL BE MOUNTED ON CEILING ADJACENT TO MOTOR. ALL WORK ASSOCIATED WITH OVERHEAD DOORS SHALL BE PART OF BID ALTERNATIVE NO. 2. COORDINATE EXACT LOCATION OF CONTROLS WITH OWNER. MOTORS SHALL BE POWERED FROM EXISTING CIRCUIT USED FOR REMOVED MOTOR. EXTEND CONDUIT AND WIRING FROM REMOVED MOTOR AND CONTROLS TO NEW MOTOR AND CONTROLS.
- ② DEVICE SHALL BE RATED 96dB.
- ③ EXHAUST FAN SHALL BE POWERED FROM CIRCUIT USED FOR REMOVED FAN. EXTEND CONDUIT AND WIRING FROM REMOVED MOTOR TO NEW MOTOR.

- ④ PROVIDE 3~#12 AND #12 GROUND IN 3/4" CONDUIT FROM EXHAUST CONTROLLER TO VEHICLE EXHAUST CONTROL SYSTEM.
- ⑤ LIMIT SWITCH PROVIDED BY DIVISION 23 AND WIRED BY DIVISION 26. PROVIDE 2~#14 IN 3/4" CONDUIT FROM LIMIT SWITCH TO VEHICLE EXHAUST CONTROLLER.
- ⑥ EQUIPMENT PROVIDED BY DIVISION 23 AND WIRED BY DIVISION 26.
- ⑦ PROVIDE 2~#14 IN 3/4" CONDUIT FROM HOSE REEL CONTROLLER TO JUNCTION BOX ON HOSE REEL.
- ⑧ DAMPER SHALL BE WIRED TO OPEN WHEN EXHAUST FAN EF-02 IS RUNNING.
- ⑨ PROVIDE RACEWAY WITHIN DOOR FRAME FOR FUTURE CARD ACCESS WIRING.

[illegible]

OVERALL ELECTRICAL FLOOR PLAN

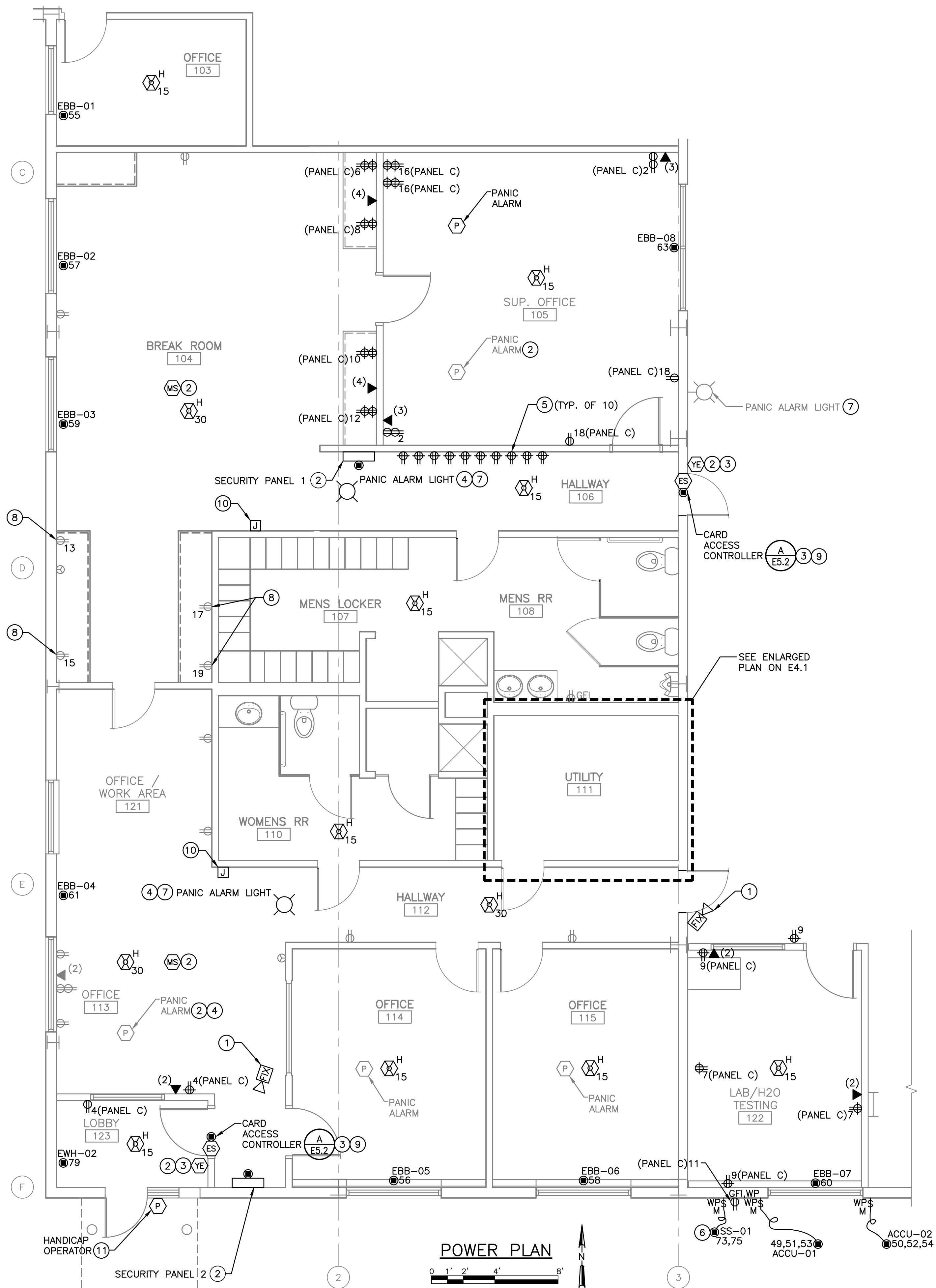
**WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



SHEET
30
E1.1



GENERAL NOTES:

1. ALL 120/208V EQUIPMENT/LIGHTING SHALL BE POWERED FROM PANEL B UNLESS NOTED OTHERWISE. PANEL B IS IN THE UTILITY ROOM AS SHOWN ON SHEET E4.1.
2. COORDINATE EXACT LOCATIONS FOR ALL SECURITY DEVICES WITH OWNER.
3. CONTRACTOR SHALL COORDINATE SECURITY EQUIPMENT AND WORK WITH BOLDTRONICS, BURT BOLDEBUCK (608) 271-8979.
4. WIRING FOR ALL NEW DEVICES INSTALLED ON EXISTING WALLS SHALL BE INSTALLED IN SURFACE RACEWAY.
5. ALL FIRE ALARMS DEVICES TO BE WIRED TO FACP/NAC IN UTILITY ROOM.
6. REFER TO E5.1 FOR PANIC ALARM SYSTEM DIAGRAM.

KEY NOTES:

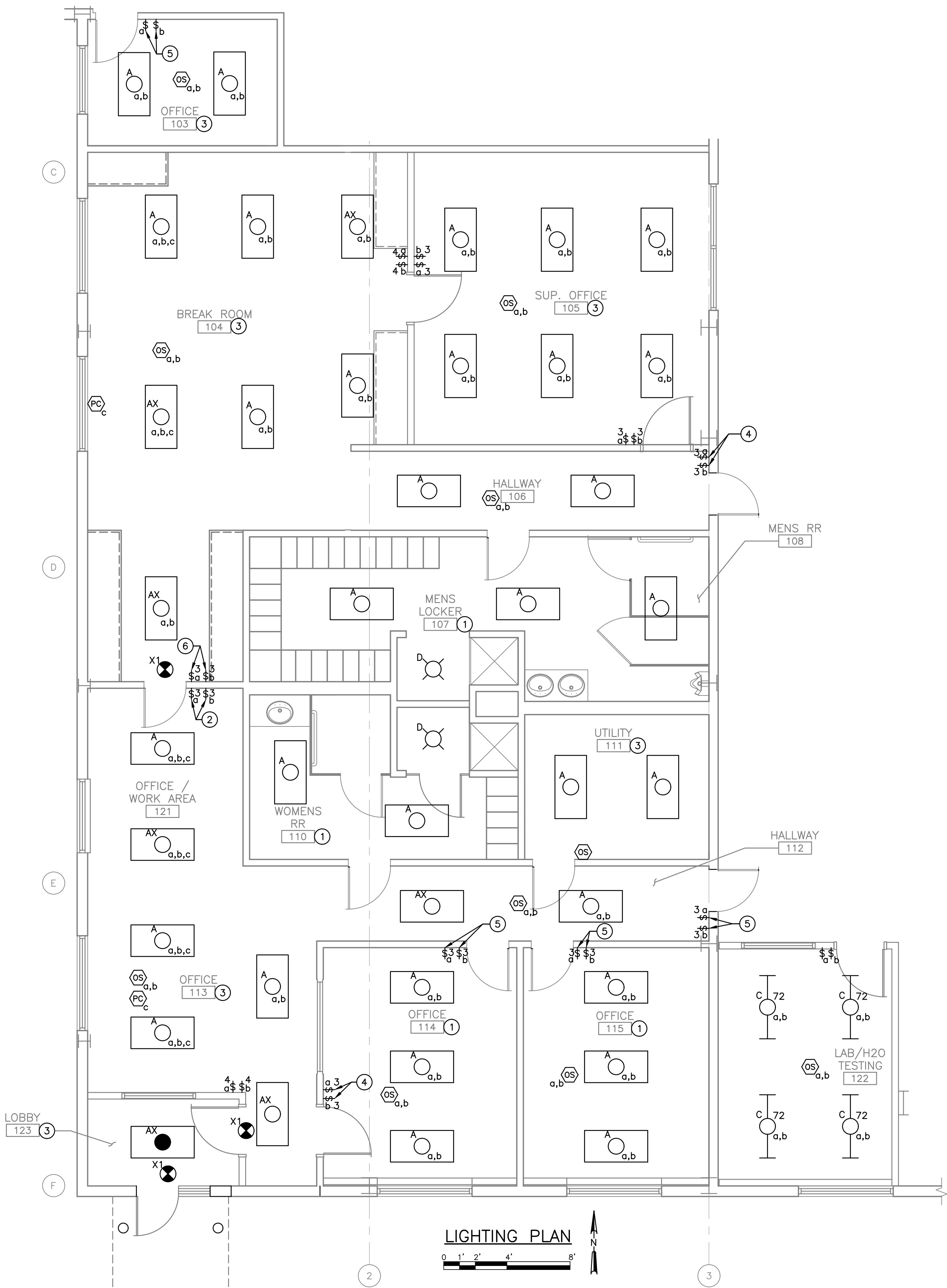
- 1 RELOCATED CAMERA. COORDINATE AIMING WITH OWNER.
- 2 RELOCATED SECURITY DEVICE. EXTEND CONDUIT AND WIRING AS REQUIRED.
- 3 ROUTE ALL CONDUIT AND CABLING TO EXISTING MAIN PANEL IN UTILITY ROOM.
- 4 PROVIDE RED PANIC ALARM LIGHT CONNECTED TO ALL NEW AND EXISTING PANIC BUTTONS, SUCH THAT WHEN ANY ALARM BUTTONS ARE PUSHED, BOTH LIGHTS SHALL BE ENERGIZED. REFER TO DIAGRAM ON E5.1 FOR ADDITIONAL INFORMATION. ALARM LIGHTS SHALL MATCH EXISTING ALARM LIGHTS.
- 5 RECEPTACLES SHALL BE INSTALLED IN SURFACE RACEWAY. 5 RECEPTACLES SHALL BE POWERED FROM CIRCUIT 20, PANEL C AND 5 RECEPTACLES SHALL BE POWERED FROM CIRCUIT 22, PANEL C. COORDINATE MOUNTING HEIGHT WITH OWNER.
- 6 PROVIDE 3~#12 AND #12 GROUND IN 3/4" CONDUIT AND 2~#14 IN 3/4" CONDUIT FROM SS-01 (OUTDOOR UNIT) TO SS-01 (INDOOR UNIT) FOR POWER AND CONTROL OF INDOOR UNIT.
- 7 EXTEND CIRCUIT FROM EXISTING PANIC ALARM LIGHTS. PROVIDE CONDUIT AND WIRING AS SHOWN ON THE RISER DIAGRAM ON SHEET E5.1. COORDINATE EXACT LOCATION OF ALARM LIGHTS WITH OWNER.
- 8 PROVIDE NEW WIRING IN EXISTING CONDUIT FROM PANEL C TO EACH RECEPTACLE.
- 9 POWER FROM SAME CIRCUIT AS EXISTING CONTROLLER IN UTILITY ROOM. VERIFY EXISTING VOLTAGE.
- 10 PROVIDE SURFACE MOUNTED BOX FOR DIVISION 23 PROVIDED THERMOSTAT AND SURFACE RACEWAY FROM BOX TO ABOVE CEILING. WIRING TO THERMOSTAT SHALL BE ROUTED WITH IN THE SURFACE RACEWAY.
- 11 RELOCATED HANDICAP OPERATOR.

OFFICE ENLARGED POWER PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

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SHEET
31
E1.2



GENERAL NOTES:

1. ALL 120/208V EQUIPMENT/LIGHTING SHALL BE POWERED FROM PANEL B UNLESS NOTED OTHERWISE. PANEL B IS IN THE UTILITY ROOM AS SHOWN ON SHEET E4.1.
2. REFER TO A6.2 FOR REFLECTED CEILING PLAN.
3. WIRING FOR ALL NEW DEVICES INSTALLED ON EXISTING WALLS SHALL BE INSTALLED IN SURFACE RACEWAY,

KEY NOTES:

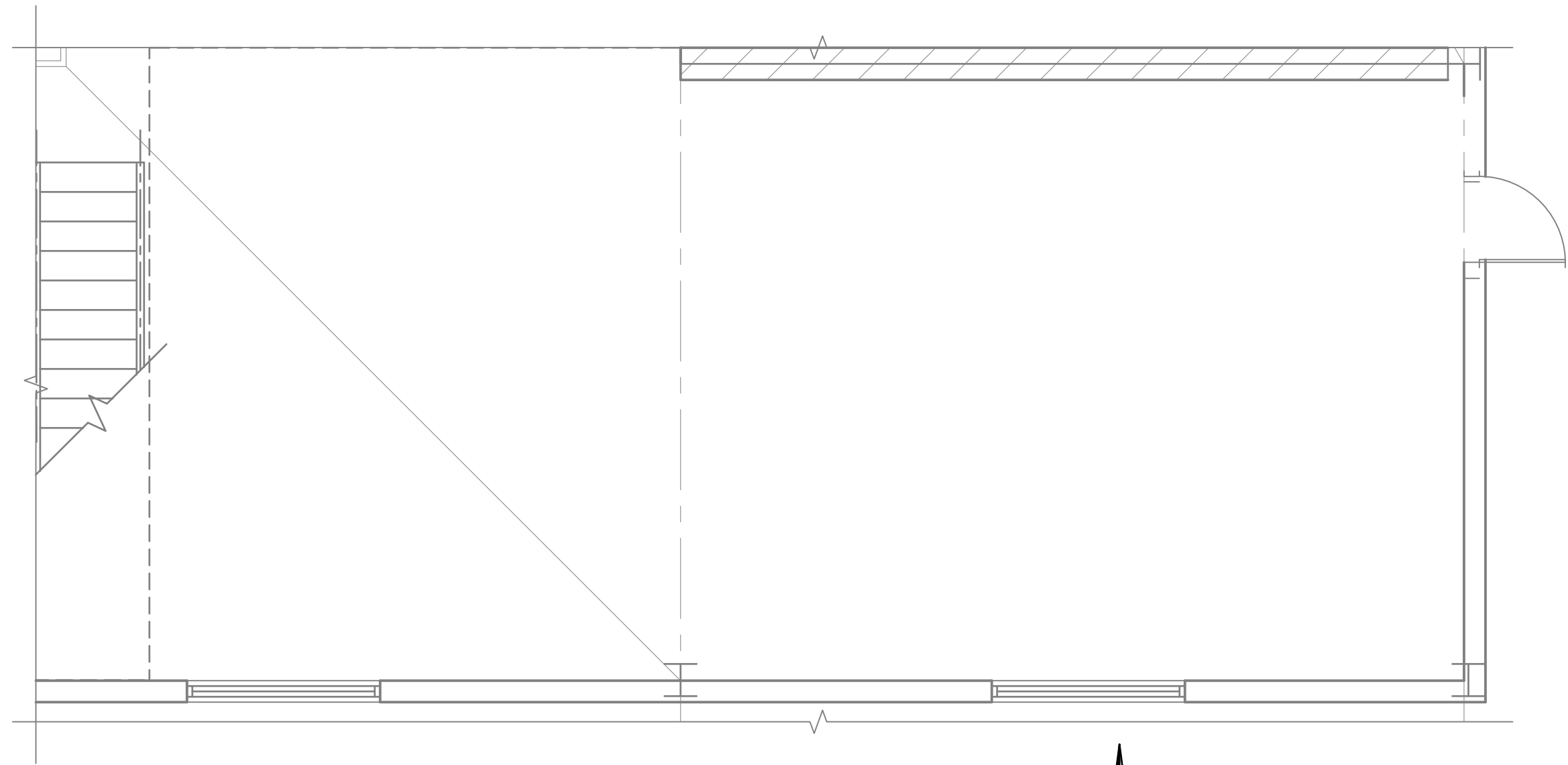
- ① POWER AND CONTROL LIGHTS FROM EXISTING CIRCUIT AND CONTROLS. PROVIDE NEW WIRING FROM LIGHTS TO SWITCHES/OCCUPANCY SENSOR,
- ② SWITCH SHALL BE MOUNTED IN EXISTING SWITCH BOX.
- ③ POWER NEW LIGHTS FROM CIRCUIT USED FOR REMOVED LIGHTS. PROVIDE CONDUIT AND WIRING AS REQUIRED.
- ④ PROVIDE NEW SWITCH BOX AND CONDUIT IN EXISTING WALL.
- ⑤ PROVIDE NEW SWITCH BOX ATTACHED TO EXISTING SWITCH BOX IN WALL.
- ⑥ PROVIDE A DUAL SWITCH IN THE EXISTING SWITCH BOX.

LIGHTING PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

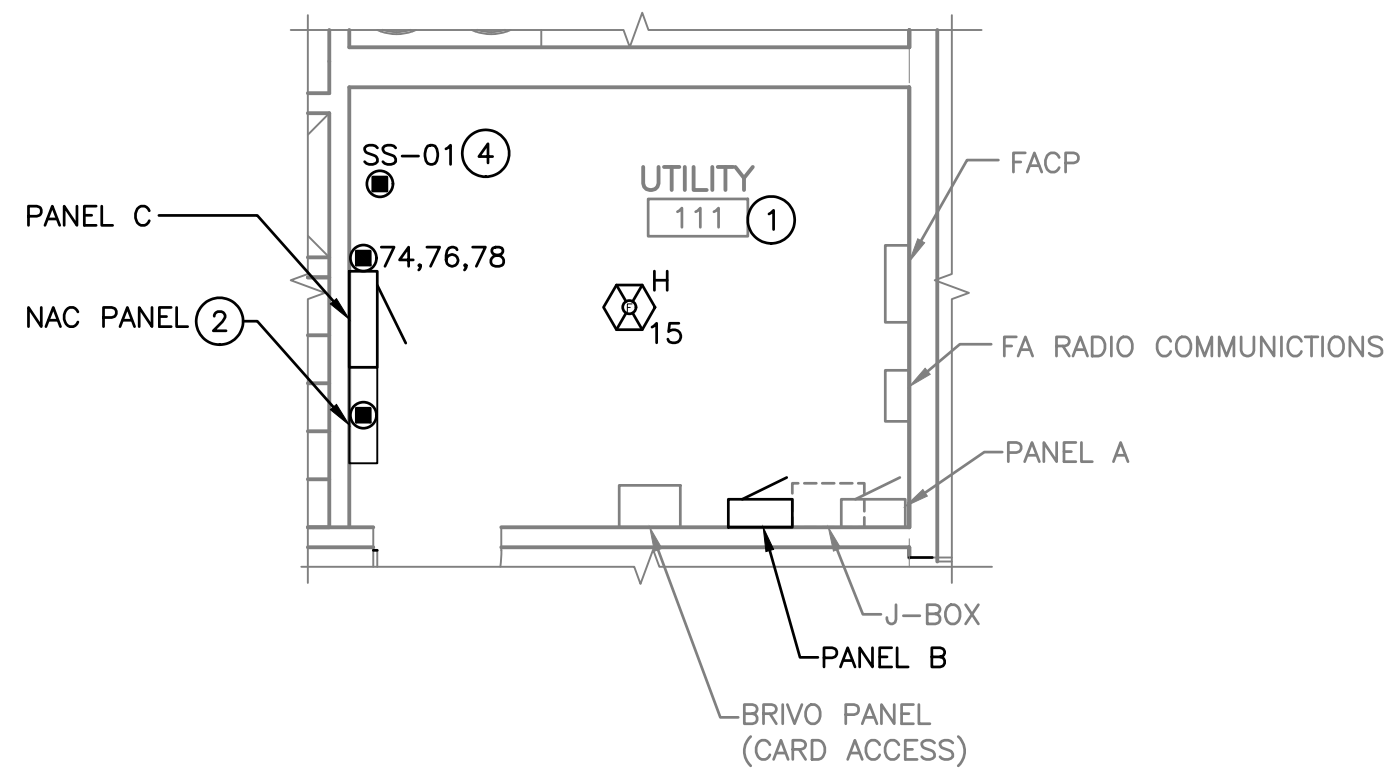
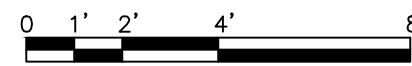
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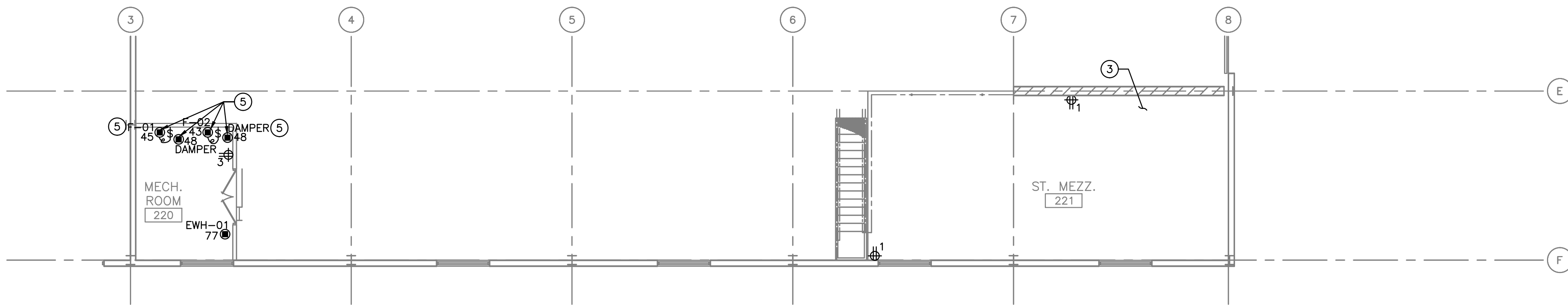
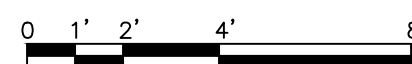
SHEET
32
E1.3



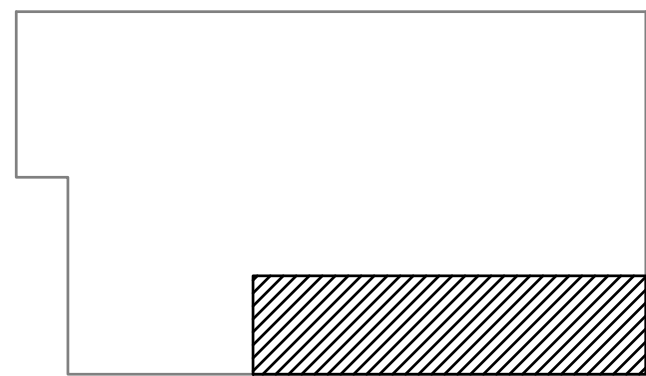
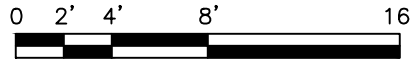
LOWER LEVEL MEZZANINE POWER PLAN



UTILITY POWER PLAN



UPPER LEVEL MEZZANINE POWER PLAN



KEY PLAN
NO SCALE

GENERAL NOTES:

1. ALL 120/208V EQUIPMENT/LIGHTING SHALL BE POWERED FROM PANEL C UNLESS NOTED OTHERWISE. PANEL C IS IN THE UTILITY ROOM AS SHOWN ON THIS SHEET.
2. CONTRACTOR SHALL COORDINATE SECURITY EQUIPMENT AND WORK WITH BOLDTRONICS, BURT BOLDEBUCK (608) 271-8979.

KEY NOTES:

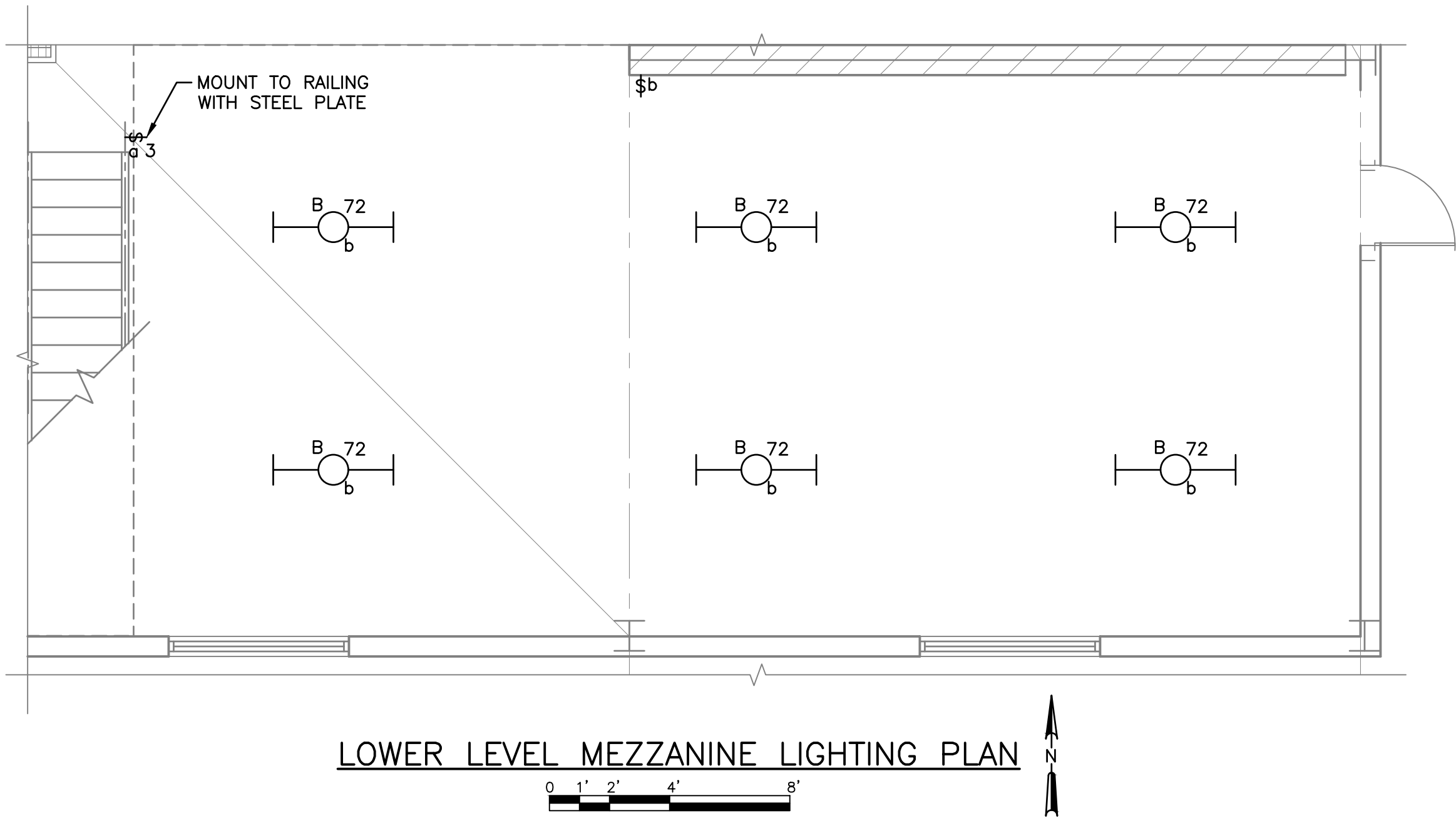
- ① ALL IT EQUIPMENT WILL BE RELOCATED, PROVIDED, AND INSTALLED BY McFARLAND IT DEPARTMENT. COORDINATE ALL WORK WITH IT DEPARTMENT, UNLESS NOTED OTHERWISE.
- ② PROVIDE NAC PANEL AS REQUIRED TO POWER FAS ANNUNCIATION DEVICES. PROVIDE A DEDICATED 20-AMP, 120V CIRCUIT BREAKER, WIRE, AND CONDUIT TO NAC PANEL. CIRCUIT BREAKER SHALL BE RED AND PERMANENTLY LABELED PER NFPA.
- ③ RELOCATED PRESSURE WASHER. EXTEND CONDUIT AND WIRING AS REQUIRED.
- ④ PROVIDE 3~#12 AND #12 GROUND IN 3/4" CONDUIT AND 2~#14 IN 3/4" CONDUIT FROM SS-01 (OUTDOOR UNIT) TO SS-01 (INDOOR UNIT) FOR POWER AND CONTROL OF INDOOR UNIT.
- ⑤ REFERENCE SHEET H7.1 FOR WIRING.

UPPER AND LOWER LEVEL MEZZANINE POWER PLANS
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

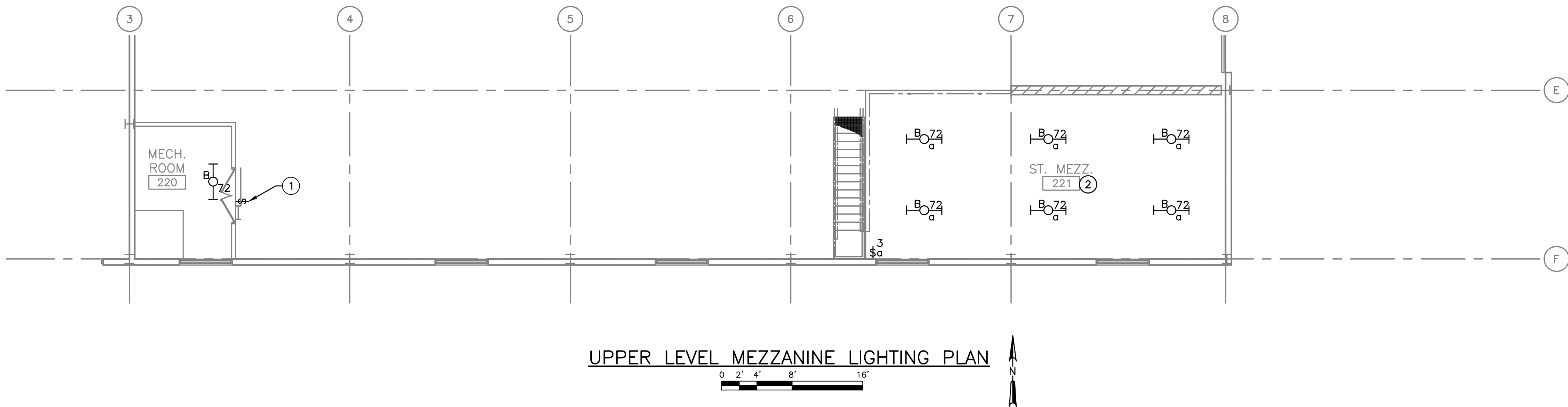
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SCOTT HERKERT



SHEET
33
E4.1



LOWER LEVEL MEZZANINE LIGHTING PLAN



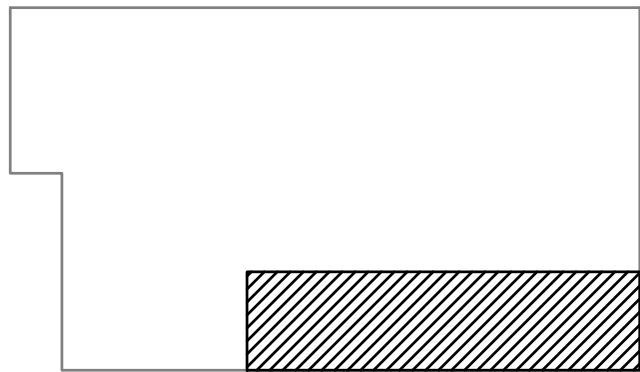
UPPER LEVEL MEZZANINE LIGHTING PLAN

GENERAL NOTES:

1. ALL LIGHTING SHALL BE POWERED FROM PANEL B UNLESS NOTED OTHERWISE. PANEL B IS IN THE UTILITY ROOM AS SHOWN ON SHEET E4.1.

KEY NOTES:

- ① ATTACH SWITCH TO LADDER WITH A STEEL MOUNTING PLATE. MOUNT ADJACENT TO LADDER AT 48" A.F.F.
- ② PENDANT MOUNT FIXTURES IN THIS SPACE AT 22' A.F.F.



KEY PLAN
NO SCALE

NO.	REVISIONS	DATE:
1	ISSUED FOR BID	4/8/20

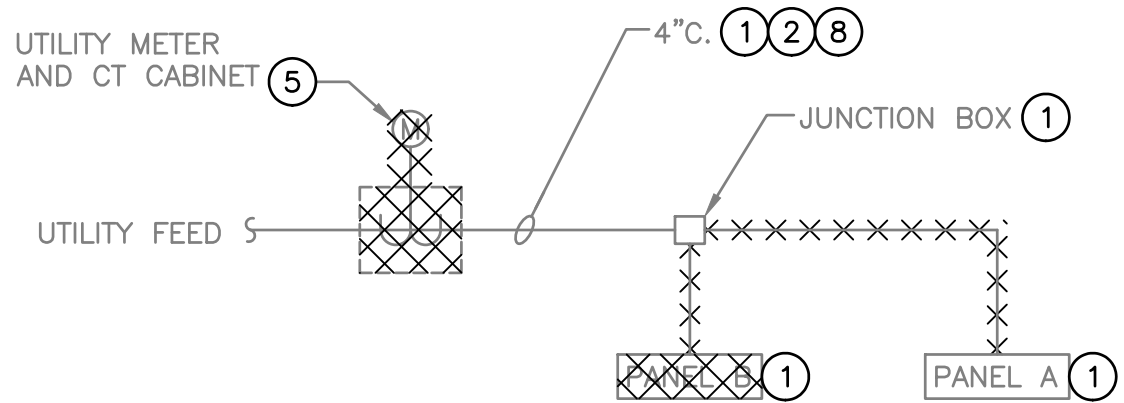
UPPER AND LOWER LEVEL MEZZANINE LIGHTING PLANS
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

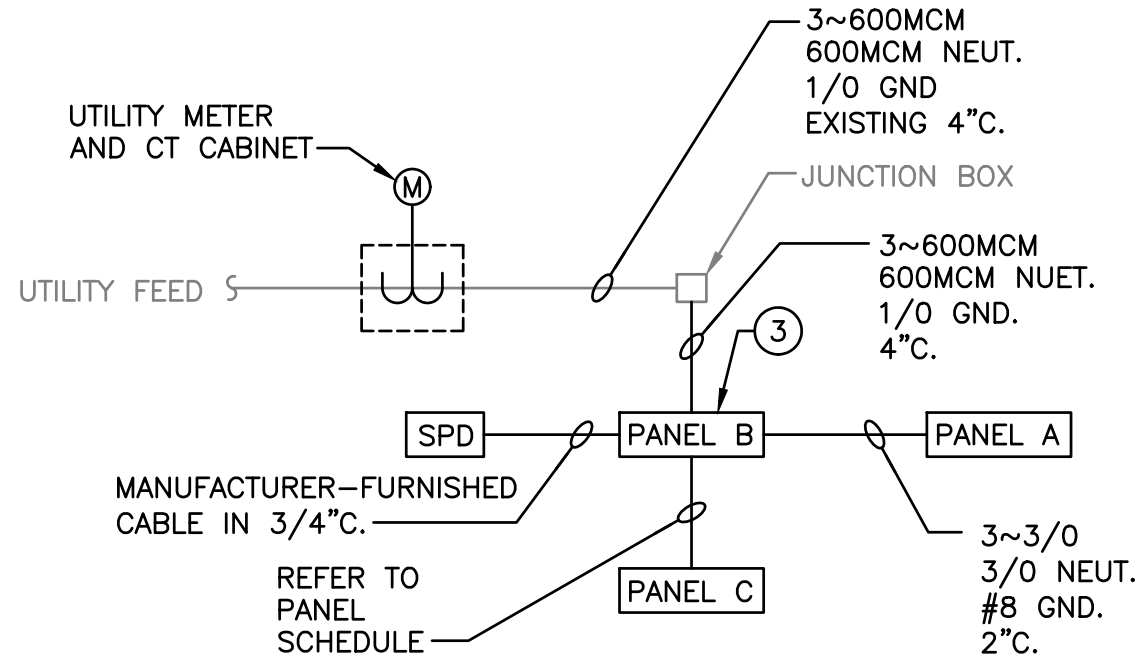
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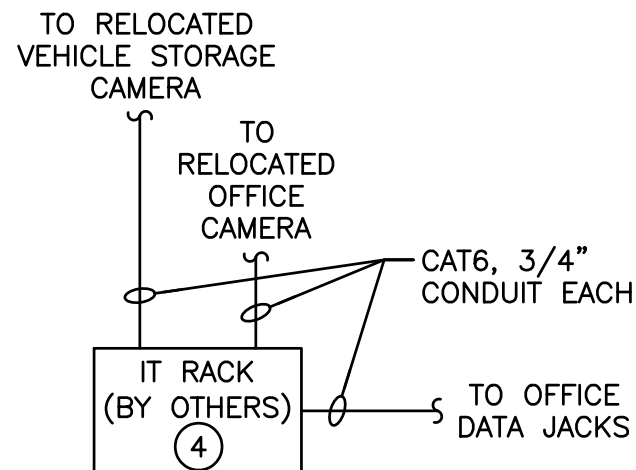
SHEET
34
E4.2



EXISTING ONE-LINE DIAGRAM
NO SCALE



ONE-LINE DIAGRAM
NO SCALE

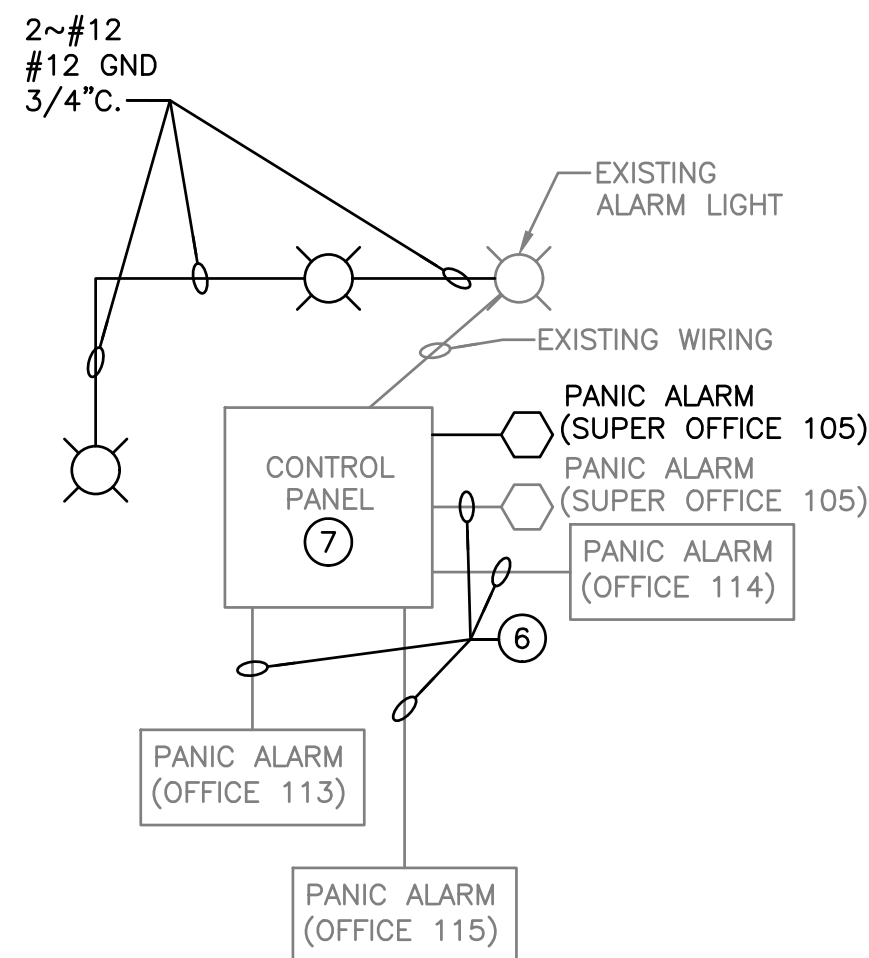


NETWORK RISER DIAGRAM
NO SCALE

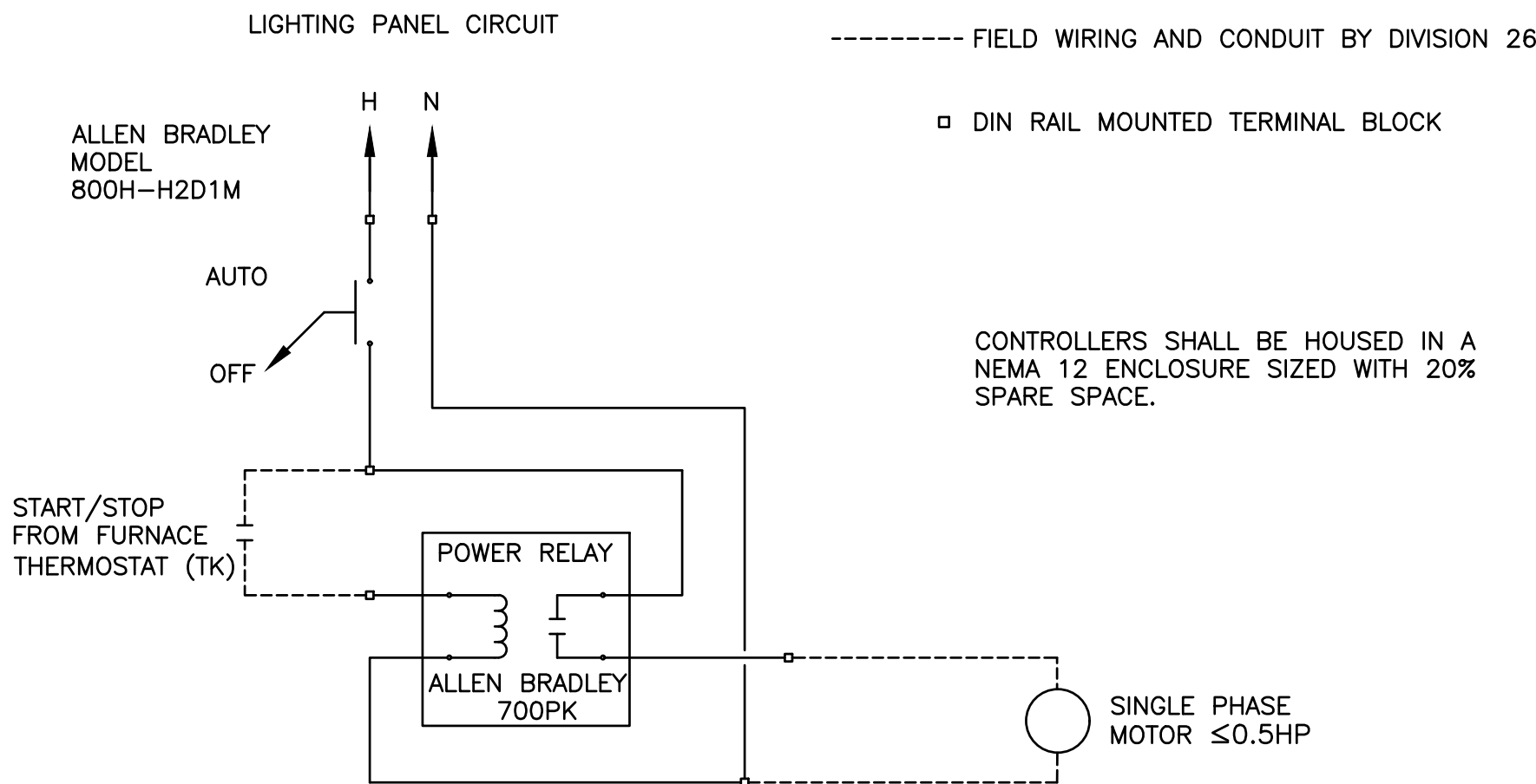
KEY NOTES:

- 1 REMOVE WIRING BETWEEN PANEL A, PANEL B, AND UTILITY SERVICE. GROUND CONDUCTOR SHALL REMAIN.
- 2 REMOVE EXISTING WIRING. CONDUIT SHALL REMAIN.
- 3 EXISTING GROUND CONDUCTOR SHALL BE CONNECTED TO NEW PANEL B.
- 4 COORDINATE TERMINATIONS WITH McFARLAND IT DEPARTMENT.
- 5 COORDINATE ALL WORK ASSOCIATED WITH CHANGES TO THE SERVICE WITH UTILITY COMPANY. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE BID.
- 6 EXTEND CONDUIT AND WIRING AS REQUIRED.
- 7 COORDINATE ALL WORK WITH BOLDTRONICS - BURT BOLDEBUCK (608) 271-8979.
- 8 TWO EXISTING 200-AMP FEED.CO.
- 9 PROVIDE NEW CT CABINET PER UTILITY REQUIREMENTS.

PANEL C															
Service: 120/208V, 3ø, 4W Main Breaker: 100A Location: UTILITY ROOM 111										Enclosure: NEMA 1 Mounting: Surface Main Bus: Copper SCIC: 10 kAIC					
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description	Amps	Poles
RECEPTACLES - MEZZANINE	20	1	1	500			720			2	1	20	RECEPTACLES - SUP. OFFICE 105		
SPARE	20	1	3					360		4	1	20	RECEPTACLES - OFFICE 113, LOBBY		
RECEPTACLES - MEZZANINE	20	1	5			500			360	6	1	20	RECEPTACLES - BREAKROOM 104		
RECEPTACLE - H2O TESTING LAB	20	1	7	1000			360			8	1	20	RECEPTACLES - BREAKROOM 104		
RECEPTACLE - H2O TESTING LAB	20	1	9		1000			360		10	1	20	RECEPTACLES - BREAKROOM 104		
RECEPTACLES - EXTERIOR	20	1	11			180			360	12	1	20	RECEPTACLES - BREAKROOM 104		
RECEPTACLES - BREAKROOM	20	1	13	720						14	1	20	SPARE		
RECEPTACLES - BREAKROOM	20	1	15		720			720		16	1	20	RECEPTACLES - SUP. OFFICE 105		
RECEPTACLES - BREAKROOM	20	1	17			720			360	18	1	20	RECEPTACLES - SUP. OFFICE 105		
RECEPTACLES - BREAKROOM	20	1	19	720			900			20	1	20	RECEPTACLES - SURFACE RACEWAY		
SPARE	20	1	21					900		22	1	20	RECEPTACLES - SURFACE RACEWAY		
SPARE	20	1	23							24	1	20	SPARE		
SPARE	20	1	25							26	1	20	SPARE		
SPARE	20	1	27							28	1	20	SPARE		
SPARE	20	1	29							30	1	20	SPARE		
Total Load per Phase per Side (VA)				2940	1720	1400	1980	2340	1080						
Total Load Phase A (VA)				4920	VA							Total Connected Load (A)			
Total Load Phase B (VA)				4060	VA							Total Connected Load + 25%			
Total Load Phase C (VA)				2480	VA							Spare 25%			
Total Connected Load (VA)				11460	VA							Feeder Load			



PANIC ALARM SYSTEM DIAGRAM
NO SCALE



SINGLE PHASE MOTOR CONTROL
NO SCALE

FURNACE CONDUIT AND WIRING SCHEDULE				
CONDUIT* DESIGNATION	ORIGIN	TERMINATION	CONDUIT SIZE	CONDUCTORS*
OUTDOOR AIR TEMP. SENSOR	TK-01	TE-03	3/4"	SH. PR.
RETURN/OUTSIDE AIR DAMPER (MODULATING)	TK-01	BAROMETRIC RELIEF DAMPER	3/4"	SH. PR.
FAN (START/STOP)	TK-01	F-01	3/4"	2~#14
HEATING (START/STOP)	TK-01	F-01	3/4"	2~#14
SUPPLY AIR TEMP.	TK-01	TE-01	3/4"	SH. PR.
EXHAUST FAN (START/STOP)	TK-01	EF-01	3/4"	2~#14
COOLING (START/STOP)	TK-01	ACCU-01	3/4"	2~#14
OUTDOOR AIR TEMP. SENSOR	TK-02	TE-04	3/4"	SH. PR.
RETURN/OUTSIDE AIR DAMPER (MODULATING)	TK-02	BAROMETRIC RELIEF DAMPER	3/4"	SH. PR.
FAN (START/STOP)	TK-02	F-02	3/4"	2~#14
HEATING (START/STOP)	TK-02	F-02	3/4"	2~#14
SUPPLY AIR TEMP.	TK-02	TE-02	3/4"	2~#14
COOLING (START/STOP)	TK-02	ACCU-02	3/4"	2~#14

*Provide ground conductor per NEC.
*Refer to Plans For Surface Raceway

FIXTURE SCHEDULE					
Fixture Type	Manufacturer(s)	Model Number	Lamp Type	Mounting	Remarks
A	LITHONIA	2BLT4-40L-ADP-SLD-LP840	31W LED	RECESSED	
AX	LITHONIA	2BLT4-40L-ADP-SLD-LP840-EL7L	31W LED	RECESSED	
B	LITHONIA	BLWP4 60L ADP SLD LP840	49W LED	SURFACE/PENDANT	
C	LITHONIA	BLWP4 30L ADP SLD LP840	25W LED	SURFACE/PENDANT	
D	RP LIGHTING	8763-4K	10W LED	RECESSED	
X1	SURE-LITES	SLX-7-SD-R	1W LED	WALL/PENDANT	PROVIDE MOUNTING HARDWARE, CHEVRONS AND FACES AND REQUIRED.

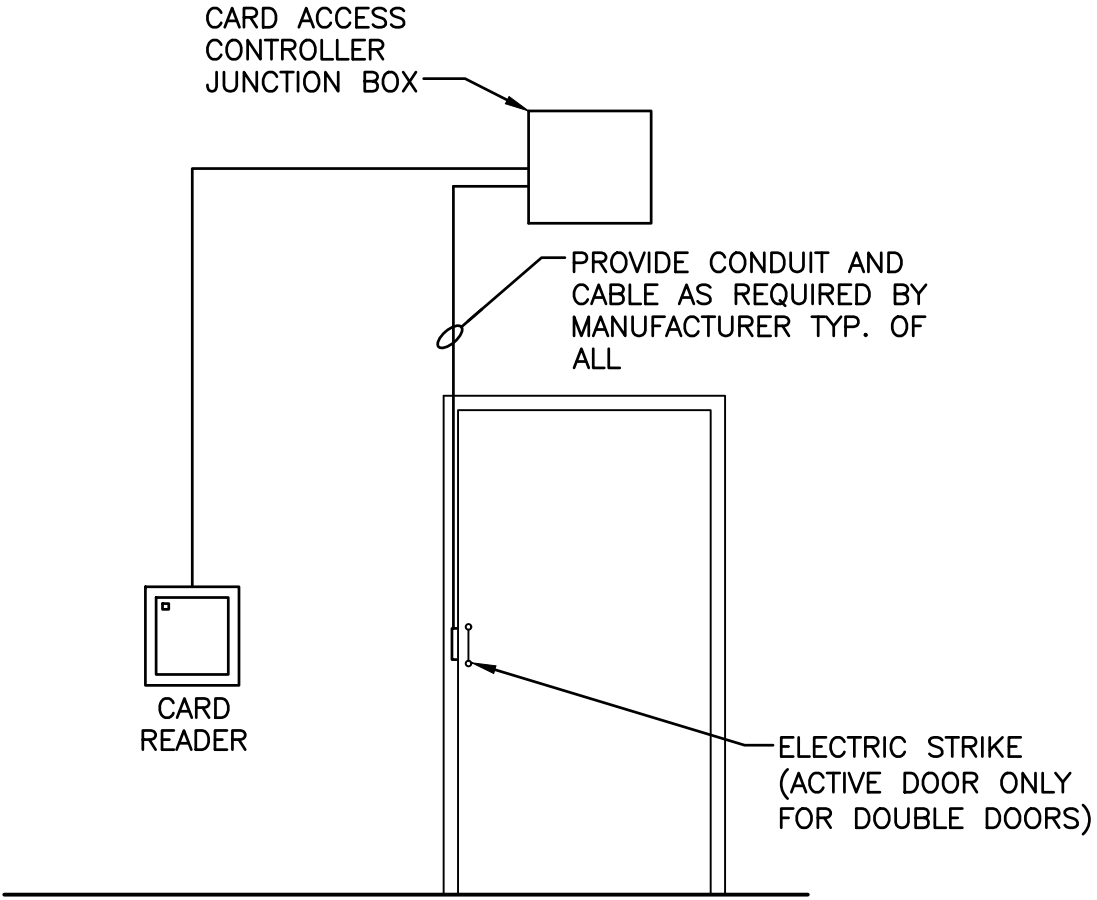
PANEL B															
Service: 120/208V, 3ø, 4W Main Breaker: 400A (SE RATED) Location: UTILITY ROOM 111										Enclosure: NEMA 1 Mounting: Surface Main Bus: Copper SCIC: 42 kAIC					
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description	Amps	Poles
EXISTING LOAD	20	1	1							2	1	20	PANEL GFI OUTLET		
EXISTING LOAD	20	2	3							4	1	20	EXISTING LOAD		
ENTRY DOOR OPENER	20	1	7							6	1	20	SMALL OFFICE		
FIRE ALARM PANEL	20	1	9							8	1	20	BASEBOARD HEAT - SPARE		
MECHANIC'S ROOM LIGHTS	20	1	11							10	1	15	CONTROL PANEL		
MECHANIC'S RM GFI OUTLETS	20	1	13							12	1	20	BATHROOM GFI OUTLET		
MECHANIC'S RM GFI OUTLETS	20	1	15							14	1	20	KITCHEN GFI OUTLET - SPARE		
MECHANIC'S RM GFI OUTLETS	20	1	17							16	1	20	LUNCHROOM OUTLET - SPARE		
MECHANIC'S RM GFI OUTLETS	20	1	19							18	1	20	OUTLETS-PARTS STORAGE & SMALL OFFICE		
MECHANIC'S RM GFI OUTLETS	20	1	21							20	2	40	RANGE		
WATER HEATER	30	2	23							22	1	20	FAX		
WASH BAY OUTLETS & LIGHTS	20	1	25							24	1	20	COPIER		
WASH BAY HEAT & GARAGE DR	20	1	27							26	1	20	SOFTENER		
PRESSURE WASHER WASH BAY	30	3	31							28	1	20			
EXISTING LOAD	20	3	33							30	3	100	EXISTING LOAD		
EXISTING LOAD	20	3	35							32	3	100	EXISTING LOAD		
EXISTING LOAD	20	3	37							34	3	100	EXISTING LOAD		
EXISTING LOAD	20	3	39							36	1	20	PHONE BOARD		
F-01	20	1	41	1236			264			38	1	20	PHONE BOARD		
F-02	20	1	43							40	1	15	EXISTING LOAD		
EF-02 & DAMPER	30	1	45		1663			1000		42	1	15	EXISTING LOAD		
ACC01	20	3	47			1656			200	44	1	20	EF-01 & DAMPER		
EBB-01	20	1	49	1686			2160			46	1	20	HOSE REEL		
EBB-02	20	1	51		1686			2160		48	1	20	FURNACE DAMPERS		
EBB-03	20	1	53			1686			2160	50	3	30	ACC02		
EBB-04	20	1	55	750			1250			52	3	30	ACC02		
EBB-05	20	1	57		1500			1250		54	3	30	ACC02		
EBB-06	20	1	59			1500			1250	56	1	20	EBB-05		
EBB-07	20	1	61	1000			500			58	1	20	EBB-06		
EBB-08	20	1	63		1080			500		60	1	20	EBB-07		
SPARE	20	1	65						500	62	3	15	VEHICLE EXHAUST SYSTEM		
SPD	30	3	67							64	3	15	VEHICLE EXHAUST SYSTEM		
SS-01	20	2	69	800			4920		700	66	3	100	PANEL C		
EW01	20	1	71		800			4060		68	1	20	SPARE		
EW02	20	1	73			1008				70	1	20	SPARE		
SPARE	20	1	75							72	1	20	LIGHTING - MEZZANINE		
SPARE	20	1	77							74	3	100	PANEL C		
SPARE	20	1	79							76	3	100	PANEL C		
SPARE	20	1	81							78	3	100	PANEL C		
SPARE	20	1	83							80	3	80	SPACE FOR FUTURE SOLAR		
Total Load per Phase per Side (VA)				6480	6729	5850	9094	8970	7290						
Total Load Phase A (VA)				15574	VA	PROVIDE THROUGH FEED LUGS FOR POWER TO PANEL A. EXISTING CIRCUITS SHALL BE RECONNECTED TO PANEL B.						Total Connected Load (A)			
Total Load Phase B (VA)				15699	VA							Total Connected Load + 25%			
Total Load Phase C (VA)				13140	VA							Spare 25%			
Total Connected Load (VA)				44413	VA							Feeder Load			

ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT

STRAND
ASSOCIATES®

SHEET
35
E5.1



- NOTES:
- 1. ALL CABLES SHALL BE INSTALLED IN EXISTING CONDUIT TO CARD ACCESS CONTROLLER IN UTILITY ROOM.
 - 2. CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED CONDUCTORS AND QUANTITIES TO EACH DEVICE.

A
E5.2 ACCESS CONTROL INSTALLATION DIAGRAM
NO SCALE

DATE:		4/8/20							
REVISED									
NO.		ISSUED FOR BID							
1									

**ELECTRICAL
DETAILS**

PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT


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36
E5.2



Strand Associates, Inc.®

910 West Wingra Drive

Madison, WI 53715

(P) 608.251.4843

May 7, 2020

Mr. Matt Schuenke, Village Administrator
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558

Re: Public Works Facility Renovations
Contract 1-2020
Village of McFarland, Wisconsin

Dear Matt:

Bids for the above-referenced project were opened on May 6, 2020. Ten bids were received with the resulting bid tabulation enclosed. The low base bid of \$499,850.00 was less than ENGINEER's opinion of probable construction cost.

Newcomb Construction Company of Madison, Wisconsin, was the apparent low bidder at \$499,850.00. Their Alternative Bid No. 1 is \$113,750.00 and Alternative Bid No. 2 is \$32,605.00. The bid included a bid bond for 10 percent and Addendum Nos. 1 through 3 were acknowledged. The bid is deemed to be responsive.

Strand Associates, Inc.® has not had previous experience with Newcomb Construction Company.

Based on the review of the prequalification information by the Village, Newcomb Construction Company was considered a responsible bidder, therefore we recommend proceeding with award of the Contract in accordance with Article 19 of the Instructions to Bidders.

Sincerely,

STRAND ASSOCIATES, INC.®

Scott G. Herkert, P.E.
Senior Associate

Enclosure

Bids Received: 12:00 PM
May 6, 2020

STRAND ASSOCIATES, INC.®
910 West Wingra Drive
Madison, WI 53715

PUBLIC WORKS FACILITY RENOVATIONS
CONTRACT 1-2020
VILLAGE OF MCFARLAND, WISCONSIN

BID TABULATION SUMMARY

Bidder and Address	Bid Bond	Addenda Nos. 1-3 Acknowledged	Lump Sum Bid	Bid Alternative No. 1	Bid Alternative No. 2
Newcomb Construction Company, Inc. 999 Fourier Drive, Suite 102 Madison, WI, 53717	10%	Yes	\$499,850.00	\$113,750.00	\$32,605.00
Kenneth F. Sullivan Company 1314 Emil Street Madison, WI 53713	10%	Yes	\$521,600.00	\$109,490.00	\$29,700.00
Advanced Building Corporation 4125 Terminal Drive, Suite 100 McFarland, WI 53558	10%	Yes	\$556,282.00	\$119,405.00	\$32,250.00
KSW Construction Company 807 Liberty Drive, Suite 106 Verona, WI 53593	10%	Yes	\$557,996.00	\$97,041.00	\$34,551.00
Bachman Construction Company, Inc. 1201 South Stoughton Road Madison, WI 53716	10%	Yes	\$592,240.00	\$75,538.00	\$38,746.00

Bidder and Address	Bid Bond	Addenda Nos. 1-3 Acknowledged	Lump Sum Bid	Bid Alternative No. 1	Bid Alternative No. 2
Vogel Brothers Building Company 5460 Fen Oak Drive Madison, WI 53718	10%	Yes	\$617,850.00	\$112,850.00	\$47,720.00
McKee Associates, Inc. 925 Watson Avenue Madison, WI 53713	10%	Yes	\$626,900.00	\$132,510.00	\$40,630.00
Joe Daniels Construction Company, Inc. 919 Applegate Road Madison, WI 53713	10%	Yes	\$656,340.00	\$98,776.00	\$34,650.00
FCM Corporation 4906 Femrite Drive Madison, WI 53716	10%	Yes	\$705,000.00	\$108,110.00	\$52,428.00
T2 Contracting, LLC 311 Plastic Avenue Tomah, WI 54660	10%	Yes	\$861,562.55	\$93,830.00	\$39,162.00

Reviewed by:  _____

PUBLIC WORKS FACILITY RENOVATIONS
CONTRACT 1-2020
VILLAGE OF MCFARLAND, WISCONSIN

CASH ALLOWANCES

BIDDER AND ADDRESS				Newcomb Construction Company, Inc. 999 Fourier Drive, Suite 102 Madison, WI 53717		Kenneth F. Sullivan Company 1314 Emil Street Madison, WI 53713		Advanced Building Corporation 4125 Terminal Drive Suite 100 McFarland, WI 53558		KSW Construction Company 807 Liberty Drive Suite 106 Verona, WI 53593		Bachman Construction Company, Inc. 1201 South Stoughton Road Madison, WI 53716		Vogel Brothers Building Company 5460 Fen Oak Drive Madison, WI 53718		McKee Associates, Inc. 925 Watson Avenue Madison, WI 53713		Joe Daniels Construction Company, Inc. 919 Applegate Road Madison, WI 53713		FCM Corporation 4906 Femrite Drive Madison, WI 53716		T2 Contracting, LLC 311 Plastic Avenue Tomah, WI 54660	
Item No.	Description	Quantity Included in the Lump Sum Base Bid	Unit	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid	Unit Price	Total Included in Lump Sum Bid
1.	Electrical Service Utility Allowance Section 26 21 00	1	LS	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	
2.	Unsuitable Foundation Material for Driveways Section 31 23 00	350	CY	\$ 49.00	\$ 17,150.00	\$ 49.00	\$ 17,150.00	\$ -	\$ -	\$ 38.00	\$ 13,300.00	\$ 49.00	\$ 17,150.00	\$ 45.00	\$ 15,750.00	\$ 49.00	\$ 17,150.00	\$ 51.50	\$ 18,025.00	\$ 55.00	\$ 19,250.00	\$ 22.30	\$ 7,805.00

Reviewed by 



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator, Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action regarding the award of a proposal for the addition of solar panels to the Public Works Center.

PREVIOUS ACTION:

The Public Works Committee reviewed these proposals at their meeting on May 12, 2020 and recommended their approval.

ISSUE SUMMARY:

Included within your packet are two proposals to add solar infrastructure to the Public Works Center after the roof has been replaced. This will replace the dated system that is currently in place and provide for a majority of the electricity needs of the facility. The Committee desired to conduct this process as an RFP similar to how we might purchase a vehicle or service. Only two responses were received after we tried to solicit a third applicant. Both are from reputable and experienced companies planning to install essentially the same product. The proposal from Eagle Point Solar is recommended and they have done similar work for public entities in Wisconsin.

FINANCIAL/BUDGET IMPACT:

The total budget for facility improvements to the Public Works Center in 2020 is \$1,000,000. The proposal from Eagle Point is \$69,498 compared to the proposal from Full Spectrum at \$83,802. As mentioned in the previous agenda item, funds remain available for the project as the base bid for construction was well under anticipated amounts.

VILLAGE PLAN REFERENCE:

The Strategic Plan was adopted by the Village Board in 2020. Within it, the plan established Goal B stating that the Village would "Plan for and align physical facilities and open space to support future service delivery, quality of life, and infrastructure needs." A strategy to accomplish this is identified within this goal to "improve current Village facilities, including maintenance enhancements, and identify new systems to promote sustainability". The project as proposed and presented for award adds a sustainable element to the project that helps to provide the facility's electric through the solar panels instead of its reliance on the utility.

ORDINANCE REFERENCE:



None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended for approval to award the contract to Eagle Point Solar in an amount of \$69,498.

ATTACHMENTS:

1. Solar Bid Summary Letter 050820
2. McFarland Solar RFP and Attachments
3. McFarland Solar Proposal - Eagle Point Solar 05062020



Strand Associates, Inc.®

910 West Wingra Drive

Madison, WI 53715

(P) 608.251.4843

May 8, 2020

Mr. Matt Schuenke, Village Administrator
Village of McFarland
5915 Milwaukee Street
McFarland, WI 53558

Re: Public Works Facility
Solar PV Array Bids
Village of McFarland, Wisconsin

Dear Matt,

Bids for the above-referenced project were opened on May 6, 2020. Two bids were received and the third firm that was provided a proposal did not submit a bid. The low bid of \$69,498.00 was less than ENGINEER's opinion of probable construction cost.

Full Spectrum Solar's bid was \$83,802.00. Eagle Point Solar, LLC of Dubuque, Iowa, was the apparent low bidder at \$69,498.00. The bid is deemed to be responsive. The materials and installation information supplied meets the requirements of the request for proposal and appears to provide a fully operational solar PV array at the facility. Eagle Point Solar, LLC has included a signed copy of the Indemnification Clause included in the RFP whereas the other bidder has not.

Strand Associates, Inc.® has previously worked with Eagle Point Solar, LLC on projects for Darlington School District, Wisconsin; Emmi-Roth, Platteville, Wisconsin; and Johnson County EMS, Iowa City, Iowa. For those projects, the OWNER(s) determined Eagle Point Solar, LLC to be responsible.

If you determine that Eagle Point Solar, LLC is a responsible bidder after your evaluation of their qualifications, we recommend proceeding with award of the Contract.

Sincerely,

STRAND ASSOCIATES, INC.®

Scott G. Herkert, P.E.
Senior Associate

REQUEST FOR PROPOSAL TO INSTALL
A SOLAR PHOTOVOLTAIC ARRAY AT
THE MCFARLAND PUBLIC WORKS FACILITY

INTRODUCTION AND GENERAL INFORMATION

The Village of McFarland is requesting bids to design, provide, and install a 31.5 kW DC roof mounted solar photovoltaic array at the Public Works Facility, 5115 Terminal Drive, McFarland, WI.

SCOPE OF PROJECT

The Village of McFarland is requesting bids to design, provide, and install a 31.45 kW DC roof mounted solar photovoltaic system at the Public Works Facility. Depending on the final cost per watt, the system may be reduced.

Contractor is to provide bid and additional information for the proposed work addressed to Village of McFarland, 5115 Terminal Drive, McFarland, WI 53558 .

SPECIFICATION

Project site is located at the Public Works Facility, 5115 Terminal Drive, McFarland, WI.

Project is detailed as follows:

1. Bid cost will include all design, specifications, material, labor, and equipment to install a turn-key grid-tied 31.45 kW solar photovoltaic system (DC STC conditions), including connection/integration with Public Works Facility power system. The system shall be sized to deliver a minimum of 23kW AC with a minimum specific yield of 1290 kWh/kWp.
2. The system components and installation shall meet the requirements of the 2017 National Electrical Code (NFPA 70).
3. PV arrays to be mounted to roof of the Public Works Facility (see Attachments No. 1 and No. 2). Include all racking, support mountings, and installation on a standing seam metal roof. Approximate available area 2,000 square feet. Provide ample working space around skylights and events. Coordinate roof layout with Owner.
4. Inverters shall have a CEC weighted efficiency of no less than 97.5%. Inverters shall be UL 1741 listed and IEEE 1547 compliant and shall have a minimum 20 year warranty.
5. Inverters are to be a minimum of two (one~9kW and one~14.4kW) SolarEdge or equal units utilized in conjunction with DC power optimizers at each PV module. Mount inverters indoors. Space is available for wall mounted units in the vehicle storage in the Public Works Facility (see Attachments No. 3 and No. 4). The master inverter shall be equipped with input terminals to accept a dry contact signal from the facility's automatic transfer switch to disable the inverters when the transfer switch is not in the normal (utility) position.
6. Racking to be attached to standing seam roof without penetrating the roof.
7. PV panel shall be mounted at the same pitch as the roof. PV arrays to be fixed rack system. Provide PV panel mounting clips to attach to the standing seam roof as manufactured by S-5!, model S-5-U.
8. Provide manufacturer standard Web based monitoring system to include monitoring screen (minimum size 20 inch) in utility room or area indicated by OWNER. The monitoring system shall be connected to the existing IT rack within the utility room. Coordinate work with McFarland IT department. All configuration, training, and installation shall be included within the Bid.
9. PV modules shall have a minimum rating of 370 watts and be UL 1703 listed. Preference will be given to PV modules with a PTC (PV USA Test Conditions) watts per square foot of 19 or greater.

Panels shall have a 25-year linear performance guarantee and minimum 10 year warranty and be as manufactured by Heliene, 72M, or equal.

10. Indoor AC wiring shall be type THHN and outdoor AC wiring shall be type XHHW. Indoor and outdoor above-grade DC wiring shall be type PV and underground DC wiring, if used, shall be type USE-2 or type PV as appropriate. Outdoor wiring shall be secured to the solar panel supports in a manner that minimizes exposure of the wiring to the elements and to general system maintenance activities such as weed control, snow removal, etc. Where wiring must be extended across 12-inch or larger gaps between the solar panels or other system components, wiring shall be placed in aluminum conduit. Underground conduits, if needed, within 6 feet of a building shall be PVC-coated RGS conduit or shall within a minimum 12-inch by 12-inch reinforced concrete duct. Provide heavy-duty non-metallic or aluminum cast junction boxes at wiring transitions from above-ground free air wiring to underground wiring in conduit. All AC wiring shall be installed in conduit.
11. Wiring from solar panel arrays to inverters shall be sized for a maximum 1% voltage drop of nominal panel voltage output from the furthest solar panel array. Wiring from inverters to the utility interconnection point shall be sized for a maximum 1% voltage drop of nominal inverter voltage output from the furthest inverter. Provide power consolidation panels with circuit protection via molded case circuit breakers as necessary such that there will be one point of connection between the photovoltaic system and the facility electrical distribution system.
12. Connection to the utility interconnection point shall be via the existing facility electrical distribution system in the utility room of the Public Works Facility (see Attachments No. 3 and No. 4).
13. There is an existing 30kW generator (exterior of the building, see Attachment No. 3) and automatic transfer switch (see Attachment No. 3). Contractor shall provide 2~#12 in 3/4-inch conduit between the automatic transfer switch and the master inverter to in order for the inverter to know that the facility power is on generator power. Provide additional dry contacts on existing automatic transfer switch as required to communicate this signal.
14. Provide all necessary equipment and appurtenances to meet the requirements of NEC Article 690.12-Rapid Shutdown of PV Systems on Buildings.
15. In the connection from the PV system to the existing facility distribution system, include a pad-lockable disconnect switch on the customer side of the utility metering cabinet. The equipment shall meet the requirements of the Alliant Energy. The equipment shall be near the existing utility service and shall be labeled per utility company requirements (see Attachment No. 3).
16. The contractor shall coordinate all necessary permits, agreements and coordination with Alliant Energy company.
17. The contractor is expected to consult the latest version of the International Building Code for regional snow load and wind category for this location. As guidance, we expect snow load of 30 psf and wind risk category of 90 mph, class C.
18. Provide projected annual output in kWh with calculation for the proposed PV array at metering connection based on PVSyst or similar software. This calculation must be as accurate as possible to indicate all losses through the balance of system components. A report indicating all modules, inverters, and losses used in the calculation shall be included with the bid. Losses included in the calculation shall be specific to the location and installation or the array.
19. Provide all grants (e.g. Focus On Energy) available to Owner during bidding review.
20. Bidder must provide details and contact references of at least two similar projects to demonstrate the capabilities of the firm to effectively complete the work.
21. Bidder must provide work schedule to indicate the project can be substantially complete by November 30, 2020.

TIMELINE

The Village Board is expected to award contract to selected contractor on May 15, 2020. Selected contractor will then provide detailed design plans, specifications (including electrical layout plans), and performance guarantee for approval by Village before finalization of contract agreement and commencement of construction in July 2020. This will also include a calculation of the expected power production over the first ten year period. Project completion is scheduled for not later than December 31, 2020.

QUALITY ASSURANCE

1. System Suppliers: Firms regularly engaged in the design and manufacture of photovoltaic systems equipment whose equipment has been in satisfactory use in similar service for not less than 10 years.
2. Installer: A firm with at least 10 years of successful installation experience on projects with photovoltaic system design and installation work similar to that required for the project.

EVALUATION FACTORS

In evaluating the bids, the Village will consider, in addition to the price quoted in the Bid, the following:

1. Compliance with the Scope of work and bid documents.
2. Clarity, pricing structure, and commercial terms and conditions.
3. Execution plan, project team, and ability to meet schedule. Provide relevant resources.
4. Contractor's experience with systems of similar size and scope. Provide a minimum of three examples and references of existing systems installed by contractor.
5. Equipment maintenance and reliability history.
6. Length and coverage of equipment warranties and performance guarantees.
7. Life cycle costs, including but not limited to, maintenance requirements.

SUBMITTALS

Contractor shall submit shop drawings and product data for review and approval by the Village. Included in submittals shall be a one-line diagram that shows all connections of photovoltaic equipment and monitoring as well as connection of the photovoltaic system to the existing electrical distribution system.

CONDITIONS

All work performed under this contract shall be subject to compliance with the Wisconsin Prevailing Wage Act, including latest revisions. Contractors are required to submit certified copies of their payroll each billing cycle. The Village of McFarland shall be exempt from any liability for costs incurred by unsuccessful bidders in preparation of this proposal. The Village of McFarland reserves the right to reject any or all bids.

ADDITIONAL INSURED ENDORSEMENTS

1. Contractor shall purchase and maintain liability insurance, as described above, specifically naming as additional insureds the Village of McFarland, Alliant Energy, and Strand Associates, Inc.®, using either insurance endorsement form CG 20 26 07 04, CG 20 10 07 04, or equivalent form. General liability policies shall also be endorsed with Form CG 20 37 07 04 to include the "products-completed operations hazard." Endorsements or General Liability policy shall not exclude supervisory or inspection services. Contractor shall also provide an Additional Insured Endorsement for the automobile policy, Form CA 20 48, or equivalent form.

2. That failure of Contractor to comply with the above requirements with respect to Additional Insured Endorsement and/or Certificate of Insurance shall not be construed as waiver of those provisions by any of the additional insureds so identified above.

INDEMNIFICATION

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless the Village of McFarland, Alliant Energy, and Strand Associates, Inc.®, and against all claims, costs, losses, and damages arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

The Village of McFarland will receive sealed bids to complete the proposed work until 12:00 PM, May 6, 2020.

Questions concerning the project or arranging a site visit with Village staff should be directed to: Village Administrator Matt Schuenke at 608-838-3153- or email: matt.schuenke@mcfarland.wi.us

Responses to all inquiries about the project or bid requirements will be distributed to all companies by email based upon the email address supplied to the Village of McFarland by the prospective bidders.

Company name

Address

.....

Contact Name

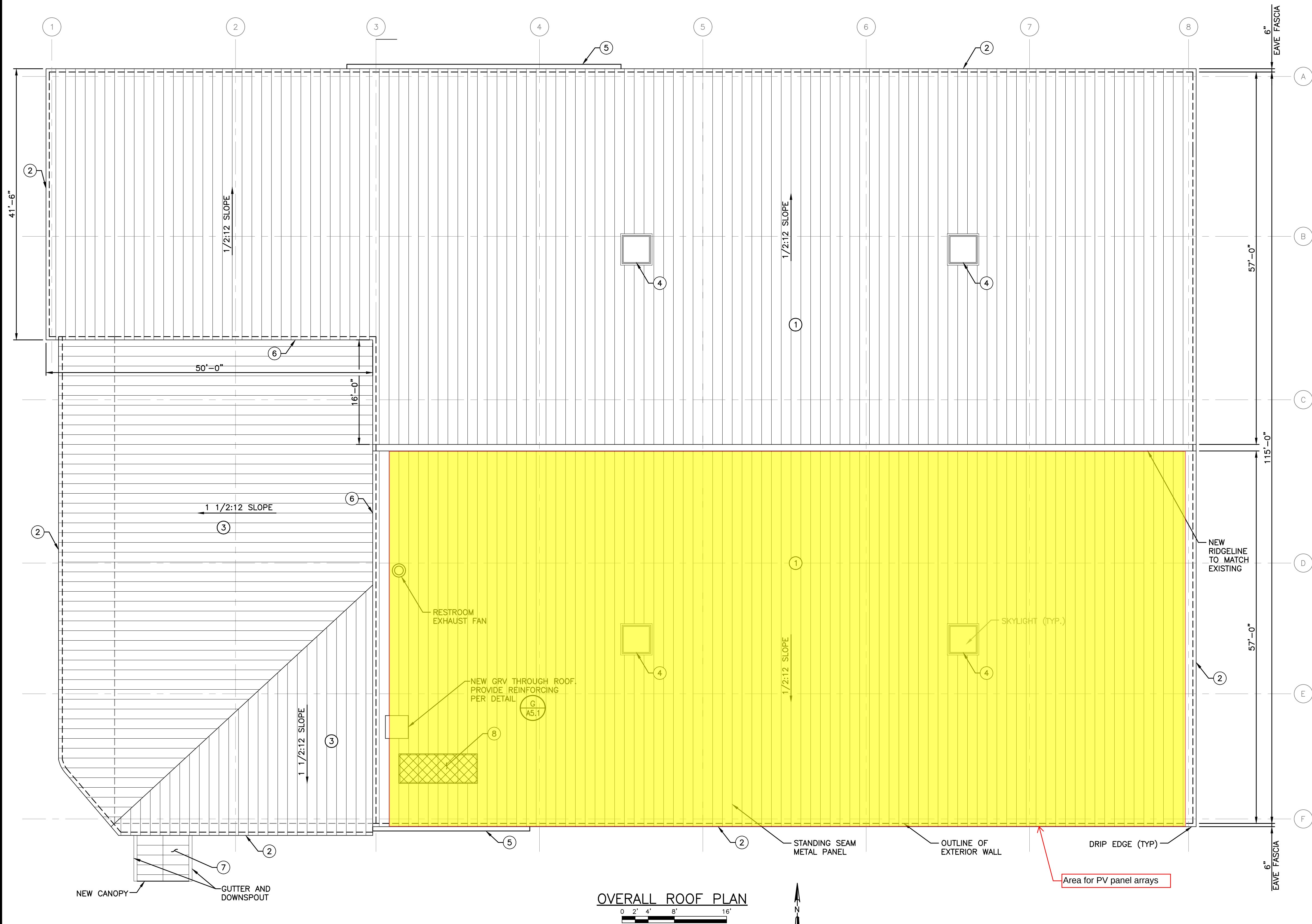
Phone #

Email

.....
Signature

.....
Name

.....
Date



GENERAL NOTES:

1. VERIFY REQUIRED OPENINGS IN NEW ROOF SYSTEM FOR SKYLIGHTS, ROOF EQUIPMENT, AND HVAC OPENINGS.
2. FLASH ALL PENETRATIONS PER ROOFING MANUFACTURER REQUIREMENTS.
3. SEE DRAWING A5.2 FOR TYPICAL DETAILS.
4. REVISE AND PROVIDE FLASHING AROUND ALL EXISTING VENT AND EXHAUST PIPES NOT SHOWN PER MANUFACTURER'S RECOMMENDATIONS.

KEY NOTES:

- ① METAL-OVER-METAL RE-ROOF SYSTEM. FASTEN TO EXISTING DECK PER MANUFACTURER REQUIREMENTS AND PROVIDE 4" BATT INSULATION BETWEEN NEW AND EXISTING ROOF PANELS. SEE DRAWING A5.2 FOR TYPICAL SYSTEM DETAILS.
- ② PROVIDE EAVE/FASCIA CLOSURE PER MANUFACTURER'S DETAILS.
- ③ REPLACE STANDING SEAM ROOF PANELS TO MATCH EXISTING, SEE SPECIFICATIONS.
- ④ MODIFY FLASHING AT SKYLIGHTS FOR NEW ROOF SYSTEM AS REQUIRED.
- ⑤ MODIFY GUTTER AS REQUIRED FOR NEW ROOF SYSTEM.
- ⑥ FLASH INTO WALL PANELS TO MATCH EXISTING CONSTRUCTION.
- ⑦ PROVIDE STANDING SEAM ROOF PANELS TO MATCH OFFICE AREA ROOF PANELS. PLACE PANELS FLUSH AGAINST EXISTING BUILDING SOFFIT.
- ⑧ REMOVE EXISTING SOLAR PANELS AND TURN OVER TO OWNER.

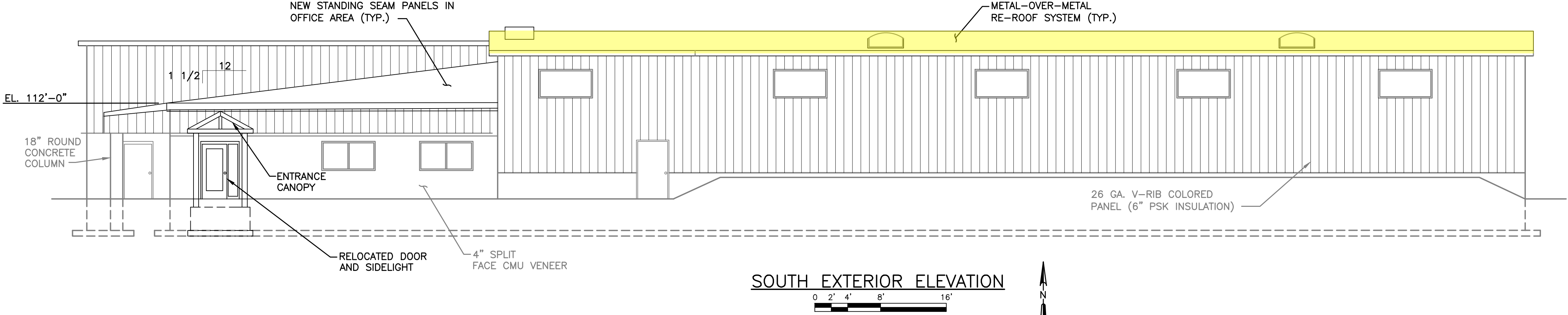
DATE:	4/8/20								
NO.	1								
ISSUED FOR BID									
REVISIONS									

ROOF PLAN
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

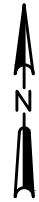
JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT

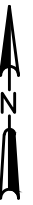
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8
A1.3



SOUTH EXTERIOR ELEVATION



KEY PLAN
NO SCALE



NO.	REVISIONS		DATE
	ISSUED FOR BID		
1			4/8/20

SOUTH EXTERIOR ELEVATION
PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



SHEET
9
A2.1

1. ALL 120/208V EQUIPMENT/LIGHTING SHALL BE POWERED FROM PANEL B UNLESS NOTED OTHERWISE. PANEL B IS IN THE UTILITY ROOM AS SHOWN ON SHEET E4.1.
2. ALL FIRE ALARMS DEVICES TO BE WIRED TO FACP/NAC IN UTILITY ROOM.

- ① OVERHEAD GARAGE DOOR CONTROLS FURNISHED AS SPECIFIED IN DIVISION 8 AND INSTALLED BY DIVISION 26. REFER TO DIVISION 8 OF SPECIFICATIONS FOR OPERATING DESCRIPTION AND ADDITIONAL CONTROLS TO BE WIRED BY DIVISION 26. MOTOR DISCONNECT SHALL BE MOUNTED ON CEILING ADJACENT TO MOTOR. ALL WORK ASSOCIATED WITH OVERHEAD DOORS SHALL BE PART OF BID ALTERNATIVE NO. 2. COORDINATE EXACT LOCATION OF CONTROLS WITH OWNER. MOTORS SHALL BE POWERED FROM EXISTING CIRCUIT USED FOR REMOVED MOTOR. EXTEND CONDUIT AND WIRING FROM REMOVED MOTOR AND CONTROLS TO NEW MOTOR AND CONTROLS.
- ② DEVICE SHALL BE RATED 96dB.
- ③ EXHAUST FAN SHALL BE POWERED FROM CIRCUIT USED FOR REMOVED FAN. EXTEND CONDUIT AND WIRING FROM REMOVED MOTOR TO NEW MOTOR.

- ④ PROVIDE 3~#12 AND #12 GROUND IN 3/4" CONDUIT FROM EXHAUST CONTROLLER TO VEHICLE EXHAUST CONTROL SYSTEM.
- ⑤ LIMIT SWITCH PROVIDED BY DIVISION 23 AND WIRED BY DIVISION 26. PROVIDE 2~#14 IN 3/4" CONDUIT FROM LIMIT SWITCH TO VEHICLE EXHAUST CONTROLLER.
- ⑥ EQUIPMENT PROVIDED BY DIVISION 23 AND WIRED BY DIVISION 26.
- ⑦ PROVIDE 2~#14 IN 3/4" CONDUIT FROM HOSE REEL CONTROLLER TO JUNCTION BOX ON HOSE REEL.
- ⑧ DAMPER SHALL BE WIRED TO OPEN WHEN EXHAUST FAN EF-02 IS RUNNING.
- ⑨ PROVIDE RACEWAY WITHIN DOOR FRAME FOR FUTURE CARD ACCESS WIRING.

This detailed electrical schematic illustrates the layout of a building floor, including rooms such as Maintenance (102), Vehicle St. (100), Office (103), Break Room (104), Sup. Office (105), Hallway (106), Mens Locker (107), Mens RR (108), Office / Work Area (121), Womens RR (110), Utility (111), Office (113), Lobby (123), Office (114), Office (115), Lab/H2O Testing (122), and Wash Bay (101). The plan shows the placement of various electrical components, including ventilation exhaust system controllers, hose reel controllers, CT cabinets, utility meters, and single phase motor controllers. It also details the locations of transfer switches, combiner panels, and inverters, as well as the placement of various wiring paths and conduits. The schematic is divided into sections by a dashed line, with the left side showing the main building structure and the right side showing the vehicle storage area. The plan includes a grid system with numbers 1 through 8 along the top and letters A through F along the right side. Red arrows indicate specific locations for the generator, transfer switch, and combiner panel/inverter. The plan also includes a note at the bottom right: 'SEE ENLARGED PLANS ON DRAWINGS E4.1 AND E4.2'.

OVERALL ELECTRICAL FLOOR PLAN

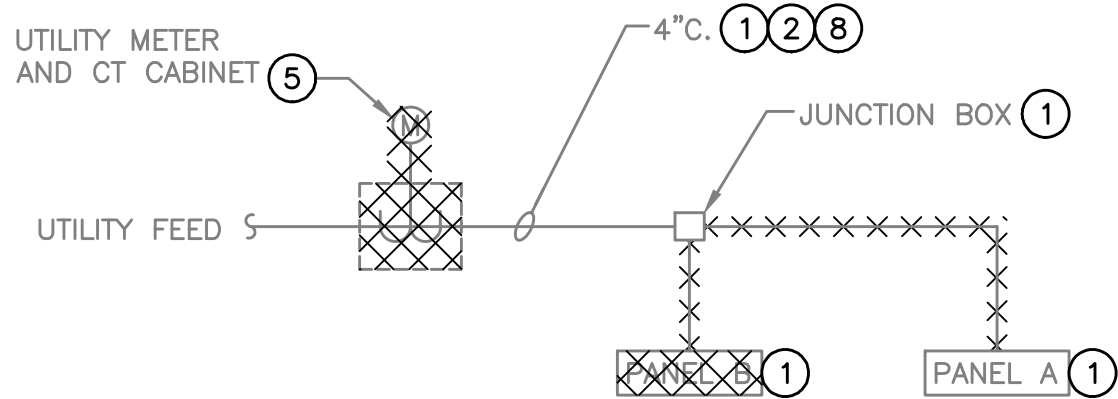
PUBLIC WORKS FACILITY RENOVATION VILLAGE OF MCFARLAND MCFARLAND, WISCONSIN

PROJECT MGR.
SCOTT HERKERT

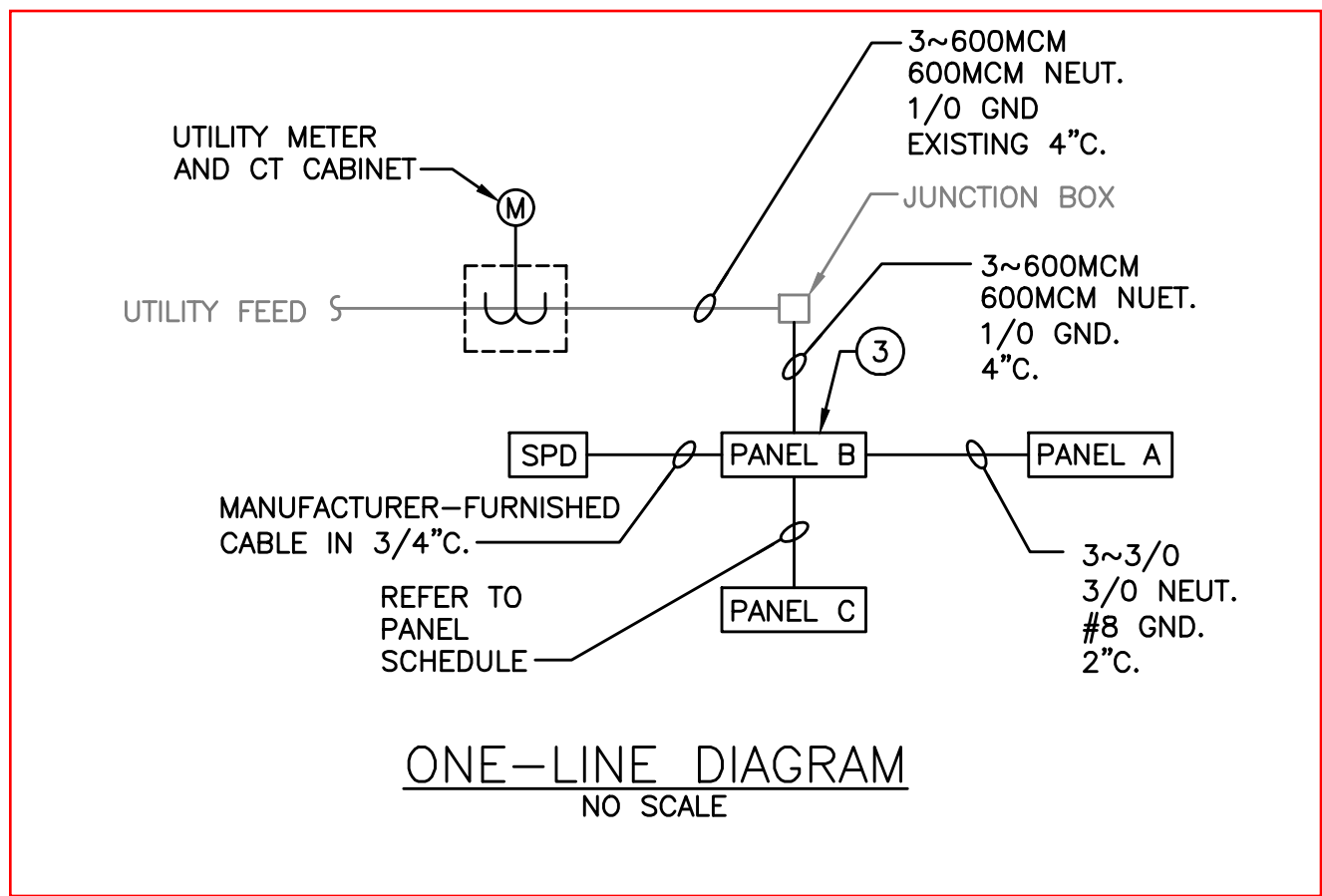


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STRAND
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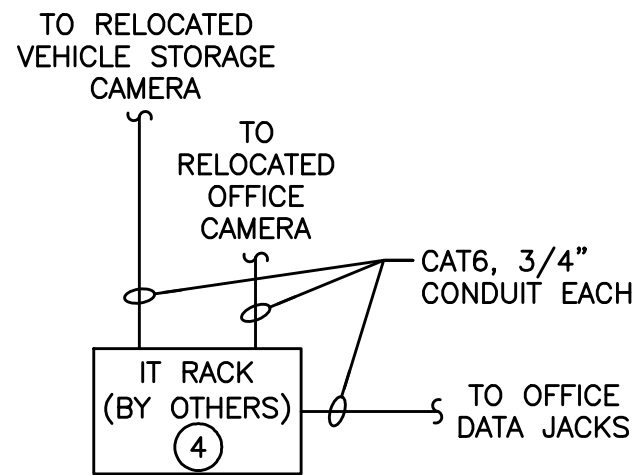
SHEET
30
E1.1



EXISTING ONE-LINE DIAGRAM
NO SCALE



ONE-LINE DIAGRAM
NO SCALE



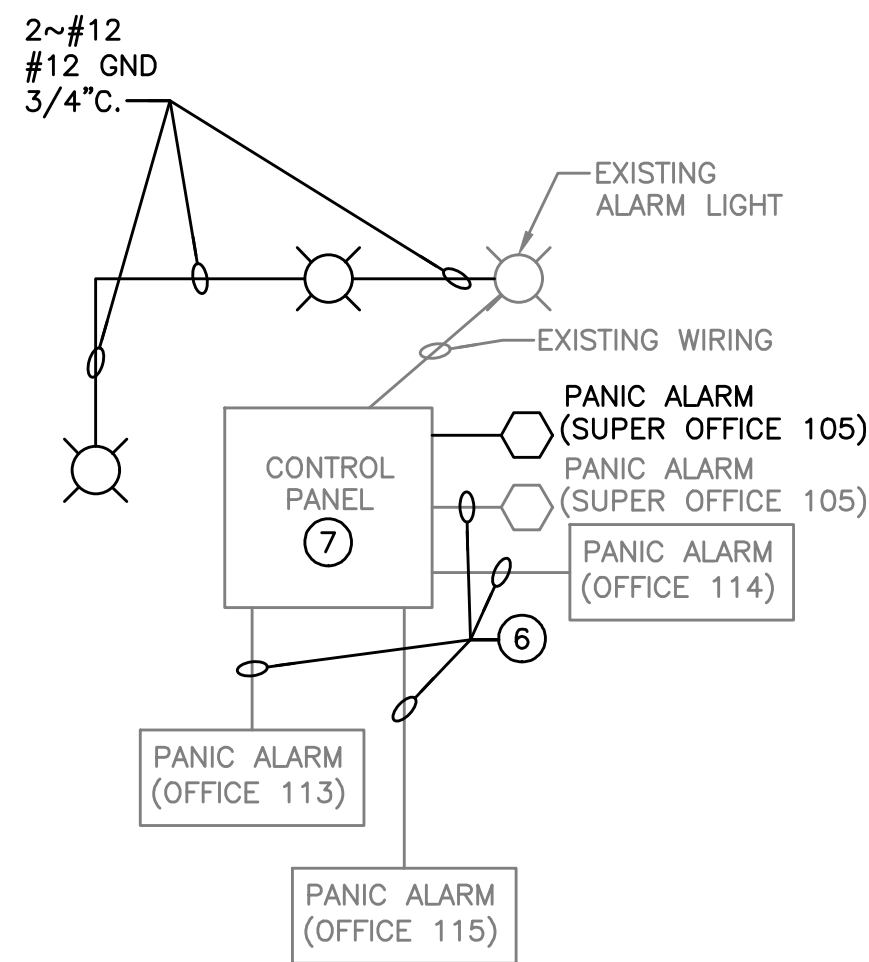
NETWORK RISER DIAGRAM
NO SCALE

KEY NOTES:

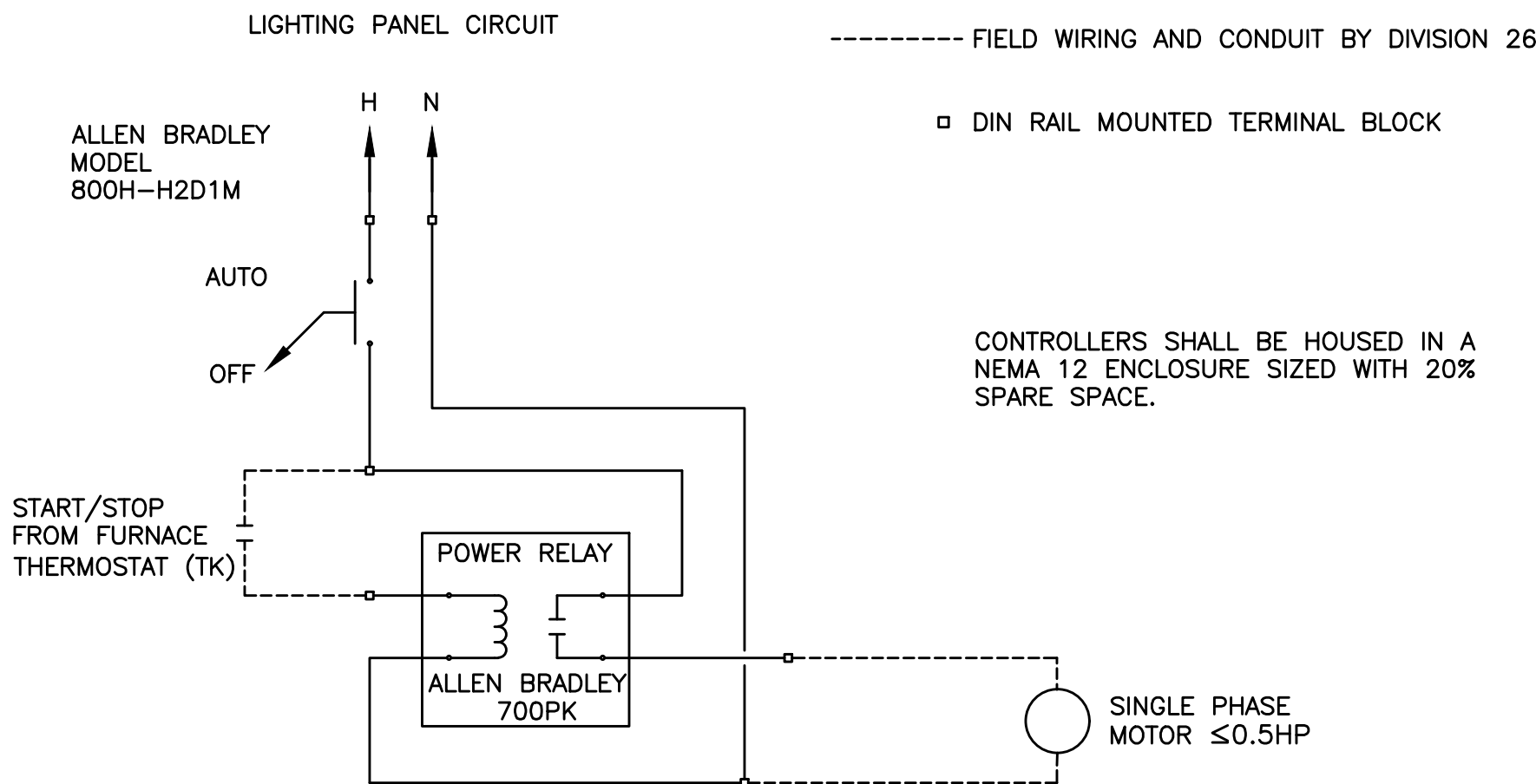
- 1 REMOVE WIRING BETWEEN PANEL A, PANEL B, AND UTILITY SERVICE. GROUND CONDUCTOR SHALL REMAIN.
- 2 REMOVE EXISTING WIRING. CONDUIT SHALL REMAIN.
- 3 EXISTING GROUND CONDUCTOR SHALL BE CONNECTED TO NEW PANEL B.
- 4 COORDINATE TERMINATIONS WITH McFARLAND IT DEPARTMENT.
- 5 COORDINATE ALL WORK ASSOCIATED WITH CHANGES TO THE SERVICE WITH UTILITY COMPANY. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE BID.
- 6 EXTEND CONDUIT AND WIRING AS REQUIRED.
- 7 COORDINATE ALL WORK WITH BOLDTRONICS - BURT BOLDEBUCK (608) 271-8979.
- 8 TWO EXISTING 200-AMP FEED.CO.
- 9 PROVIDE NEW CT CABINET PER UTILITY REQUIREMENTS.

Attachment No. 4

PANEL C													
Service: 120/208V, 3ø, 4W				Enclosure: NEMA 1								Mounting: Surface	
Main Breaker: 100A												Main Bus: Copper	
Location: UTILITY ROOM 111												SCIC: 10 kAIC	
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description
RECEPTACLES - MEZZANINE	20	1	1	500			720			2	1	20	RECEPTACLES - SUP. OFFICE 105
SPARE	20	1	3					360		4	1	20	RECEPTACLES - OFFICE 113, LOBBY
RECEPTACLES - MEZZANINE	20	1	5			500			360	6	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLE - H2O TESTING LAB	20	1	7	1000			360			8	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLE - H2O TESTING LAB	20	1	9		1000			360		10	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLES - EXTERIOR	20	1	11			180			360	12	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLES - BREAKROOM	20	1	13	720						14	1	20	SPARE
RECEPTACLES - BREAKROOM	20	1	15		720			720		16	1	20	RECEPTACLES - SUP. OFFICE 105
RECEPTACLES - BREAKROOM	20	1	17			720			360	18	1	20	RECEPTACLES - SUP. OFFICE 105
RECEPTACLES - BREAKROOM	20	1	19	720			900			20	1	20	RECEPTACLES - SURFACE RACEWAY
SPARE	20	1	21					900		22	1	20	RECEPTACLES - SURFACE RACEWAY
SPARE	20	1	23							24	1	20	SPARE
SPARE	20	1	25							26	1	20	SPARE
SPARE	20	1	27							28	1	20	SPARE
SPARE	20	1	29							30	1	20	SPARE
Total Load per Phase per Side (VA)				2940	1720	1400	1980	2340	1080				
Total Load Phase A (VA)		4920	VA							Total Connected Load (A)		32	A
Total Load Phase B (VA)		4060	VA							Total Connected Load + 25%		40	A
Total Load Phase C (VA)		2480	VA							Spare 25%		10	A
Total Connected Load (VA)		11460	VA							Feeder Load		50	A



PANIC ALARM SYSTEM DIAGRAM
NO SCALE



SINGLE PHASE MOTOR CONTROL
NO SCALE

FURNACE CONDUIT AND WIRING SCHEDULE				
CONDUIT* DESIGNATION	ORIGIN	TERMINATION	CONDUIT SIZE	CONDUCTORS*
OUTDOOR AIR TEMP. SENSOR	TK-01	TE-03	3/4"	SH. PR.
RETURN/OUTSIDE AIR DAMPER (MODULATING)	TK-01	BAROMETRIC RELIEF DAMPER	3/4"	SH. PR.
FAN (START/STOP)	TK-01	F-01	3/4"	2-#14
HEATING (START/STOP)	TK-01	F-01	3/4"	2-#14
SUPPLY AIR TEMP.	TK-01	TE-01	3/4"	SH. PR.
EXHAUST FAN (START/STOP)	TK-01	EF-01	3/4"	2-#14
COOLING (START/STOP)	TK-01	ACCU-01	3/4"	2-#14
OUTDOOR AIR TEMP. SENSOR	TK-02	TE-04	3/4"	SH. PR.
RETURN/OUTSIDE AIR DAMPER (MODULATING)	TK-02	BAROMETRIC RELIEF DAMPER	3/4"	SH. PR.
FAN (START/STOP)	TK-02	F-02	3/4"	2-#14
HEATING (START/STOP)	TK-02	F-02	3/4"	2-#14
SUPPLY AIR TEMP.	TK-02	TE-02	3/4"	2-#14
COOLING (START/STOP)	TK-02	ACCU-02	3/4"	2-#14

*Provide ground conductor per NEC.
*Refer to Plans For Surface Raceway

FIXTURE SCHEDULE					
Fixture Type	Manufacturer(s)	Model Number	Lamp Type	Mounting	Remarks
A	LITHONIA	2BLT4-40L-ADP-SLD-LP840	31W LED	RECESSED	
AX	LITHONIA	2BLT4-40L-ADP-SLD-LP840-EL7L	31W LED	RECESSED	
B	LITHONIA	BLWP4 60L ADP SLD LP840	49W LED	SURFACE/PENDANT	
C	LITHONIA	BLWP4 30L ADP SLD LP840	25W LED	SURFACE/PENDANT	
D	RP LIGHTING	8763-4K	10W LED	RECESSED	
X1	SURE-LITES	SLX-7-SD-R	1W LED	WALL/PENDANT	PROVIDE MOUNTING HARDWARE, CHEVRONS AND FACES AND REQUIRED.

PANEL B															
Service: 120/208V, 3ø, 4W Main Breaker: 400A (SE RATED) Location: UTILITY ROOM 111										Enclosure: NEMA 1		Mounting: Surface Main Bus: Copper SCIC: 42 kAIC			
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description		
EXISTING LOAD	20	1	1							2	1	20	PANEL GFI OUTLET		
EXISTING LOAD	20	2	3							4	1	20	EXISTING LOAD		
ENTRY DOOR OPENER	20	1	7							6	1	20	SMALL OFFICE		
FIRE ALARM PANEL	20	1	9							8	1	20	BASEBOARD HEAT - SPARE		
MECHANIC'S ROOM LIGHTS	20	1	11							10	1	15	CONTROL PANEL		
MECHANIC'S RM GFI OUTLETS	20	1	13							12	1	20	BATHROOM GFI OUTLET		
MECHANIC'S RM GFI OUTLETS	20	1	15							14	1	20	KITCHEN GFI OUTLET - SPARE		
MECHANIC'S RM GFI OUTLETS	20	1	17							16	1	20	LUNCHROOM OUTLET - SPARE		
MECHANIC'S RM GFI OUTLETS	20	1	19							18	1	20	OUTLETS-PARTS STORAGE & SMALL OFFICE		
WATER HEATER	30	2	21							20	2	40	RANGE		
WASH BAY OUTLETS & LIGHTS	20	1	25							22	1	20	FAX		
WASH BAY HEAT & GARAGE DR	20	1	27							24	1	20	COPIER		
PRESSURE WASHER WASH BAY	30	3	29							26	1	20	SOFTENER		
			31							28	1	20			
			33							30					
			35							32	3	100	EXISTING LOAD		
EXISTING LOAD	20	3	37							34					
			39							36	1	20	PHONE BOARD		
EXISTING LOAD	20	1	41							38	1	20	PHONE BOARD		
F-01	20	1	43	1236			264			40	1	15	EXISTING LOAD		
F-02	20	1	45		1663			1000		42	1	15	EXISTING LOAD		
EF-02 & DAMPER	30	1	47			1656			200	44	1	20	EF-01 & DAMPER		
			49	1686			2160			46	1	20	HOSE REEL		
ACCU-01	20	3	51		1686			2160		48	1	20	FURNACE DAMPERS		
			53			1686			2160	50					
EBB-01	20	1	55	750			1250			52	3	30	ACCU-02		
EBB-02	20	1	57		1500			1250		54					
EBB-03	20	1	59			1500			1250	56	1	20	EBB-05		
EBB-04	20	1	61	1000			500			58	1	20	EBB-06		
EBB-08	20	1	63		1080			500		60	1	20	EBB-07		
SPARE	20	1	65						500	62					
			67							64	3	15	VEHICLE EXHAUST SYSTEM		
SPD	30	3	69							66	1	20	SPARE		
			71						700	70	1	20	SPARE		
SS-01	20	2	73	800			4920			72	1	20	LIGHTING - MEZZANINE		
			75		800			4060		74					
EW-H01	20	1	77			1008			2480	76					
EW-H02	20	1	79	1008						78					
SPARE	20	1	81							80					
SPARE	20	1	83							82					
										84	3	80	SPACE FOR FUTURE SOLAR		
Total Load per Phase per Side (VA)				6480	6729	5850	9094	8970	7290						
Total Load Phase A (VA)				15574	VA	PROVIDE THROUGH FEED LUGS FOR POWER TO PANEL A.				Total Connected Load (A)				123	A
Total Load Phase B (VA)				15699	VA	EXISTING CIRCUITS SHALL BE RECONNECTED TO PANEL B.				Total Connected Load + 25%				154	A
Total Load Phase C (VA)				13140	VA					Spare 25%				39	A
Total Connected Load (VA)				44413	VA					Feeder Load				193	A

PROVIDE THROUGH FEED LUGS FOR POWER TO PANEL A.
EXISTING CIRCUITS SHALL BE RECONNECTED TO PANEL B.

Breaker for PV array

ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES

PUBLIC WORKS FACILITY RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT

STRAND
ASSOCIATES®

SHEET
35
E5.1

Solar Proposal For:



Prepared By:



ARTICLE 1 – BID RECIPIENT -Transmittal Letter

May 5, 2020

Matt Schuenke
Village of McFarland
5115 Terminal Drive,
McFarland, WI 53558

Dear Matt,

Eagle Point Solar is pleased to provide a proposal to The Village of McFarland in response to your request for a proposal to design, build and maintain a solar array located at Village of McFarland, 5115 Terminal Drive, McFarland, WI 53558

We have read, understand and agree to the terms of your RFP.

Our proposal is organized into the following sections:

1. Transmittal Letter
2. Project and Technology Description
 - A. Project Schedule and Timing
3. Warranties
4. Company Qualifications/Lead Installer information
5. Minimizing Downtime
6. Inverter Warranty option
7. Pricing
8. Other Pricing Options
9. References
10. Exhibits
 - A – Eagle Point Solar 5-Year Workmanship Warranty
 - B - Standard Operations & Maintenance Agreement (O&M)
 - C – Insurance Documentation
 - D – SolarEdge Monitoring System

Our proposal is “turn-key” in nature, meaning Eagle Point Solar will handle all aspects of the project including, design, optimization, construction, permitting, interconnection preparation & submission, equipment procurement, inspections, commissioning and 5 Years of on-going operations and maintenance services.

Per your instructions we have used the designs provided in the proposal request as the basis for our bid. You will also notice we have taken the liberty of adding some additional comments to the technical description. Our comments are simply things we would like to discuss further should we be selected to be involved in these projects.

Our base bid includes training for select the Village of McFarland staff on the operation of the solar array. This training is designed to be a supplement to the services Eagle Point Solar provides under the (O&M) agreement, not a replacement of those services.

We are very interested in assisting the Village of McFarland in educating citizens on why this project is good for the community. Ribbon cuttings, educational sessions and potentially installing a TV monitor in a prominent location to display the system production and environmental benefits are just a few things we will do should we be selected.

The Village of McFarland will certainly have multiple vendors bid on your solar project but as you evaluate each response it will become clear Eagle Point Solar provides the highest value for your solar installation.


Sincerely,
Dave Pluym
Solar Energy Consultant


Eagle Point
SOLAR
Bringing you the SUN®

BIDDER'S ACKNOWLEDGEMENTS

Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that

Bidder may agree to in writing upon request of Owner.:

The following is a description of the solar array including Google Earth image of the location with an overlay of the location of the modules, make, model & quantity of modules and make, model & quantity of inverters, first year kWh production estimate based on PV Watts, racking manufacturer and warranty information. Specification Sheets and warranty sheets are included in the "exhibit" section of this document.

Our design and equipment choices meet all of the requirements in the PR. Our philosophy is to continue to use only the highest quality components from established, stable, tier 1 manufacturers. An investment in a solar array is a long term investment and the ROI depends solely on the performance of the equipment so using only quality equipment is the correct choice.

BIDDER'S REPRESENTATIONS

Key Personnel:

Every project has corporate level management from Eagle Point Solar's headquarters in Dubuque, Iowa as well as local construction management at the site. Eagle Point Solar will oversee quality of service and product and is the prime contractor responsible for all of the project work. Our experienced construction management team has enabled us to attain a reputation as a consistent and efficient solar provider focused on customer satisfaction and quality workmanship.

Barry R. Shear CEO & President

Barry Shear is President and Owner of Eagle Point Solar. He has earned a wide reputation as a vigorous advocate for solar energy and climate change initiatives. Barry feels energy from renewable sources is the Industrial Revolution of the 21st century, and that jobs, economic growth, sustainability, and reducing greenhouse gas emissions can all be accomplished within a framework that works for the public and the utilities. Barry and Eagle Point Solar took the lead in the landmark Supreme Court case which now allows for third party power purchase agreements in Iowa. He is a founding Board member and Treasurer of ISETA (Iowa Solar Energy Trade Association) and is a frequent speaker and panelist on Solar Energy Policy.

Jim Pullen General Manager

Jim has over 25 years of Executive Sales and Operations Management experience. His focus is on process development and improvement, specifically with the sales and construction departments. Jim has also personally provided solar consultations to over 50 customers who have installed solar arrays. Prior to Eagle Point, Jim was a small business owner and the Vice President of Sales for an established technology firm.

Larry Steffen Vice President of Sales

Larry has over 38 years of Sales & Executive Sales Management experience. Leading the sales teams in his divisions as well as establishing and executing sales strategies is a major focus. Larry has also provided solar consultations to over 450 customers in the last 5 years. Prior to Eagle Point Solar, Larry was the Chief Operating Officer and co-owner of an agriculture fertilizer plant in Iowa. He holds 3 U.S. patents on agriculture and ornamental fertilizer formulations. Larry was also the Executive Director of Sales for an established software engineering consulting firm for 23 years.

Randy Ambrosy**Vice President of Operations**

Since 1991, Randy has served in a variety of Executive Management roles including Sales, Marketing, Product Development, International Business and Operations. Randy has lead acquisition and divestiture teams and has experience managing large projects. Randy brings Executive Leadership to the team, and oversees the construction phases of the business while focusing on process efficiency and improvement. Randy earned his Master's Degree in Business Analytics from Loras College in 2017.

*****Joseph Petsche – Lead Installer****Vice President of Construction/Project Manager**

Joe is a degreed engineer with an MBA from the University of Iowa. He has over 20 years of engineering and project management experience including previous positions with Kinder Morgan Energy Partners, British Petroleum and Amoco. He has managed dozens of energy related projects and is committed to precise planning, efficient execution, cost effective results and total customer satisfaction. Joe has also attended extensive solar training and is NABCEP certified.

Tod Hollenback**Vice President of Design and Procurement**

Tod has over 25 years of experience of design, sales, repair and procurement within the technology market. He is responsible for the design process which includes matching compatible equipment to the needs and goals of all client projects. Tod has attended various training sessions and is NABCEP certified. Prior to Eagle Point, Tod was a small business owner and previously worked for a technology company in various technical and sales roles.

Brian Gill**Master Electrician**

Brian has been in the electrical trade for nearly 25 years, the last 16 as a Master Electrician. Prior to Eagle Point Solar Brian worked as the Service & Project Manager for Hawkeye Electric in Dubuque. In addition to Brian's extensive electrical background, he has over 4 years of solar experience as a contractor working on projects for Eagle Point Solar. Brian will oversee all electrical functions corporately for Eagle Point Solar including design, engineering and construction. In addition to this, he will manage all electrical contractors and the in-house electrical staff.

Dave Pluym**Solar Energy Consultant**

Dave Pluym has over 4 years in the solar energy industry and brings a wide breadth and depth of technical sales experience to Eagle Point Solar as an addition to their solar sales team. Dave has over 35 years of sales and management expertise combined with design, repair and procurement within the technology market. His exemplary leadership and strong implementation strategies in technical and operational plans has a proven record in facilities management solutions for solar, IT, VFD drives, GPS/GIS consulting for land survey/design and machine guidance, along with M2M tracking and property and casualty insurance

Local Presence

Eagle Point Solar has developed a business model that includes offices and employees located in strategic geographies and partnerships with local solar experts in other areas. Our presence in the State of Wisconsin continues to grow with staff presently located in both the Osh Kosh and Milwaukee areas along with Kieler/Hazel Green. Our business plan calls for expansion into other markets in Wisconsin during 2020 -2021.

Company Qualifications/Lead Installer Information-Bidders Certification:

History:

Eagle Point Solar was founded in 2010 with an unwavering focus on quality, professionalism, and service. We have become one of the leading solar providers in the Midwest with over 750 completed systems in Iowa, Illinois, and Wisconsin with an aggregate size exceeding 19MW. We have provided solar solutions for a variety of customers and facilities including, utilities, schools, city & county governments, farms, non-profits, large and small businesses and homeowners.

We have worked with several public entities by installing solar arrays at multiple locations in Iowa, Illinois and Wisconsin including, the City of Asbury Iowa, the City of Galena, IL, Sauk County, WI, and the City of Milwaukee.

Qualifications:

Our commitment to the solar industry is evident as we are members of various trade organizations and a founding member of the Iowa Solar Energy Trade Association (ISETA) as well as current members of the Illinois Solar Trade Association (ISEA) and RENEW Wisconsin.

Here are a few things that make us uniquely qualified for the wastewater treatment plant project:

- 1) We are a professional solar installer/integrator that is 100% focused on the solar industry. For the last 10-years we have grown to a team of 78 employees with specific areas of expertise in our industry.
- 2) Full-time, on-staff installers. We do not sub-contract the installations of the solar array. We can leverage our knowledge from past projects and complete installations quickly, with consistent quality. Nearly every member of our crew will be from the local labour pool.
- 3) We have invested in education for our entire staff including the time, effort and financial commitment necessary to have multiple NABCEP certified individuals in our organization including:

Tod Hollenback - PV-041616-012867

*******Joseph Petsche - PV-042217-012772 – Lead Installer**

Matthew Pullen - PVA-020718-020696

Todd Lindquist - PV-090718-020118

Vivika Heller - PVA-110518-021693

Adam Jordan – PVA-091718-023370

Danny Leavenworth - PVA-021519-022497

- 4) Eagle Point Solar has invested in the equipment necessary to build ground arrays that are aesthetically pleasing and durable. The investment we made in our Vermeer PD-10 pile driving machine and our experience in operating it set our ground arrays apart from any other installer you will find in this area.
- 5) We have been named one of Solar Power World's Top 500 Solar Contractors in the U.S. for 3 years in a row.

Division of Professional Credential
Processing
4822 Madison Yards Way
Madison, WI 53705
Phone: (608) 266-2112
Fax: (608) 267-0592
Email: dpscredtrades@wi.gov
Website: www.dps.wi.gov

Certification, License, or Registration Card

Below you will find your certification, license or registration card. This card serves as an additional piece of documentation of licensure that may be carried on person. To view details about your credential or continuing education log into the eSLA portal where you can view your credential status or use the public lookup to verify the status of your CE.

Wisconsin Department of Safety and Professional Services	
EAGLE POINT SOLAR LLC	
Credential ID: DC-111500020	
Certification, License, or Registration Name	Expires:
Dwelling Contractor	2020-11-05
Signature:	

Please review the information on the card. If errors or discrepancies are found, you may contact the Department at 608-266-2112 or email DSPSCredTrades@wi.gov, and provide your ID number printed on the card. The Department should be notified of changes in addresses as they occur. Notification of address changes is the responsibility of the credential holder. A renewal notice will be emailed to the email address on file 30, 60, and 90 days before expiration. Before the expiration date of each credential indicated on the card. Renewals are contingent upon compliance with the requirements specified in Wisconsin Administrative Code SPS 305.

Village of McFarland – Roof Mounted



This proposal specifies a 31.59 kW DC roof mounted solar photovoltaic system at the Public Works Facility for the proposed work addressed to Village of McFarland, 5115 Terminal Drive, McFarland, WI 53558

Project Summary:

Solar array to be installed at the following location:
5115 Terminal Dr. McFarland, WI
31.59 kW DC Roof Mounted Array

Solar Modules will be mounted on a flush mount array racking system on the Southern roof face of building. Flush mount racking system consists of S5! Clamp attachments and IronRidge rails and hardware designed to the specifications of the approving AHJ.

DC wiring will be run underneath the modules and secured to the array racking via cable management clips and cable ties when necessary. DC wiring off the roof will be run to the interior via sealed roof penetration. DC wiring will be run in conduit through the interior to the location of the inverters and combiner panel. SolarEdge inverters and combiner to mounted on interior south wall as shown in the RFP Attachment No. 3.

AC conduit and wire out of the combiner panel will be run across the building to the exterior North wall to the Utility DG disconnect required by Alliant. The disconnect will be mounted within 10' and line of sight of the existing metering cabinet. AC conduit and wire out of the disconnect will re-enter the building and be routed to

"PANEL B" inside the building. The solar point-of-connection will be made by landing a breaker into "PANEL B" as spec'd in the RFP.

Communications will be transmitted from the SolarEdge inverters to the existing router inside of the building via CAT6 cable.

Major Components/Services/Equipment:

- Components
 - (81) – JA Solar 390-watt Modules
 - (81) – SolarEdge Optimizers, Model: P400
 - (1) – SolarEdge Inverter, Model: SE9K-US
 - (1) – SolarEdge Inverter, Model: SE14.4K-US
 - IronRidge XR 100 Racking
 - S5! U Attachment Clamps
 - (300') – CAT6 cable for communication
- Services
 - Complete and submit all necessary Alliant and AHJ documentation including:
 - Interconnection Agreement
 - 1-Line Electrical Drawing
 - Project lay out sketch
 - Certificate of Completion
 - All Interconnection Fees
 - All Permitting Fees
 - Final Inspection and Commissioning
 - All potential incentive paperwork

Inverter Warranty Option:

We believe the best option for these projects is to purchase the manufacturer's 20-year extended warranty. This reduces the Village's potential liability for most of the expected life of the system.

This cost is approximately \$500/inverter or a total of \$1,000. **(Included in bid price)**

BASIS OF BID:

Our pricing proposal is "turn-key", meaning it is all inclusive with no additional costs for the Village of McFarland. Although there is a substantial amount of volatility in the solar materials and equipment, we will honor our price until 07/30/2020. Below is the pricing matrix:

Photovoltaic Installation

\$69,498

TIME OF COMPLETION

Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

Project Schedule - McFarland Public Works Facility		
Activity	Date	
	Begins	Ends
Contract Award		May 15, 2020
Contract Negotiation and Approval	May 15, 2020	June 30, 2020
Final Design Completed & Submitted	May 15, 2020	June 30, 2020
Complete, Submit and Gain Approval of Utility Interconnections	May 15, 2020	June 30, 2020
Complete, Submit and Gain Approval of All Permits	May 15, 2020	June 30, 2020
Delivery of Equipment to Project Site	July 1, 2020	July 10, 2020
Construction	July 13, 2020	October 31, 2020
Final Inspections	November 30, 2020	November 30, 2020
Utility Inspections and Testing	November 30, 2020	November 30, 2020
System Commissioned		December 31, 2020

ATTACHMENTS TO THIS BID:

The following documents are submitted with and made a condition of this Bid:

- A. Our proposal includes our standard 5-year workmanship warranty which is described near the end of this document as Exhibit A.
- B. Eagle Point Solar offers a standard Operations & Maintenance agreement (O&M) which is described in Exhibit B at the end of this document.
- C. Insurance Certificate Exhibit C
- D. Monitoring and Specification sheets Exhibit D

RFP Design McFarland Public Works RFP, 5115 Terminal Dr. McFarland WI

Report

Project Name	McFarland Public Works RFP
Project Address	5115 Terminal Dr. McFarland WI
Prepared By	Nicole Tygart ntygart@eaglepointsolar.com

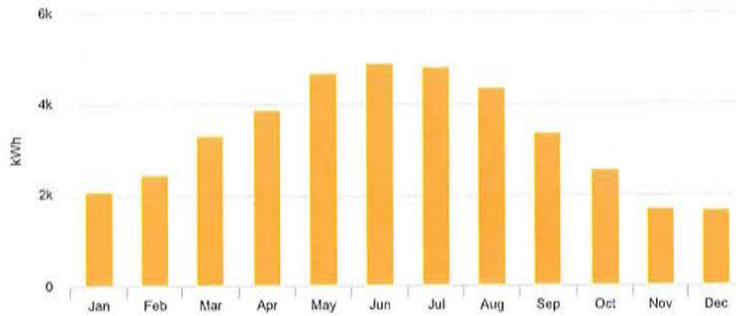
System Metrics

Design	RFP Design
Module DC Nameplate	31.6 kW
Inverter AC Nameplate	23.4 kW Load Ratio: 1.35
Annual Production	39.75 MWh
Performance Ratio	82.5%
kWh/kWp	1,258.2
Weather Dataset	TMY, MADISON DANE CO REGIONAL ARPT (ISIS), NSRDB (tmy3, I)
Simulator Version	70e353687f-301d24fdb-8f3cf974d4-5e9aee986c

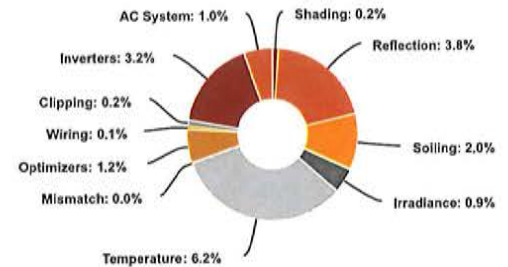
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,427.4	
	POA Irradiance	1,525.5	6.9%
	Shaded Irradiance	1,522.0	-0.2%
	Irradiance after Reflection	1,464.3	-3.8%
	Irradiance after Soiling	1,435.0	-2.0%
	Total Collector Irradiance	1,435.0	0.0%
Energy (kWh)	Nameplate	45,337.8	
	Output at Irradiance Levels	44,936.2	-0.9%
	Output at Cell Temperature Derate	42,127.8	-6.2%
	Output After Mismatch	42,127.8	0.0%
	Optimizer Output	41,622.1	-1.2%
	Optimal DC Output	41,566.0	-0.1%
	Constrained DC Output	41,476.9	-0.2%
	Inverter Output	40,153.1	-3.2%
	Energy to Grid	39,747.9	-1.0%
Temperature Metrics			
	Avg. Operating Ambient Temp	11.4 °C	
	Avg. Operating Cell Temp	26.3 °C	
Simulation Metrics			
	Operating Hours	4607	
	Solved Hours	4607	

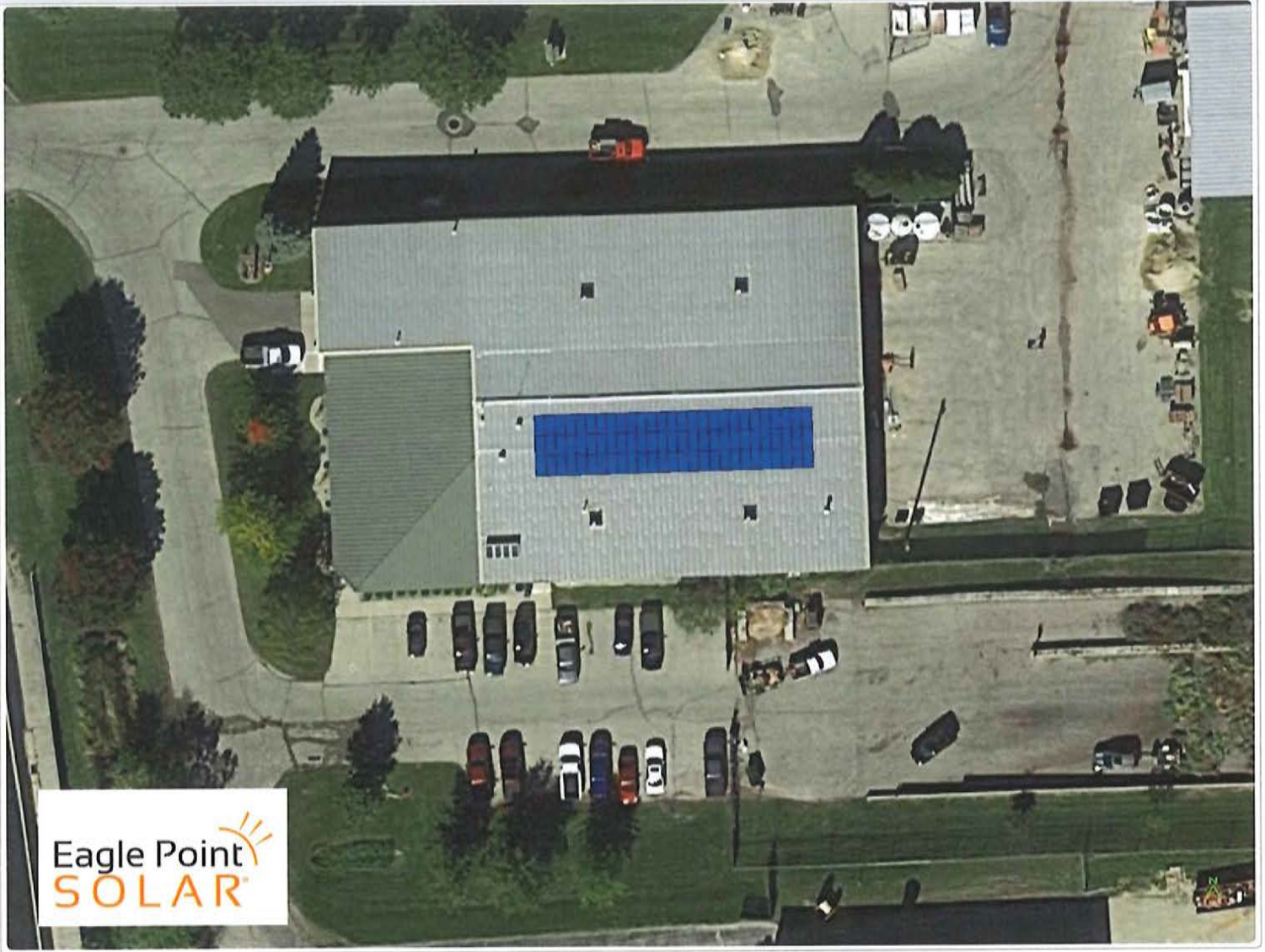
Condition Set												
Description	Condition Set 2											
Weather Dataset	TMY, MADISON DANE CO REGIONAL ARPT [ISIS], NSRDB (tmy3, I)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a		b		Temperature Delta						
	Fixed Tilt	-3.56		-0.075		3°C						
	Flush Mount	-2.81		-0.0455		0°C						
	East-West	-3.56		-0.075		3°C						
	Carport	-3.56		-0.075		3°C						
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module	Uploaded By		Characterization								
	JAM72S09 -390/PR (JA Solar)	Folsom Labs		Spec Sheet Characterization, PAN								
Component Characterizations	Device	Uploaded By		Characterization								
	SE14.4KUS (SolarEdge)	Folsom Labs		CEC								
	SE9KUS (SolarEdge)	Folsom Labs		Spec Sheet								
	P400 (SolarEdge)	Folsom Labs		Mfg Spec Sheet								

Components		
Component	Name	Count
Inverters	SE14.4KUS (SolarEdge)	1 (14.4 kW)
Inverters	SE9KUS (SolarEdge)	1 (9.00 kW)
AC Panels	1 input AC Panel	2
AC Home Runs	4 AWG (Copper)	3 (840.9 ft)
AC Home Runs	2 AWG (Copper)	1 (326.8 ft)
Strings	10 AWG (Copper)	7 (1,111.5 ft)
Optimizers	P400 (SolarEdge)	81 (32.4 kW)
Module	JA Solar, JAM72S09 -390/PR (390W)	81 (31.6 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	9-15	Along Racking
Wiring Zone 2	12	9-14	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	9°	178.5°	0.0 ft	1x1	51	51	19.9 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	9°	178.5°	0.0 ft	1x1	30	30	11.7 kW

Detailed Layout



Project Details

Name	McFarland Public Works RFP	Date	05/05/2020
Location	5115 Terminal Drive, McFarland, WI, 53558	Total modules	81
Module	JA Solar : JAM72509 390/PR (40mm)	Total watts	31,590
Dimensions	78.27" x 39.57" x 1.57" (1988.0mm x 1005.0mm x 40.0mm)	Attachments	138
ASCE	7-10		

System Weight

Total system weight	4,534.5 lbs
Weight/attachment	32.9 lbs
Racking weight	498.3 lbs
Distributed weight	2.6 psf

Load Assumptions

Wind exposure	C
Wind speed	110 mph
Ground snow load	30 psf
Attachment spacing	4.0'

Roof Information

Roof material	Metal	Building height	20 ft
Roof attachment	L-Foot Only	Roof slope	9 °
Attachment hardware	Square	Risk category	II

Span Details XR100 - Portrait

Zone	Max span	Max cantilever
1	5' 5"	2' 2"
2	5' 5"	2' 2"
3	5' 4"	2' 2"

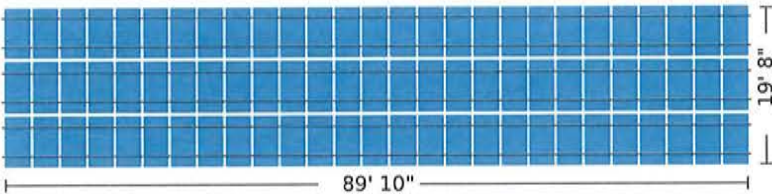
Reaction Forces XR100 - Portrait

Zone	Down (lbs)	Uplift (lbs)	Lateral (lbs)
1	369	158	62
2	369	319	62
3	370	501	63

Roof Section 1

Definition	Roof Section Weights	Roof Section (all segments)
81 modules	Total weight: 4,534.5 lbs	Provided rail: 558' [18 x 14', 18 x 17']
Portrait orientation	Weight/attachment: 32.9 lbs	Attachments: 138
Graphical entry	Total Area: 1,766.9 sq ft	Splices: 30
	Distributed weight: 2.6 psf	Clamps: 168

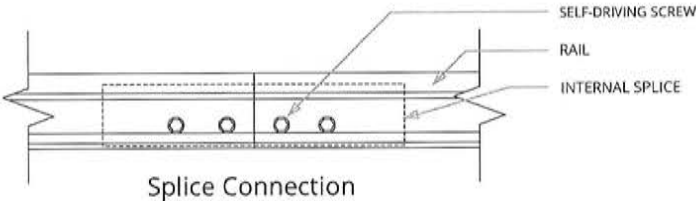
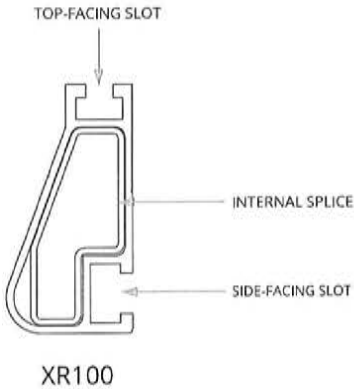
Diagram



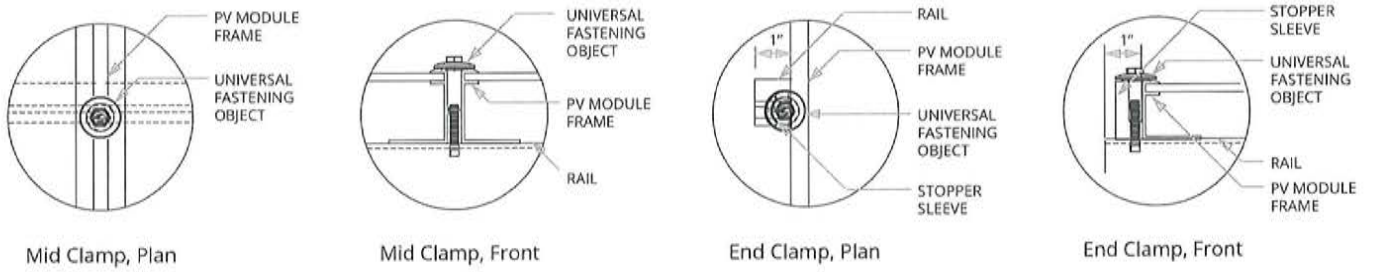
Segments

Columns	Length	Cantilever	Cantilever Violations	Rail	Attachments	Splices	Clamps
27	90'	1'	None	186' [6 x 14', 6 x 17']	46	10	56
Row segment totals (x 3) →				558' [18 x 14', 18 x 17']	138	30	168

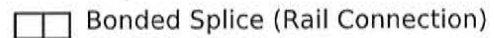
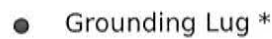
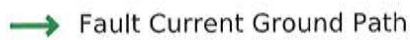
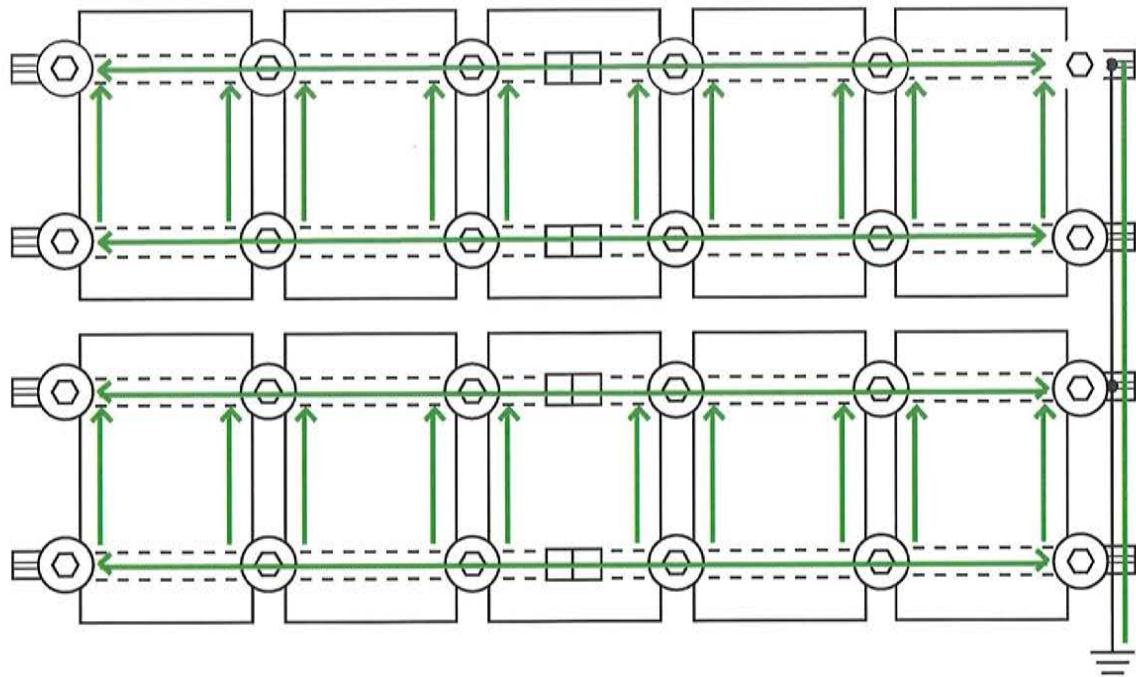
Splice Details



Clamp Detail



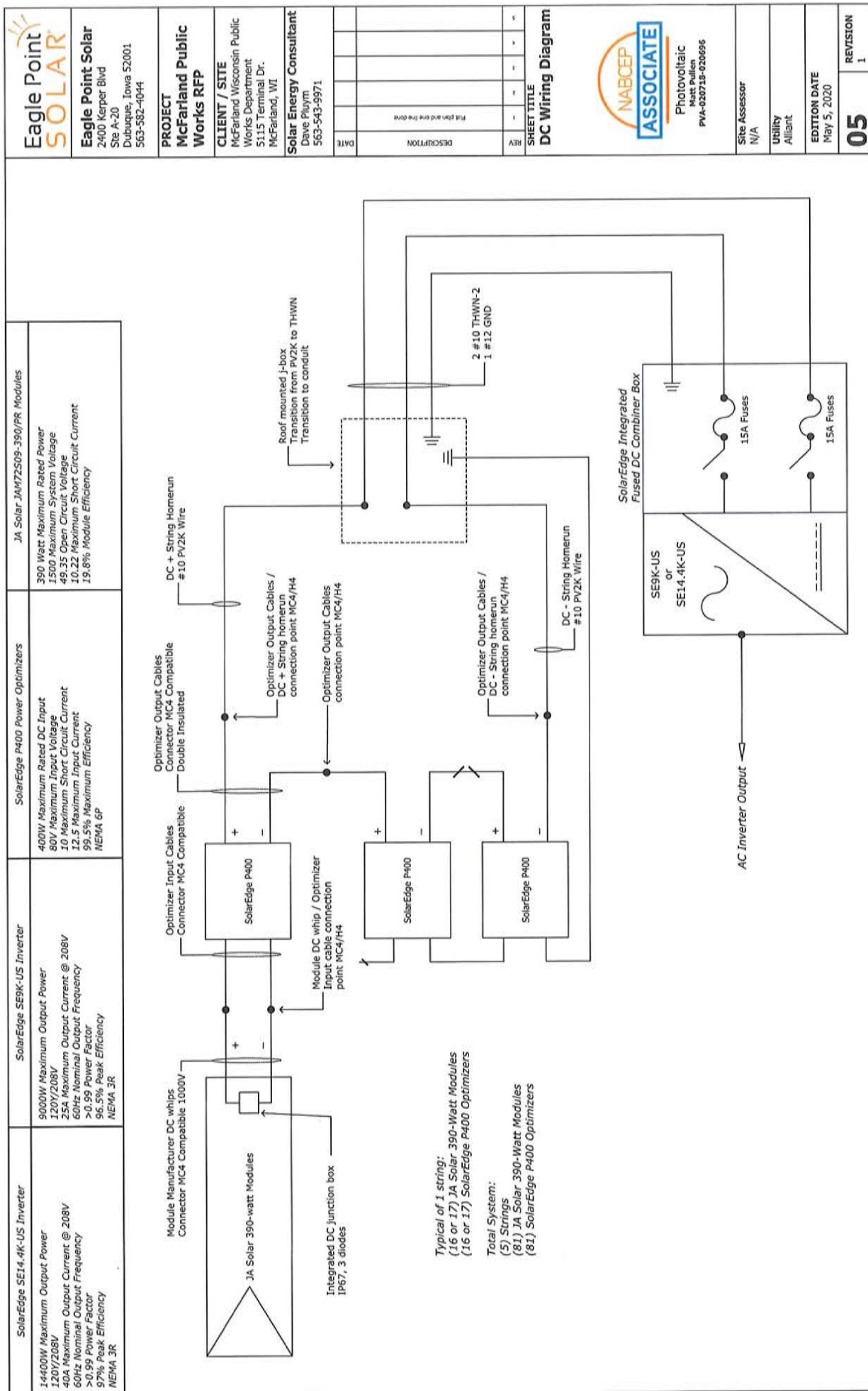
Grounding Diagram



* Grounding Lugs and Wire are not required in systems using Enphase microinverters.

Bill of Materials

Part	Spares	Total Qty
Rails & Splices		
XR-100-204A XR100, Rail 204" (17 Feet) Clear	0	18
XR-100-168A XR100, Rail 168" (14 Feet) Clear	0	18
XR-100-SPLC-M1 XR100 Bonded Splice (Incl. Self-tapping Screws)	0	30
Clamps & Grounding		
UFO-CL-01-A1 Universal Module Clamp, Clear	0	168
UFO-STP-40MM-M1 Stopper Sleeve, 40MM, Mill	0	12
XR-LUG-03-A1 Grounding Lug, Low Profile	0	3
Attachments		
LFT-03-M1 Slotted L-Foot, Mill	0	138
BHW-SQ-02-A1 Square-Bolt Bonding Hardware	0	138



Eagle Point Solar
 2400 Kerper Blvd
 Ste A-20
 Dubuque, Iowa 52001
 563-582-4044

PROJECT
McFarland Public Works RFP

CLIENT / SITE
 McFarland Wisconsin Public Works Department
 5115 Terminal Dr.
 McFarland, WI

Solar Energy Consultant
 Dave Pluym
 563-543-9971

DATE

DESCRIPTION

REV

SHEET TITLE
DC Wiring Diagram

Photovoltaic
 Matt Pullen
 PVA-020718-020696

Site Assessor
 N/A

Utility
 Alliant

EDITION DATE
 May 5, 2020

05

REVISION
 1

Division of Professional Credential
Processing
4822 Madison Yards Way
Madison, WI 53705
Phone: (608) 266-2112
Fax: (608) 267-0592
Email: dpscredtrades@wi.gov
Website: www.dsps.wi.gov

Certification, License, or Registration Card

Below you will find your certification, license or registration card. This card serves as an additional piece of documentation of licensure that may be carried on person. To view details about your credential or continuing education log into the eSLA portal where you can view your credential status or use the public lookup to verify the status of your CE.

Wisconsin Department of Safety and Professional Services	
EAGLE POINT SOLAR LLC	
Credential ID: DC-111500020	
Certification, License, or Registration Name	Expires:
Dwelling Contractor	2020-11-05
Signature:	

Please review the information on the card. If errors or discrepancies are found, you may contact the Department at 608-266-2112 or email DSPSCredTrades@wi.gov, and provide your ID number printed on the card. The Department should be notified of changes in addresses as they occur. Notification of address changes is the responsibility of the credential holder. A renewal notice will be emailed to the email address on file 30, 60, and 90 days before expiration. Before the expiration date of each credential indicated on the card. Renewals are contingent upon compliance with the requirements specified in Wisconsin Administrative Code SPS 305.

References:

Northland Pines School District, Eagle River, WI

4250kW

Contact: Dave Bohnen dbohnens.k12.wi.us
(715) 479-5031



Sauk County Law Enforcement Center, Baraboo, WI

459kW

Contact: Ian Crammond ian.crammond@saukcountywi.gov
(608) 355-3245



City of

Milwaukee - Libraries

Project size: 200kW

Contact: Elizabeth Hittman elizabeth.hittman@milwaukee.gov
(414) 286-5593



Johnson Co. Health & Human Services Building –Iowa City, Ia.

Project size: 159.6kW

Contact: Josh Busard jbusard@co.johnson.ia.us
(319) 356-6085



Partial Project Portfolio:

Municipalities, Counties, Schools & Utilities

Name:	Projects	Total Size	Third Party Finance
Farmers Electric CCOP, IA	1	800kW	Y
Northland Pines CSD, Wi	1	425kW	Y
City of Galena, IL	2	400kW	N
Rochelle Municipal Utility, IL	1	368kW	N
Jo Carroll Energy, IL	1	126kW	Y
Hamilton County, IA	1	118kW	Y
City of Cedar Rapids, IA	5	307kW	Y
Johnson County, IA	2	245kW	Y
City of Dyersville, IA	3	297kW	Y
City of Dubuque, IA	6	351kW	Y
N.I.C.C., IA	1	104kW	Y
City of Asbury, IA	4	230kW	Y
Cedar County, IA	1	213kW	Y
City of Rochelle, IL	1	324kW	N
Bennett CSD, IA	1	166kW	N
Olin CSD, IA	2	136kW	N
Howard Winneshiek CSD, IA	1	35kW	N
Sauk County, WI	2	465kW	Y
City of Olin, IA	5	87kW	Y
Spoon River Electric Coop, IL	1	70kW	N
VIT CSD, IL	3	520kW	Y
Spoon River Valley CSD, IL	1	449kW	Y
City of Peosta, IA	7	405kW	Y
City of Oelwein, IA	5	254kW	Y
City of Marquette, IA	1	36kW	N

Exhibits:

Exhibit A

5-Year Limited Workmanship Warranty

Definition:

Eagle Point Solar (EPS) provides a 5-year workmanship warranty for every customer for whom it installs a solar array. The 5-year period begins on the date of commissioning and is subject to the following terms:

This warranty covers the work related to the installation of a solar array and completed by EPS. No coverage is provided for any part of the project which is completed by any party other than EPS unless specifically approved by EPS.

Items Covered by the Warranty:

- 1) For all solar arrays:
 - a. Mounting hardware will be mounted securely to the mounting surface in accordance with all Federal, State and Local regulations.
 - b. Railing will be securely fastened to the mounting hardware per manufacturer's requirements.
 - c. Modules will be securely fastened to the racking hardware per manufacturer's requirements.
 - d. Electrical connections will be secure and operational.
 - e. Production monitoring system operation.
- 2) For a solar array mounted on the roof:
 - a. The mounting hardware will not damage or cause the roof to leak.
- 3) For a solar array mounted on the ground:
 - a. Piers or posts will remain securely in the original installation position.

Exclusions:

- 1) Internet Service
 - a. Any interruption of customer's internet service by their service provider causing the solar array or the production monitoring system to malfunction.
 - b. Internet hardware failure by any customer owned hardware related to their internet service.
- 2) Vegetation control
- 3) Acts of God
- 4) Array kWh production
- 5) Normal wear and tear to customer's property during installation
- 6) Equipment issues covered by a manufacturer's warranty
- 7) Pre-existing property damage

Warranty claims:

- 1) EPS customer shall promptly notify EPS directly should a potential warranty claim be identified. EPS will at its discretion determine if such claim is valid and also the recourse plan if action. The recourse plan of action will be designed to repair the identified warranted item to their state prior to the warranty claim and be completed in a reasonable time frame.

Initials: _____
Customer EPS Representative

Exhibit B

SAMPLE - Operations & Maintenance Agreement

This Operations & Maintenance Agreement ("Agreement") is made between [Eagle Point Solar, LLC] ("Operator") and [customer] ("Owner"), as of [EXECUTION DATE]. Operator and Owner hereby agree as follows:

1. **O&M SERVICES.** Subject to and in accordance with this Agreement, Operator shall provide the services set forth on Schedule A ("Agreement Services") for the system described in Construction Contract Appendix A ("System") during the Term. Operator shall inform Owner of any additional services required for the safe, reliable operation of the System and of conditions adversely affecting the performance of the System. Operator shall submit a written cost estimate covering such additional services necessary to correct the identified issues. Operator shall not perform any services other than the Planned Maintenance, and Owner shall not be required to pay Operator for any Additional Services performed without Owner's approval.

2. **PRICE AND PAYMENT.** Owner shall pay Operator an annual fixed fee of \$[0] with a [0%] annual escalator for the Planned Maintenance. On an annual basis, Operator shall submit an invoice to Owner documenting the cost associated with the agreement. Owner shall pay Operator, including any applicable taxes, within thirty (30) days after receipt of each invoice.

Operator's additional services fees for items not covered in the Agreement or for those Owners without an Agreement will be as follows:

- A) Owner shall pay Operator any cost of equipment and materials not covered by manufacturer's warranty.
- B) Owner shall pay Operator for all labor hours, including travel time, for the hours each Operator employee dedicates to the Owner's project. This hourly rate will be \$50/hour.
- C) Owner shall pay Operator for each mile logged by Operator's employees or contractors in the event Operator dispatches employees or contractors to the Owner's location. This mileage rate will be equal to the then current IRS mileage reimbursement rate.
- D) Owner shall pay Operator a flat fee trip charge of \$75 for each trip and each vehicle deployed to the Owner's site.

3. **TERM.** The term of this Agreement begins on the date of this Agreement and continues for a period of 1 year following the initiation date. The Agreement will automatically renew for subsequent periods of 1 year, unless a written notice of non-renewal is given by either Operator or Owner at least 60 days prior to the expiration of the Initial Term or then applicable Subsequent Term. No expiration of this Agreement shall release either party from any obligations (including payment obligations) arising under this Agreement prior to such expiration.

4. **ENTRY.** Except in the event of an emergency, Operator and any approved subcontractor shall notify Owner at least 48 hours prior to entry onto Owner's premises and may be required to provide such addition information regarding Operator's or subcontractor's personnel and reason for entry as may be reasonably required by Owner.

5. **SERVICE REPORTS.** Within 30 days following the performance of the Annual Planned Maintenance Schedule or Owner-approved Additional Services, Operator shall provide Owner with a written report summarizing all cleaning, inspections, tests, checks and other actions undertaken by Operator in sufficient detail for Owner to evaluate independently the condition of the System and any issues that may give rise to performance issues. Owner's payment obligations under are conditioned on Operator providing complete and accurate reports to Owner.

6. **STANDARD OF PERFORMANCE.** Operator shall perform the Services in accordance with all applicable laws, regulations, permits, licenses and industry standards and the requirements of any insurance policies maintained by Owner or Operator. The Services shall be performed in a good and workmanlike manner, free of any defect or deficiency

and shall otherwise be performed in accordance with the requirements set forth in this Agreement. If Owner determines in its reasonable discretion that the Services are unsatisfactory or performed in a manner not consistent with industry standards, Operator shall, at its own cost and expense, reperform the Services. Operator shall review all of the manufacturer's warranties for the panels, inverters, racking and combiner boxes ("Manufacturers' Warranties") and perform the Services in accordance with such Manufacturers' Warranties, including all requirements, conditions and stipulations therein. If included as part of Owner-approved Additional Services, Operator shall assist Owner with the prosecution of any claims arising under the Manufacturers' Warranties. Owner has made all Manufacturers' Warranties available to Operator, and Operator has had full opportunity to review, and may from time to time request copies of, the Manufacturers' Warranties.

7. DEFAULTS. It shall be an Operator event of default if Operator breaches a material obligation under this Agreement and fails to cure such breach within 30 days following notice from Owner. If such Operator event of default occurs, Owner shall have the right to terminate this Agreement and pursue any and all remedies it may have at law or in equity. It shall be an Owner event of default if Owner fails to make timely payment pursuant to Section 2 and Owner fails to cure such breach within 30 days following notice from Operator. If such an Owner event of default occurs, Operator's sole and exclusive remedy shall be to terminate this Agreement and bring suit to recover such unpaid amounts.

8. INDEMNITY. Operator shall indemnify and hold harmless Owner from and against any and all losses incurred by Owner to the extent arising from or out of any third-party claim for any injury to or death of any person or loss or damage to property of any person to the extent caused by any negligence willful, reckless or otherwise tortious act or omission (including strict liability) in connection with Operator's performance of the Services.

9. INSURANCE. Operator shall, at its own cost and expense obtain and maintain in full force and affect any insurance coverage in founded amounts consistent with prudent industry standards and shall provide original certificates of such insurance coverages to Owner upon request.

10. NOTICES. Any written notice, instruction, request or other communication under this Agreement, shall be deemed to have been duly given on the date of receipt and shall be delivered (a) personally to the party to whom notice is to be given, (b) by a recognized overnight receipted delivery service, to the party to whom notice is to be given or (c) to the party to whom notice is to be given, by first class registered or certified mail, return receipt requested, postage prepaid. All notices shall be addressed to recipient's address as listed below or at the most recent address specified by written notice given to the other party in the manner provided in this Section 10.

Operator:
Eagle Point Solar, LLC
Attn: Jim Pullen
Address: 900 Jackson St., Suite 108
Dubuque, IA 52001]

Owner:
(Customer)
Attn: _____
Title
Address:

11. CONFIDENTIALITY. Neither party, without the prior written consent of the other party, will disclose the contents of this Agreement or any other information related thereto to any third party except to its fiduciary representatives who agree to keep such information confidential or as required by applicable law.

12. INTEGRATION. With respect to matters involving operations and maintenance for the system, this Agreement, together with all schedules hereto, constitutes the entire agreement of the Parties with respect to its subject matter,

supersedes all prior written or oral agreements and any other correspondence between the parties or offers made by either party, if any, of the parties with respect to its subject matter.

13. GENERAL TERMS. If any term or provision of this Agreement is declared invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall not be affected, and, if appropriate, such invalid or unenforceable provision shall be modified or replaced to give effect to the underlying intent of the parties. Neither party may assign this Agreement without the prior written consent of the other party. The failure of Operator or Owner to enforce any of the provisions of this Agreement, or the waiver thereof, shall not be construed as a general waiver or relinquishment on its part of any such provision, in any other instance or of any other provision in any instance. This Agreement will be deemed made in and governed by the laws of the state in which the System is located, without application of such state's principles regarding conflicts of law. This Agreement, together with all schedules hereto, constitutes the entire agreement of the parties with respect to its subject matter, supersedes all prior written or oral agreements and any other correspondence between the parties or offers made by either party, if any, of the parties with respect to its subject matter. This Agreement may only be amended in a writing signed by both parties. "Including" and any other words or phrases of inclusion shall not be construed as terms of limitation, so that references to "included" matters shall be regarded as non-exclusive, non-characterizing illustrations. The terms of Sections 6, 8, 11, and 12 shall survive the expiration or termination of this Agreement. This Agreement may be executed by original or facsimile signature in one or more counterparts, each of which will be deemed an original, but which collectively will constitute one and the same instrument.

By signing below, each party acknowledges that it has authority and hereby causes this Agreement to be executed in their respective names as of the date set forth below.

[Eagle Point Solar, LLC]

By: _____
Name: Jim Pullen
Title: General Manager
Date: _____

[Customer]

By: _____
Name: Washburn School District
Title: _____
Date: _____

Schedule "A"

On-Going Operation Support:

- Operator will provide all services necessary to uphold equipment manufacturer's warranties.

System Monitoring:

(If Owner qualifies to have an on-line portal set up for the system, the following services will be included. If it is determined the Owner does not qualify to have the on-line portal set up, these services are not included.)

- Proactively monitor solar array production and provide Customer with an emailed production report annually.
- Configure, monitor and react to performance alerts generated by the monitoring system.

Annual Planned Maintenance Schedule:

- Visually check all DC disconnects and combiners for blown fuses / corrosion / heat distortion / moisture entry / insect or rodent issues
- Verify module cleanliness (note if cleaning is required in follow up)
- Visually check array for broken, loose / missing modules, loose racking hardware, unsecured wiring or MC connectors, correct as is necessary
- Check for corrosion between copper wires and PV frames and galvanized steel racking structure
- Check condition of plastic wire ties and the insulation materials between wires and metal edges in the array; replace as necessary
- Inspect array for build-up of debris; clean as necessary
- Inspect wire runs / piping / conduits; make necessary corrections (sealant, secure elbows, etc.)
- Inspect Inverter for external damage
- Check all AC/DC connections to note possible hot spots and re-torque where necessary
- Shut down AC/DC breakers to Inverter, power down inverter
- Wait for Inverter to discharge
- Clean area around Inverter & verify base is sealed
- Clean / replace air filters and clean air returns
- Visually inspect for moisture intrusions-correct as needed
- Verify torque specifications for all connections
- Verify system is operational

Exclusions:

The following items and services are specifically excluded from the Agreement:

- Owner's internet service:
 - Any interruption of Owner's internet service by their internet provider causing the solar array or the production monitoring system to malfunction.
 - Internet hardware failure by any Owner owned hardware related to their internet service.
- Acts of God.
- Vegetation Control.
- Solar array kWh production.

Initials: _____
Customer

EPS Representative

Exhibit C

Insurance Documentation:



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/19/2018

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IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Kunkel & Associates, Inc.
401 Data Court
Dubuque IA 52003

CONTACT NAME: TJ Wagner
PHONE (No. Ext): 563-585-2310 FAX (No. Ext): 563-557-7316
E-MAIL: certs@kunkel-inc.com

INSURED
Eagle Point Solar LLC
900 Jackson St., Ste108
Dubuque IA 52001

EAGP012

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: West Bend Mutual	15350
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 457977036

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR LTR	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY ☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR			A053475	7/26/2018	7/26/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/CP AGG \$ 2,000,000 \$
	GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PER INCIDENT ☐ LDC						
A	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ ALL OWNED AUTOS ☒ HIRED AUTOS ☒ SCHEDULED AUTOS ☐ NON-OWNED AUTOS			A053475	7/26/2018	7/26/2019	COMBINED SINGLE LIMIT (Per accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☒ UMBRELLA LIAB ☒ EXCESS LIAB ☒ CLAIMS-MADE DED ☒ RETENTION \$ 0			A053475	7/26/2018	7/26/2019	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	A053505	7/26/2018	7/26/2019	☒ WC STATUS: ☐ OTHER EL EACH ACCIDENT \$ 500,000 EL DISEASE - EA EMPLOYEE \$ 500,000 EL DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

T.J. Wagner

ACORD 25 (2010/05)

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Exhibit D



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
5/5/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Kunkel & Associates, Inc. 401 Data Court Dubuque IA 52003	CONTACT NAME: TJ Wagner	
	PHONE (A/C, No, Ext): 563-585-2310	FAX (A/C, No): 563-557-7316
	E-MAIL ADDRESS: certs@kunkel-inc.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Integrity Insurance Company	14303
INSURED Eagle Point Solar LLC 2400 Kerper Boulevard, Suite A20 Dubuque IA 52001	EAGPO12	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 2144315292 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☒ PRO-JECT ☒ LOC OTHER:			CPP2788864	7/26/2019	7/26/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ☒ NON-OWNED AUTOS			CA2788866	7/26/2019	7/26/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☒ RETENTION \$ 0			CUP2788868	7/26/2019	7/26/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
A	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		☐ Y ☒ N ☐ N/A	WCP2788867	7/26/2019	7/26/2020	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: solar photovoltaic system at the Public Works Facility
Village of McFarland, Alliant Energy, and Strand Associates, Inc., are additional insured on the General Liability policy with respect to the ongoing and completed operations performed by the named insured, and additional insured on the Auto Liability policy as per written contract.

CERTIFICATE HOLDER	CANCELLATION
Village of McFarland 5115 Terminal Drive McFarland WI 53558	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>T.J. Wagner</i>

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2. That failure of Contractor to comply with the above requirements with respect to Additional Insured Endorsement and/or Certificate of Insurance shall not be construed as waiver of those provisions by any of the additional insureds so identified above.

INDEMNIFICATION

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless the Village of McFarland, Alliant Energy, and Strand Associates, Inc.[®], and against all claims, costs, losses, and damages arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

The Village of McFarland will receive sealed bids to complete the proposed work until 12:00 PM, May 6, 2020.

Questions concerning the project or arranging a site visit with Village staff should be directed to: Village Administrator Matt Schuenke at 608-838-3153- or email: matt.schuenke@mcfarland.wi.us

Responses to all inquiries about the project or bid requirements will be distributed to all companies by email based upon the email address supplied to the Village of McFarland by the prospective bidders.

Company name	Eagle Point Solar LLC
Address	2400 Kerper Blvd Suite A-20 Dubuque, IA 52001
Contact Name	David Pluym
Phone #	563-582-4044
Email	dpluym@eaglepointsolar.com



Signature

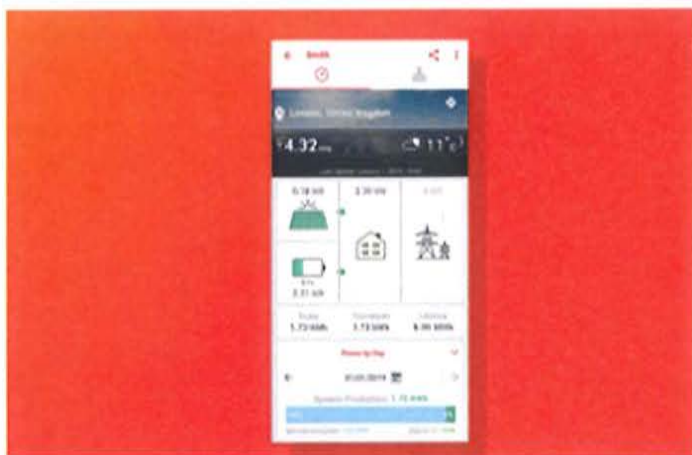
David J Pluym
Name

05/05/2020
Date

SolarEdge Monitoring System

Monitoring Platform

The **monitoring platform** provides enhanced PV performance monitoring and yield assurance through immediate fault detection and alerts at the module level, string level and system level. No hardware or wiring is required to transmit data from the power optimizers to the inverter: the monitoring sensors and transmitters are built into the SolarEdge power optimizer and **solar inverter**, and measurement data is transmitted over the regular power lines.



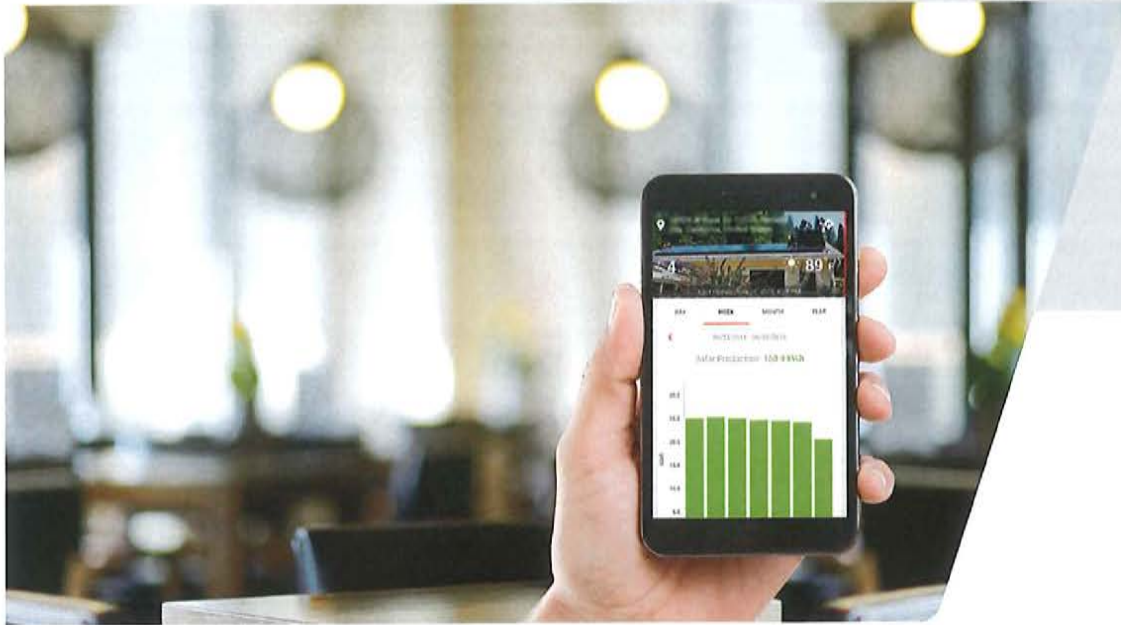
Key Benefits:

- Full visibility of your system's technical and financial performance, including interactive charts and site layout
- Visualization of PV production, building consumption, and self-consumption
- Data presentation at the module-level, string-level and system level
- Comprehensive site-level and fleet-level reporting and analysis tools with an option to schedule automatic reports and export reports
- Effective fleet management and improved O&M capabilities:
 - Automatic alerts on system issues
 - Remote troubleshooting and access to real-time system data and guided root-cause fault analysis
 - High resolution data, including historical and aggregated views with comparative analysis diagnostics
- Easy access from a computer, smartphone, or tablet
- Multiple options for social sharing and public display to drive referrals and generate leads
- Free for 25 years

All these features enable integrators, installers, maintenance staff, and system owners to improve the site performance, assure the yield of the system, maximize solar power harvesting and reduce maintenance costs by increasing system up-time and resolving faults more effectively.

The physical layout of the monitoring platform allows you to monitor systems at the module level, and pinpoint issues to the exact location of each module on a virtual site map.

To create and edit your site's physical layout quickly and easily, use the SolarEdge **Mapper** application or the web-based layout editor.



Know that your PV system is producing to its maximum potential.

View historic and real-time energy production of your SolarEdge optimized system on the go with your smart phone.



Easy to use charts show your PV performance.

Compare today's production to past measurements.



Want to know how your PV system stacks up against your friends?

You can share real-time system performance details with your friends across many social platforms: email, messaging apps, Facebook and on Twitter.



Real-time and forecasted weather data.

Evaluate your system's performance by understanding what environmental conditions affect energy production.

See and share your system's performance on the go: real-time insight to home energy production and usage.

Gain visibility into your system performance in real-time with this intuitive, user-friendly app. Share your system performance at the push of a button.

Don't have a solar system yet? You can explore and learn about features by using the demo account.

Download the app for free on iPhone or Android by visiting the AppStore or Google Play.



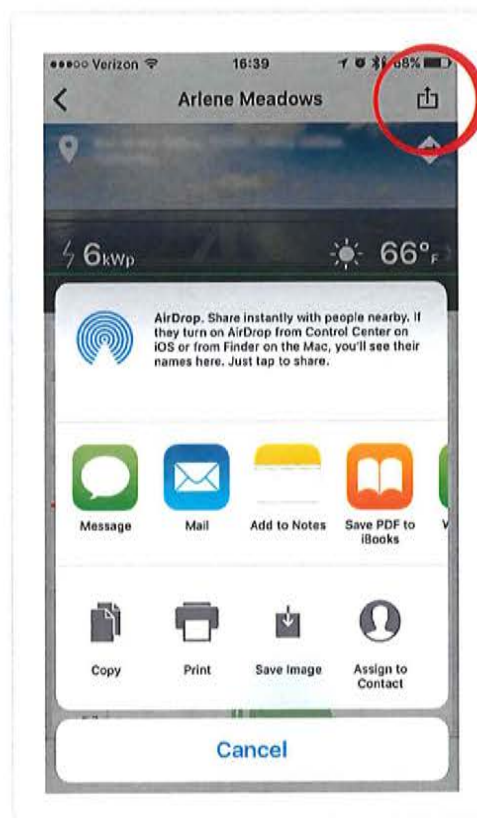
Getting Started with the SolarEdge Monitoring App

After your inverter connects to the internet, SolarEdge automatically begins tracking and reporting your site's performance. Your installer will need to create the physical layout in the SolarEdge portal for you to view. **Confirm with your installer regarding completion date of your homeowner account.**

* Before you can register you need to ensure that SolarEdge email isn't getting stuck in your SPAM folder. Add DoNotReply@solaredge.com to your contacts and watch for a registration email with the subject line: *Registration to SolarEdge Monitoring Portal.*

To begin using:

1. A link to register will be sent to you in email. *Note: if you click the link and nothing happens, simply copy and paste the same URL into your web browser address bar.
2. Register your site with SolarEdge:
 - You will need to enter your name, phone number, language, create a password and select units (*Imperial* for Fahrenheit and *Metric* for Celsius)
 - Check the box agreeing to SolarEdge's terms and conditions and select if you want news, updates or technical notifications from SolarEdge
 - Click Confirm, log-in and view your energy performance
3. To get updated information on your smart phone, download the free monitoring app:
 - Visit Google Play or the App Store to download the "SolarEdge Monitoring" app.
 - Login using the same email address and password that you created during registration. The app will remember your login information; allowing you to see your system's performance at any time.
4. You can begin sharing your system's performance on your favorite social network or by email or text.



Click on
the icon
to share

Three Phase Inverters

For the 208V Grid for North America

SE9KUS / SE14.4KUS



The best choice for SolarEdge enabled systems

- / Specifically designed to work with power optimizers
- / Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- / UL1741 SA certified, for CPUC Rule 21 grid compliance
- / Built-in module-level monitoring
- / Internet connection through Ethernet or Wireless
- / Small, lightweight, and easy to install outdoors or indoors on provided bracket
- / Fixed voltage inverter for longer strings
- / Integrated Safety Switch
- / Supplied with RS485 Surge Protection, to better withstand lightning events

/ Three Phase Inverters

For the 208V Grid for North America

SE9KUS / SE14.4KUS

SE9KUS		SE14.4KUS	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXK-XXXXXNXXX		
OUTPUT			
Rated AC Power Output	9000	14400	VA
Maximum AC Power Output	9000	14400	VA
AC Output Line Connections	4-wire WYE (L1-L2-L3-N) plus PE or 3 wire Delta		
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-N)	105-120-132.5		Vac
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-L)	183-208-229		Vac
AC Frequency Min-Nom-Max ⁽²⁾	59.3 - 60 - 60.5		Hz
Max. Continuous Output Current (per Phase)	25	40	A
GFDI Threshold	1		A
Utility Monitoring, Islanding Protection, Country Configurable Set Points	Yes		
INPUT			
Maximum DC Power (Module STC)	12150	19400	W
Transformer-less, Ungrounded	Yes		
Maximum Input Voltage DC to Gnd	250	300	Vdc
Maximum Input Voltage DC+ to DC-	500	600	Vdc
Nominal Input Voltage DC to Gnd	200		Vdc
Nominal Input Voltage DC+ to DC-	400		Vdc
Maximum Input Current	26.5	38	Adc
Maximum Input Short Circuit Current	45		Adc
Reverse-Polarity Protection	Yes		
Ground-Fault Isolation Detection	1MΩ Sensitivity	350kΩ Sensitivity ⁽³⁾	
CEC Weighted Efficiency	96.5	97	%
Night-time Power Consumption	< 3	< 4	W
ADDITIONAL FEATURES			
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional)		
Rapid Shutdown – NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect		
RS485 Surge Protection	Supplied with the inverter		
STANDARD COMPLIANCE			
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCEI according to T.I.L. M-07		
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (H-I)		
Emissions	FCC part15 class B		
INSTALLATION SPECIFICATIONS			
AC output conduit size / AWG range	3/4" minimum / 12-6 AWG	3/4" minimum / 8-4 AWG	
DC input conduit size / AWG range	3/4" minimum / 12-6 AWG		
Number of DC inputs	2 pairs	3 pairs ⁽⁴⁾	
Dimensions (H x W x D)	21 x 12.5 x 10.5 / 540 x 315 x 260		in / mm
Dimensions with Safety Switch (H x W x D)	30.5 x 12.5 x 10.5 / 775 x 315 x 260		in / mm
Weight	73.2 / 33.2	99.5 / 45	lb / kg
Weight with Safety Switch	79.7 / 36.2	106 / 48	lb / kg
Cooling	Fans (user replaceable)		
Noise	< 50	< 55	dBA
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁵⁾		*F / °C
Protection Rating	NEMA 3R		

⁽¹⁾ For 277/480V inverters refer to: <https://www.solaredge.com/sites/default/files/se-three-phase-us-inverter-datasheet.pdf>

⁽²⁾ For other regional settings please contact SolarEdge support

⁽³⁾ Where permitted by local regulations

⁽⁴⁾ Field replacement kit for 1 pair of inputs P/N: DCD-3PH-1TBK; Field replacement kit for 3 pairs of fuses and holders P/N: DCD-3PH-6FHK-S1

⁽⁵⁾ For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>



SolarEdge Power Optimizer

Module Add-On For North America

P300 / P320 / P400 / P405



POWER OPTIMIZER

PV power optimization at the module-level

- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety



SolarEdge Power Optimizer

Module Add-On for North America

P300 / P320 / P400 / P405

	P300 (for 60-cell modules)	P320 (for high-power 60-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	
INPUT					
Rated Input DC Power ⁽¹⁾	300	320	400	405	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		80	125	Vdc
MPPT Operating Range	8 - 48		8 - 80	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	10	11	10		Adc
Maximum DC Input Current	12.5	13.75	12.5		Adc
Maximum Efficiency			99.5		%
Weighted Efficiency			98.8		%
Overvoltage Category			II		
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)					
Maximum Output Current		15			Adc
Maximum Output Voltage		60		85	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)					
Safety Output Voltage per Power Optimizer		1			Vdc
STANDARD COMPLIANCE					
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3				
Safety	IEC62109-1 (class II safety), UL1741				
RoHS	Yes				
INSTALLATION SPECIFICATIONS					
Maximum Allowed System Voltage	1000				Vdc
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters				
Dimensions (W x L x H)	128 x 152 x 27.5 / 5 x 5.97 x 1.08	128 x 152 x 35 / 5 x 5.97 x 1.37	128 x 152 x 48 / 5 x 5.97 x 1.89		mm / in
Weight (including cables)	770 / 1.7	930 / 2.05	930 / 2.05		gr / lb
Input Connector	MC4 Compatible				
Output Wire Type / Connector	Double Insulated; MC4 Compatible				
Output Wire Length	0.95 / 3.0		1.2 / 3.9		m / ft
Operating Temperature Range	-40 - +85 / -40 - +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

⁽¹⁾ Rated STC power of the module. Module of up to +5% power tolerance allowed.

PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER ⁽²⁾	SINGLE PHASE	THREE PHASE 208V	THREE PHASE 480V	
Minimum String Length (Power Optimizers)	8	10	18	
Maximum String Length (Power Optimizers)	25	25	50	
Maximum Power per String	5250	6000	12750	W
Parallel Strings of Different Lengths or Orientations	Yes			

⁽²⁾ It is not allowed to mix P405 with P300/P400/P600/P700 in one string.



LIMITED PRODUCT WARRANTY

This SolarEdge Technologies Ltd. Limited Warranty covers defects in workmanship and materials of the below-listed products for the applicable warranty period set out below:

- **Power optimizers:** 25 years commencing on the earlier of: (i) 4 months from the date the power optimizers are shipped from SolarEdge; and (ii) the installation of the power optimizers, *provided, however*, that for the module embedded power optimizers (CSI and OPJ models), the Warranty Period shall not exceed the maximum of (1) the module product warranty and (2) the module power warranty periods provided by the applicable module manufacturer.
- **Inverters, Safety & Monitoring Interface (SMI), Auto-transformer, GSM Cellular Modem:** 12* years commencing on the earlier of: (i) 4 months from the date the products are shipped from SolarEdge; and (ii) the installation of the products.
- **StorEdge Interface:** 10 years commencing on the earlier of: (i) 4 months from the date the Interfaces are shipped from SolarEdge; and (ii) the installation of the Interfaces.
- **Home Gateway, Control and Communication Gateway, Firefighter Gateway, Wireless Communication Products excluding GSM Cellular Modem, RS485 Expansion Kit, SolarEdge Meter, Smart Monitoring Combiner Box:** 5 years commencing on the earlier of: (i) 4 months from the date the product is shipped from SolarEdge; and (ii) the installation of the product. Warranty duration of wireless communication products is the same whether or not the product is pre-installed in the inverter.

* In some countries the inverter warranty is limited to 7 years. For a list of these countries please access http://www.solaredge.com/warranty_exceptions

The Limited Warranty does not apply to components which are separate from the Products, ancillary equipment and consumables, such as, for example, cables, fuses, wires and connectors, whether supplied by SolarEdge or others. Some components may carry their own manufacturer warranty. See product datasheet for more details. In addition, for all power optimizers with a part number ending in C, the SolarEdge warranty does not apply to the input connector.

The Limited Warranty only applies to the buyer who has purchased the Products from an authorized seller of SolarEdge for use in accordance with their intended purpose. The Limited Warranty may be transferred from buyer to any assignee, and will remain in effect for the time period remaining under the foregoing warranties, *provided* that the Products are not moved outside its original country of installation and any reinstallation is done in accordance with the installation directions and use guidelines accompany the Products (collectively the "Documentation").

If, during the applicable Warranty Period, buyer discovers any defect in workmanship and materials and seeks to activate the Limited Warranty, then buyer shall, promptly after such discovery, report the defect to SolarEdge by sending an email to support@solaredge.com with the following information: (i) a short description of the defect, (ii) the Product's serial number, and (iii) a scanned copy of the purchase receipt or warranty certificate of the applicable Product.

Upon buyer's notification, SolarEdge shall determine whether the reported defect is eligible for coverage under the Limited Warranty. The Product's serial number must be legible and properly attached to the Product in order to be eligible for Warranty coverage. If SolarEdge determines that the reported defect is not eligible for coverage under the Limited Warranty, SolarEdge will notify buyer accordingly and will explain the reason why such coverage is not available. If SolarEdge determines that the reported defect is eligible for coverage under the Limited Warranty, SolarEdge will notify buyer accordingly, and SolarEdge may, in its sole discretion, take any of the following actions:

- repair the Product at SolarEdge's facilities or on-site; or
- issue a credit note for the defective Product in an amount up to its actual value at the time buyer notifies SolarEdge of the defect, as determined by SolarEdge, for use toward the purchase of a new Product; or
- provide Buyer with replacement units for the Product.

SolarEdge will determine whether the Product should be returned to SolarEdge and, if SolarEdge so determined, the Return Merchandise Authorization ("RMA") Procedure (set out below) will be invoked. Where replacement Products are sent, SolarEdge generally sends such products within 48 hours. SolarEdge may use new, used or refurbished parts that are at least functionally equivalent to the original part when making warranty repairs. The repaired Product or replacement parts or Product, as applicable, shall continue to be covered under the Limited Warranty for the remainder of the then-current Warranty Period for the Product.

Where the RMA Procedure is invoked by SolarEdge, SolarEdge will instruct buyer how to package and ship the Product or part(s) to the designated location. SolarEdge will bear the cost of such shipment, upon receipt of the Product or part(s), SolarEdge will, at its expense and sole discretion, either repair or replace the Product or part(s).

SolarEdge will deliver the repaired or replaced Product or part(s) to buyer at buyer's designated location in countries where SolarEdge has an office and/or there is a significant PV market. For the specific list of countries to which such service is provided, please access http://www.solaredge.com/articles/shipping_cost_coverage_warranty. SolarEdge will bear the cost of such shipment, including shipping and customs (where applicable) and buyer shall bear any applicable value added tax. SolarEdge may elect to ship replacement Product and/or part(s) prior to receipt of the Product and/or part(s) to be returned to SolarEdge as per the above.

Where SolarEdge decides to repair the Product or part(s), warranty coverage includes labor and material costs necessarily incurred to correct the Product defect; and where SolarEdge decides to replace the Product or part(s) to which the Limited Warranty applies, warranty coverage includes the cost of the replacement of the Product or part(s). In addition, SolarEdge shall bear shipping costs in respect to the foregoing, as set out above. All other costs, including, without limitation, travel and boarding costs of SolarEdge service personnel that are incurred for repairs of Products on-site, as well as costs related to buyer's employees and contractors repair or replacement activities, are not covered by the Limited Warranty and, unless otherwise agreed in writing in advance by SolarEdge, shall be borne by the buyer.

Warranty Exclusions: This Limited Warranty will not apply if (a) buyer is in default under the General Terms and Conditions of other Agreement governing the purchase of the Product, or (b) the Product or any part thereof is:

- damaged as a result of misuse, abuse, accident, negligence or failure to maintain the Product;
- damaged as a result of modifications, alterations or attachments thereto which were not pre-authorized in writing by SolarEdge;
- damaged due to the failure to observe the applicable safety regulations governing the proper use of the Product;
- installed or operated not in strict conformance with the Documentation, including without limitation, not ensuring sufficient ventilation for the Product as described in SolarEdge installation guide;
- opened, modified or disassembled in any way without SolarEdge's prior written consent;
- used in combination with equipment, items or materials not permitted by the Documentation or in violation of local codes and standards;
- damaged or rendered non-functional as a result of power surges, lightning, fire, flood, pest damage, accident, action of third parties, or other events beyond SolarEdge's reasonable control or not arising from normal operating conditions; or
- damaged during or in connection with shipping or transport to or from buyer where buyer arranges such shipping or transport.

This Limited Warranty does not cover cosmetic or superficial defects, dents, marks or scratches, which do not influence the proper functioning of the Product.

THE LIMITED WARRANTIES SET OUT HEREIN ARE IN LIEU OF ANY OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS PURCHASED BY BUYER FROM SOLAREGE, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL (INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), ALL OF WHICH ARE EXPRESSLY EXCLUDED TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW.

Claims by buyer that go beyond the warranty terms set out herein, including claims for compensation or damages, are not covered by the Limited Warranty, insofar as SolarEdge is not subject to statutory liability. In such cases, please contact the company that sold you the Product. Eventual claims in accordance with the law on product liability remain unaffected.

Coverage under the Limited Warranty is subject to buyer complying with the foregoing notification requirements and cooperating with SolarEdge's directions. SolarEdge's sole obligation and buyer's exclusive remedy for any defect warranted hereunder is limited to those actions expressly stated above. Such actions are final and do not grant any further rights, in particular with respect to any claims for compensation.

Unless otherwise specified in an executed Agreement with SolarEdge, the Limited Warranty and related provisions set out herein are subject to SolarEdge's General Terms and Conditions, including, without limitation, the provisions thereof, which relate to disclaimer of warranties, limitation of liability and governing law and jurisdiction.

Revised: June 2016



395W PERC Module

JAM72S09 375-395/PR Series

Introduction

Powered by high-efficiency PERCIUM cells, this series of high-performance modules provides the most cost-effective solution for lowering the LCOE of any PV systems large or small.



5 busbar solar cell design



Higher output power



Excellent low-light performance

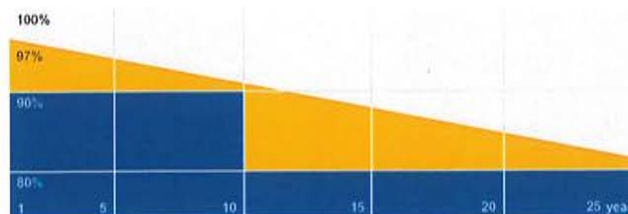


Lower temperature coefficient



Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



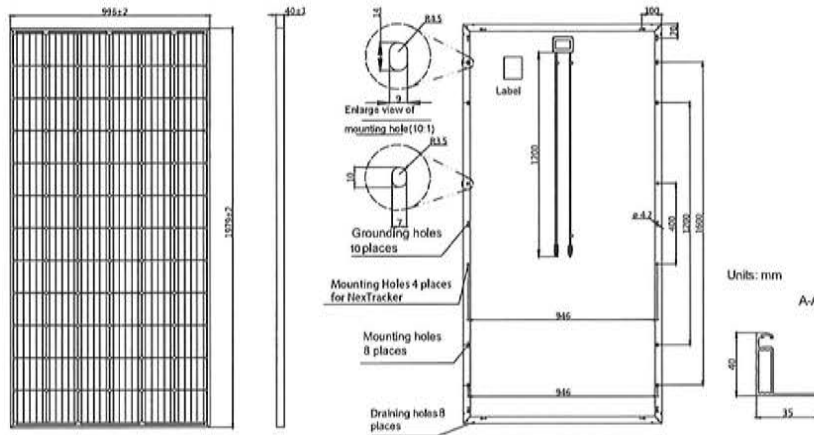
■ JA Linear Power Warranty ■ Industry Warranty

Comprehensive Certificates

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	22.3kg±3%
Dimensions	1979±2mm×996±2mm×40±1mm
Cable Cross Section Size	4mm ²
No. of cells	72(6x12)
Junction Box	IP67, 3 diodes
Connector	QC 4.10 (1000V) QC 4.10-35(1500V)
Packaging Configuration	27 Per Pallet

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72S09 -375/PR	JAM72S09 -380/PR	JAM72S09 -385/PR	JAM72S09 -390/PR	JAM72S09 -395/PR
Rated Maximum Power(P _{max}) [W]	375	380	385	390	395
Open Circuit Voltage(V _{oc}) [V]	48.47	48.75	49.04	49.35	49.64
Maximum Power Voltage(V _{mp}) [V]	39.27	39.59	39.90	40.21	40.48
Short Circuit Current(I _{sc}) [A]	10.06	10.12	10.17	10.22	10.27
Maximum Power Current(I _{mp}) [A]	9.55	9.60	9.65	9.70	9.76
Module Efficiency [%]	19.0	19.3	19.5	19.8	20.0
Power Tolerance	0~+5W				
Temperature Coefficient of I _{sc} (α _{Isc})	+0.060%/°C				
Temperature Coefficient of V _{oc} (β _{Voc})	-0.300%/°C				
Temperature Coefficient of P _{max} (γ _{Pmp})	-0.370%/°C				

STC

Irradiance 1000W/m², cell temperature 25°C, AM1.5G

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.
*For NexTracker installations static loading performance: front load measures 2400Pa, while back load measures 2400Pa.

ELECTRICAL PARAMETERS AT NOCT

TYPE	JAM72S09 -375/PR	JAM72S09 -380/PR	JAM72S09 -385/PR	JAM72S09 -390/PR	JAM72S09 -395/PR
Rated Max Power(P _{max}) [W]	278	281	285	289	292
Open Circuit Voltage(V _{oc}) [V]	45.86	46.15	46.47	46.78	47.09
Max Power Voltage(V _{mp}) [V]	37.05	37.34	37.64	37.92	38.21
Short Circuit Current(I _{sc}) [A]	7.95	7.99	8.03	8.07	8.11
Max Power Current(I _{mp}) [A]	7.49	7.53	7.57	7.61	7.65

NOCT

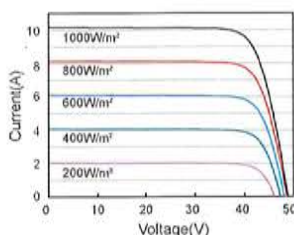
Irradiance 800W/m², ambient temperature 20°C,
wind speed 1m/s, AM1.5G

OPERATING CONDITIONS

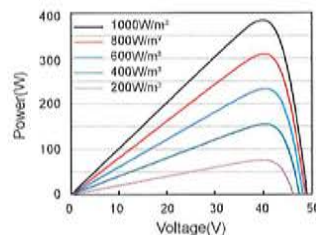
Maximum System Voltage	1000V/1500V DC(IEC)
Operating Temperature	-40°C~+85°C
Maximum Series Fuse	20A
Maximum Static Load,Front*	5400Pa
Maximum Static Load,Back*	2400Pa
NOCT	45±2°C
Application Class	Class A

CHARACTERISTICS

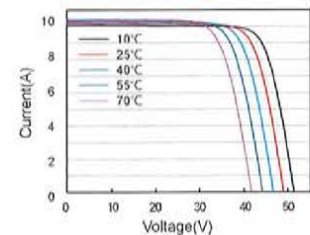
Current-Voltage Curve JAM72S09-385/PR



Power-Voltage Curve JAM72S09-385/PR



Current-Voltage Curve JAM72S09-385/PR



Limited Warranty

for PV Modules

JA SOLAR
www.jasolar.com

JA SOLAR HOLDINGS CO., LTD.
Add: No.35, Jiang Chang San Road, Zhabei, Shanghai 200435, China
Tel: +86-21-6095 5889/6095 6999
Email: service@jasolar.com
Website: www.jasolar.com

JA Solar © 2016

JA SOLAR

JA Solar Holdings Co., Ltd. and on behalf of ALL its DIRECTLY AND indirectly owned and controlled subsidiary, INCLUDING BUT NOT LIMITED TO Shanghai JA Solar Technology Co., Ltd. (hereinafter jointly referred to as "JA Solar") warrants its Photovoltaic Solar modules (MODULES) performance starting from the date of sale to the first customer installing (for their own use) the modules ("Customer") or starting at the latest 6 months after modules dispatch from the JA Solar factory, whichever occurs earlier (the "Warranty Commencement Date").

1. Limited Product Warranty – Twelve Year Repair or Replacement

JA Solar warrants that the MODULES together with the factory-assembled DC connectors and cables are free from any defects in materials and workmanship under normal application, usage, installation and service conditions for a period of one hundred and forty-four (144) months from the Warranty Commencement Date. If MODULES become malfunctioning or non-operative due to defects in material or workmanship during the one hundred and forty-four (144)-month period from the Warranty Commencement Date, as verified by an independent testing agency that will be selected and confirmed mutually by JA Solar and Customer in advance, JA Solar will, at its sole option, either repair or replace the malfunctioning or inoperative MODULES, MODULES' repair or replacement remedy shall be the sole and exclusive remedy provided under the Limited Product Warranty and shall not extend beyond the period set forth herein. This Limited Product Warranty does not warranty a specific power output at or during any time frame, which shall be exclusively covered under Section 2 of this Warranty hereinafter

("Limited Peak Power Warranty")

2. Limited Peak Power Warranty– Limited Remedy

JA Solar warrants that for a period of twenty-five years starting from the Warranty Commencement Date, less of power output against the minimum "Peak Power at STC" as specified on the label of the modules (hereinafter "Nominal Power") when measured at Standard Test Conditions (STC) for the Products shall not exceed:

(1) For Mono Products: 3 % for the first year from the Warranty Commencement Date, and 0.65% per year thereafter from the 2nd to the 25th year of the warranty period; with a power output standing at 81.4% of the Nominal Power at the end of the 25-year warranty period;

(2) For Poly Products: 2.5 % for the first year from the Warranty Commencement Date, and 0.7% per year thereafter from the 2nd to the 25th year of the warranty period; with a power output standing at 80.7% of the Nominal Power at the end of the 25-year warranty period.

Within the period of twenty-five (25)-year warranty period from the Warranty Commencement Date, should any qualified Module sold by JA Solar exhibit a loss of power output exceed the aforementioned warranted values, provided that any such declared loss in power has been verified by JA Solar, at its sole discretion is due to MODULES' defects in materials or workmanship attributable to JA Solar's own causes and further confirmed by an independent testing agency (if so requested by a customer) (which is to be selected and confirmed mutually by JA Solar and Customer in advance), JA Solar will, at its sole option and discretion, either (1) make up such loss in power by providing to customers additional MODULES; or (2) repair or replace the defective MODULES including free shipping to the location as set out in the original sales contract entered between JA Solar and the customer.

The remedies set forth herein are the sole and exclusive remedies JA Solar is bound to provide under the Limited Peak Power Warranty.

CAVEAT:

The shipping charges for any allegedly detected MODULES shall be borne by the customers making such claims in advance. Should the independent testing agency confirm that such filed detected are to be covered under this Warranty by JA Solar, the shipping charges advanced by the customers may be reimbursed by JA Solar against the original proof of expenditure.

3. Exclusions and Limitations

(a) Warranty claims from any customers, in any event, shall be filed in writing to JA Solar or its authorized distributors within the applicable warranty period and not beyond the last day of the applicable period of time as stated above.

(b) The Limited Product Warranty and Limited Peak Power Warranty shall not apply to MODULES which have been subject to:

- Misuse, abuse, neglect, vandalism or accident;
- Repair or modifications that do not strictly follow the manufacturer's instructions;
- Non-observance of JA Solar's maintenance instructions;
- Power failure, electrical spikes or surges, lightning, flood, fire, accidental breakage or other events outside JA Solar's control;
- Alteration, improper installation or application which is not compliant with JA Solar standard installation manual.

(c) The Limited Product Warranty and Limited Peak Power Warranty do not cover any costs associated with installation, removal or re-installation of the MODULES and (except as explicitly set forth in the last paragraph of the Section 5) customers clearance or any other costs for return of the MODULES.

(d) Warranty claims will not be honored if the type or serial number of JA Solar MODULES have been altered, removed or made illegible without written authorization from JA Solar.

4. Limitation of Warranty Scope

This Warranty as set forth herein is expressly in lieu of and excludes all other express or implied warranties, including but not limited to warranties of merchantability and of fitness for particular purpose, use, or application, and all other obligations or liabilities on the part of JA Solar, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by JA Solar. JA Solar shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or related to the MODULES, including, without limitation, any defects in the MODULES or from use or installation.

Under no circumstances shall JA Solar be liable for incidental, consequential or special damages, however caused. Loss of use, loss of profits, loss of production, and loss of revenues. The aforementioned alleged losses by customers are specifically and without limitation excluded from responsibilities of JA Solar. JA Solar's aggregate liability, if any, in damages or otherwise, shall not exceed the invoice value as paid by the Customer, for the single unit of MODULES.

5. Obtaining Warranty Performance

If the Customer has a justified claim covered by this Warranty, an immediate written notification shall be directly made to JA Solar by means of registered letter to the address of JA Solar listed hereunder, or sending a notification via e-mail to the e-mail account of JA Solar listed hereunder. Together with the notification, the Customer should enclose the evidence of the claim with the corresponding serial number of the MODULES and the date on which the MODULES have been purchased. An invoice with clear indication of the purchase date, purchase price, module type, stamp or signature of JA Solar or its distributors should also be submitted as part of the preliminary evidence.

If the MODULES will be returned to JA Solar for inspection, repair or replacement by JA Solar, JA Solar shall provide the Customer with a Return Merchandise Authorization (RMA). However, JA Solar will not accept a return of any MODULES without such RMA. In connection with both the Limited Product Warranty and Limited Peak Power Warranty, JA Solar may reimburse customer for reasonable, customary and documented transportation charges by sea freight for both the return of the MODULES and reshipment of any repair or replacement MODULES, only if such cost reimbursement is authorized by JA Solar's Customer Service Department in advance.

6. Transferability

This warranty is extended to the original end-user purchaser, and is also transferable to any subsequent owner of the location or holder of the product when MODULES remain at their original installed location upon satisfactory proof of succession or assignment.

7. Severability

If a section, provision or clause of this Warranty, or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such shall not affect and thus shall leave all other sections, provisions, clauses or applications under this Warranty severable, and therefore validly binding.

8. Dispute Resolution

In case of any dispute in terms of warranty-claims, a first-class international testing institute, such as PT Berlin, TÜV SÜD or Intertek, U.L., shall be entrusted by both parties upon mutual consents in order to provide third party verification and comments. All fees and expenses shall be borne by the party that demanded such verification procedure, unless otherwise agreed.

Further dispute over the claim shall be submitted to dispute resolution as stipulated in the main sales contract to which this Warranty is a part of and subject to the applicable jurisdiction agreed by the parties in the sales contract.

9. Various

The repair or replacement of the MODULES or the supply of additional MODULES does not lead to a new commencement of warranty terms, nor shall the original terms of this Warranty be extended. Any replaced MODULES shall become the property of JA Solar.

JA Solar shall at its own options to deliver another type of MODULES (different in size, color, shape, or power), either a new brand or the original one, in case that JA Solar has discontinued producing the module in question at the time of the claim.

10. Force Majeure

JA Solar shall not be responsible or liable to the Customer whatsoever or any third-party arising out of any non-performance or delay in performance of any terms and conditions of the sales, including this Warranty, due to causes of natural disasters such as fire, flood, blizzard, hurricane, thunder, acts of God, changes of public policies, terrorism, war, riots, strikes, unavailability of suitable and sufficient labor or materials and other events which are out of control of JA Solar.

REMARK:

"Peak Power" is the power in watt/peak that MODULES generates in its maximum power point under STC condition. "STC" are as follows:

- (a) Light spectrum of AM 1.5
- (b) Irradiance at 1,000W/m²
- (c) Cell temperature of 25 degree Centigrade at right angle irradiation

The measurements are carried out in accordance with IEC61215 as tested at the junction box terminals per the calibration and testing standards of JA Solar valid at the date of manufacture of the MODULES. JA Solar's calibration standards shall be in compliance with the standards applied by international institutions accredited for this purpose.

The right way to attach almost anything to metal roofs!

S-5![®]

The Right Way!

S-5-U Clamp

The S-5-U clamp is by far our most popular and most versatile clamp. It fits about 85% of the standing seam profiles manufactured in North America—including most structural and architectural profiles. It can be used on vertically oriented seams and, by rotating the clamp 90 degrees, it can also be used on most horizontal 2" seam profiles.

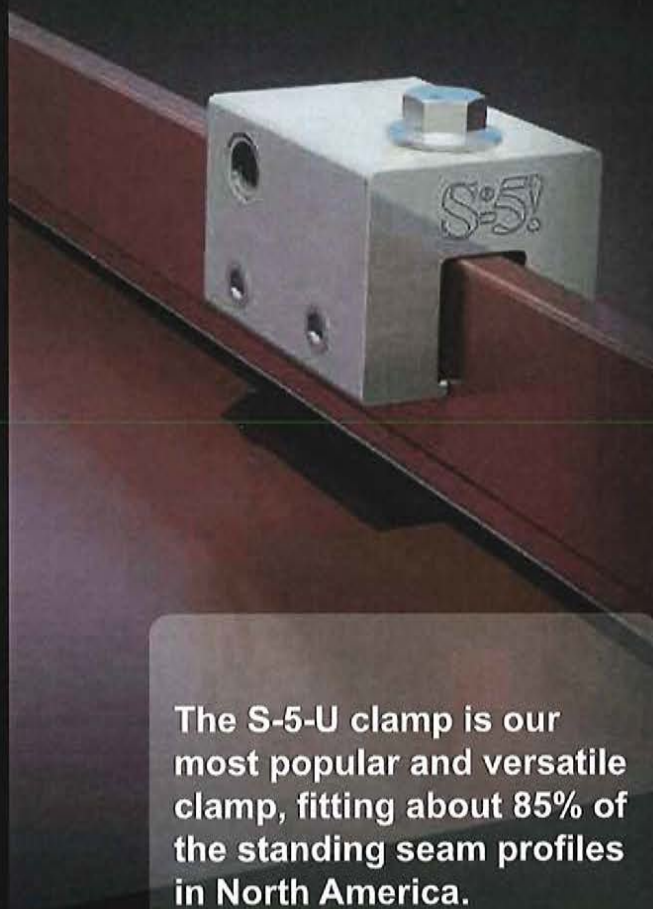
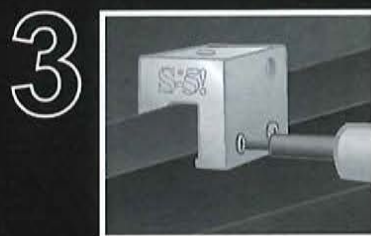
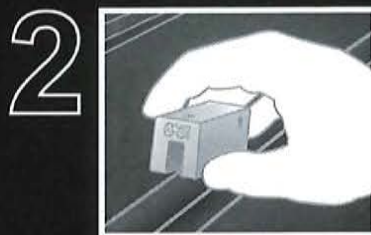
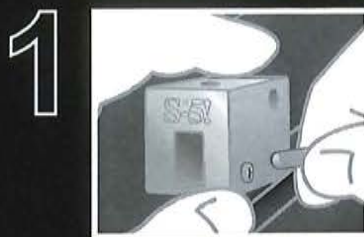
Its simple design, generous dimensioning, and multiple hole orientations are what make the S-5-U clamp so versatile for use with the S-5![®] snow retention products, such as ColorGard[®], as well as with other heavy-duty applications.

Installation is as simple as setting the specially patented round-point setscrews into the clamp, placing the clamp on the seam, and tightening them to the specified tension. Then, affix ancillary items using the bolt provided with the product. Go to www.S-5.com/tools for information and tools available for properly attaching and tensioning S-5! clamps.

S-5-U Mini Clamp

The S-5-U Mini is a bit shorter than the S-5-U and has one setscrew rather than two. The mini is the choice for attaching all kinds of rooftop accessories: signs, walkways, satellite dishes, antennas, rooftop lighting, lightning protection systems, solar arrays, exhaust stack bracing, conduit, condensate lines, mechanical equipment—just about anything!*

*S-5! mini clamps are not compatible with, and should not be used with S-5! SnoRail™/SnoFence™ or ColorGard[®] snow retention systems.



The S-5-U clamp is our most popular and versatile clamp, fitting about 85% of the standing seam profiles in North America.

S-5-U and S-5-U Mini



888-825-3432 | www.S-5.com |

METAL ROOF INNOVATIONS, LTD. (MRIL)
S-5!®
LIMITED WARRANTY

Metal Roof Innovations, Ltd (MRIL) warrants that all S-5!® products manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized MRIL distributor to the original purchaser. As purchaser's sole remedy for breach of this warranty, MRIL will, for a period of twenty-five (25) years after the date of sale, repair or replace any part of the S-5! manufactured product which is defective. This warranty applies only when the S-5! product is properly installed, used and maintained.

This warranty does not cover, and MRIL shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, negligence, misuse, abuse, accident, tampering, substitution of non-S-5! component parts, or incompatibility with equipment, structures, accessories or materials not manufactured by MRIL. The purchaser acknowledges that MRIL expresses no opinions as to the suitability of S-5! products or components for any specific application or project condition.

This warranty is conditioned upon (a) the prepaid return of the products claimed to be defective to an authorized MRIL distributor for verification of the claimed defect; and (b) receipt by MRIL of claims for product repair or replacement within thirty (30) days after discovery of the defect or after the defect could have been reasonably discovered. If the claimed defect is verified, MRIL will repair or replace free of charge any defective products manufactured by MRIL. Replacement product will be returned with transportation prepaid.

Claims under this warranty must be in writing and sent to MRIL along with a copy of this limited warranty, the part or product model name or number, date and place purchased, date installed, operating conditions, and date the defect was discovered. MRIL shall have the right to examine the components, related parts, and product application, including adjacent work on the actual building site. Purchaser grants MRIL access to the site of the installation during normal business hours for this purpose.

Disclaimers and Limitations. The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (expressed or implied). MRIL MAKES NO OTHER WARRANTIES ABOUT THE PRODUCTS AND DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR APPLICATION. PURCHASER ASSUMES ALL RISK OF USE OF ANY OF THE PRODUCTS IN COMBINATION WITH OR AS A COMPONENT PART OF ANY PRODUCT APPLICATION. NOTWITHSTANDING THE ABOVE AND REGARDLESS OF THE CIRCUMSTANCES, MRIL'S TOTAL LIABILITY TO PURCHASER IS LIMITED TO AND SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE DEFECTIVE PRODUCTS. PURCHASER WAIVES ANY AND ALL OTHER CLAIMS. IN NO EVENT SHALL MRIL BE LIABLE FOR, AND PURCHASER WAIVES ALL CLAIMS AGAINST MRIL RESPECT TO, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, OR FOR ANY LOST PROFITS. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES IS EXPRESSLY EXCLUDED. ANY CIVIL ACTION FOR BREACH OF WARRANTY MUST BE COMMENCED WITHIN TWENTY-FIVE (25) YEARS OF THE DATE OF SALE OR WITHIN ONE YEAR AFTER THE PURCHASER DISCOVERED OR SHOULD HAVE DISCOVERED THE DEFECTIVE PRODUCT

This warranty gives the purchaser specific legal rights. Purchaser may have other rights which vary from state to state.

Purchaser

Distributor

Project Name

Date of Sale

S-5!®

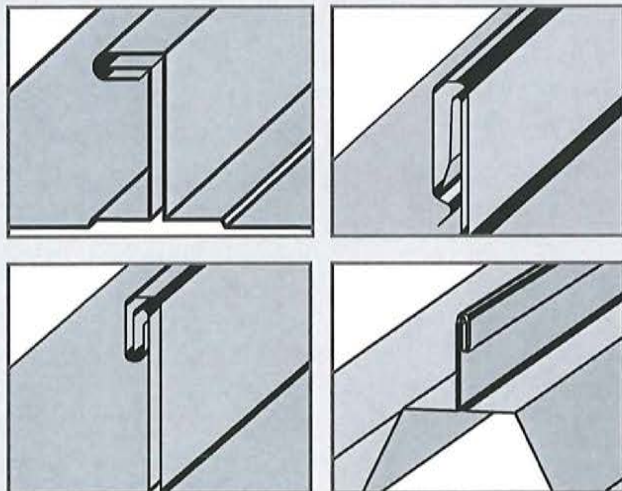
The Right Way!

The strength of the S-5-U clamp is in its simple design. The patented setscrews will slightly dimple the metal seam material but not pierce it—leaving the roof manufacturer's warranty intact.

The **S-5-U** and **S-5-U Mini** clamps are each furnished with the hardware shown to the right. Each box also includes a bit tip for tightening setscrews using an electric screw gun. A structural aluminum attachment clamp, the S-5-U is compatible with most common metal roofing materials excluding copper. All included hardware is stainless steel. Please visit www.S-5.com for more information including CAD details, metallurgical compatibilities and specifications.

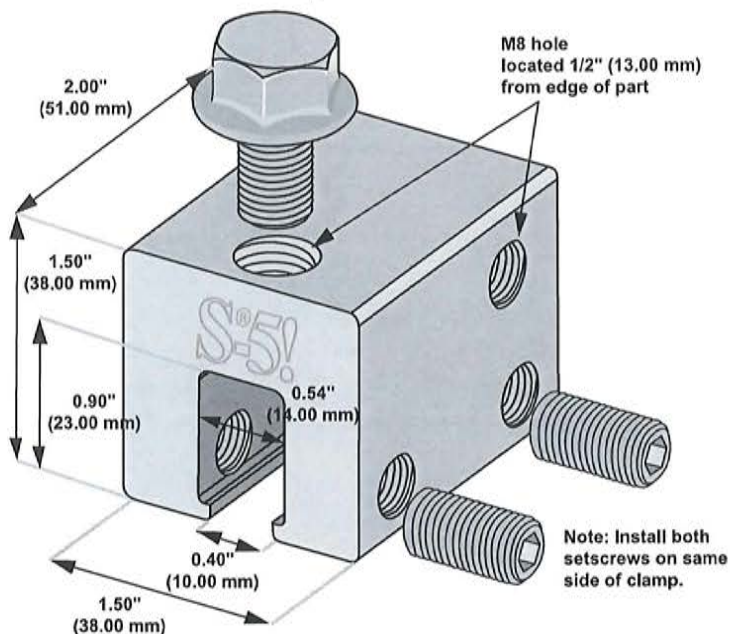
The S-5-U clamp has been tested for load-to-failure results on most major brands and profiles of standing seam roofing. The independent lab test data found at www.S-5.com can be used for load-critical designs and applications. S-5!® holding strength is unmatched in the industry.

Example Profiles

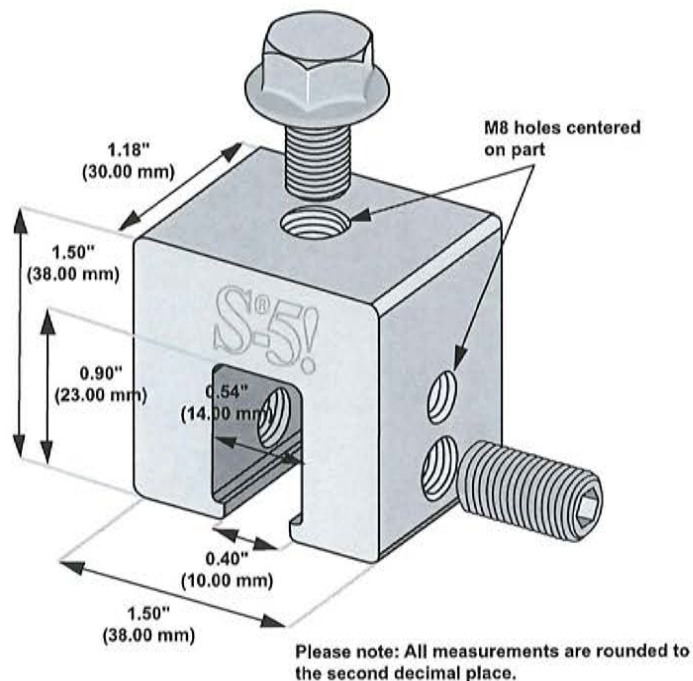


For horizontal seams under 0.65", do not use this clamp. Visit www.S-5.com for more detailed information and proper clamp usage.

S-5-U Clamp



S-5-U Mini Clamp



S-5!® Warning! Please use this product responsibly!

Products are protected by multiple U.S. and foreign patents. Visit the website at www.S-5.com for complete information on patents and trademarks. For maximum holding strength, setscrews should be tensioned and re-tensioned as the seam material compresses. Clamp setscrew tension should be verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel, and between 130 and 150 inch pounds for all other metals and thinner gauges of steel. Consult the S-5! website at www.S-5.com for published data regarding holding strength.

Copyright 2015, Metal Roof Innovations, Ltd. S-5! products are patent protected. S-5! aggressively protects its patents, trademarks, and copyrights. Version 052115.

Distributed by

IronRidge Limited Warranties

Effective for IronRidge, Inc. ("IronRidge") mounting structure components ("Products") manufactured after April 1st, 2012, IronRidge provides the following warranties, for Products installed properly and used for the purpose for which the Products are designed:

- finishes shall be free of visible defects, peeling, or cracking, under normal atmospheric conditions, for a period of three (3) years from the earlier of (i) the date of complete installation of the Product or (ii) thirty days after the original purchaser's date of purchase of the Product ("Finish Warranty");
- components shall be free of structurally-related defects in materials for a period of ten (10) years from the earlier of (i) the date of complete installation of the Product or (ii) thirty days after the original purchaser's date of purchase of the Product;
- components shall be free of functionally-related manufacturing defects for a period of twenty (20) years from date of manufacture.

The Finish Warranty does not apply to: (a) surface oxidation of the galvanized steel components or any foreign residue deposited on Product finish; and (b) Products installed in corrosive atmospheric conditions, as defined solely by IronRidge; corrosive atmospheric conditions include, but are not limited to, conditions where Product is exposed to corrosive chemicals, fumes, cement dust, salt water marine environments or to continual spraying of either salt or fresh water. The Finish Warranty is VOID if (c) the practices specified by AAMA 609 & 610-02 – "Cleaning and Maintenance for Architecturally Finished Aluminum" (www.aamanet.org) are not followed by Purchaser for IronRidge's aluminum based components; and (d) if the practices specified by ASTM A780 / A780M - 09 "Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings" are not followed by Purchaser for IronRidge's galvanized steel-based components.

The warranties above do not cover any parts or materials not manufactured by IronRidge, and exclude non-functionally-related defects, as defined solely by IronRidge. The warranties do not cover any defect that has not been reported to IronRidge in writing within twenty (20) days after discovery of such defect.

In the event of breach of or non-compliance with the warranties set forth above, IronRidge's sole obligation and liability, and the sole and exclusive remedy for such breach or non-compliance, shall be correction of defects by repair, replacement, or credit, at IronRidge's sole discretion. Such repair, replacement or credit shall completely satisfy and discharge all of IronRidge's liability with respect to these warranties.

Refurbished Product may be used to repair or replace the defective components. Transportation, installation, labor, or any other costs associated with Product replacement are not covered by these warranties and are not reimbursable. These warranties additionally do not cover (a) normal wear, or damage resulting from misuse, overloading, abuse, improper installation (including failure to follow professional instruction and certification), negligence, or accident, or from force majeure acts including any natural disasters, war or criminal acts; and (b) Products that have been altered, modified or repaired without written authorization from IronRidge or its authorized representative; and (c) Products used in a manner or for a purpose other than that specified by IronRidge. A formal document proving the purchase and the purchase date of the Product is required with any warranty claim.

Except as set forth above, IronRidge sells the Products on an "AS IS" basis, which may not be free of errors or defects, and ALL EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUALITY, WORKMANLIKE EFFORT, CORRESPONDENCE TO DESCRIPTION, DESIGN, TITLE OR NON-INFRINGEMENT, OR ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE OR TRADE PRACTICE, ARE HEREBY DISCLAIMED.



Dear Solar PV installers and Trade Allies,

Participation in the residential Solar PV offerings at the end of 2019 and the start of 2020 has led to unprecedented incentive subscription. Because of this, it is necessary to re-evaluate the incentive structure in order to provide incentives through the end of the year. Some changes that are being put in place include:

- Focus on Energy has added additional dollars to the residential incentive fund. The additional incentive funding is reflected on the website. Further shifts in funding may take place later in the year, but is not guaranteed.
- Effective immediately:
 - Incentive levels for projects with existing reservations will remain the same.
 - For new reservations and for all projects without a reservation that complete on or after June 1, 2020:
 - The incentive for residential systems will be reduced from \$300 to \$200 per kW up to \$1,000.
 - The incentive for commercial systems will also be reduced. Please see the table below.

Commercial	\$ / kW (DC)	Max Incentive
0 to 5 kW	\$200	\$1,000
5 to 10 kW	\$150	\$1,750
10 to 100 kW	\$125	\$13,000
100 to 300 kW	\$100	\$33,000
300 to 500 kW	\$85	\$50,000
500+ kW	\$0	\$50,000

Residential	\$ / kW (DC)	Max Incentive
All	\$200	\$1,000

FAQs

Q) What if my project is delayed due to permit or inspection delays related to COVID-19? Will the Program offer extensions for deadlines on existing reservations?

A) Existing reservations may be extended at Focus on Energy's discretion. If you have a project that will miss the deadline, please contact Focus on Energy at 800.762.7077 prior to the expiration of the reservation. We will need to know project name, project start date, reason for delay and expected finish date.

Q) If I submit a [reservation form](#) tomorrow, but I completed prior to June 1, what incentive will I receive?

A) You will receive the higher incentive.

Q) Does this change affect the rural or agricultural producer bonus?

Q) How quickly do I need to submit an application after a project is completed?

A) For projects with a reservation, the application must be received by Focus on Energy prior to the expiration of the reservation. For projects without a reservation, you must submit the application within 60 days of completion of install interconnect. Applications received after the 60 days may be subject to reduced or denied incentives. We encourage you to use the [online application](#) to submit for faster tracking and processing of your incentive.

Q) I submitted an application prior to this announcement. Will I receive the higher incentive?

A) If you have a reservation on file with Focus on Energy, you will have until the expiration date to install and submit the incentive application. If you do not have a reservation, the system would need to be installed before June 1, 2020 in order to receive the higher incentive.

Q) I quoted a customer recently. Now, do I have to go back and change my quote because the incentive has changed?

A) Unfortunately, you will, unless the project will be completed prior to June 1, 2020. The alternative would be for Focus on Energy to end the incentive offering early at current rates, leaving less for your future customers.

Q) How long is the reservation good for?

A) The reservation is 90 days for residential systems and 180 days for commercial systems. You have that amount of time to install, interconnect and submit the incentive application. Even if the system was completed before the expiration date, the incentive application must also be received by Focus on Energy on or before the expiration date. We encourage you to use the [online application](#) to submit for faster processing of your incentive.

Q) How long will these incentive rates stay in effect?

A) Focus on Energy anticipates these incentive rates will stay in effect until the end of 2021, coinciding with the end of the Investment Tax Credit. We are, however, keeping an eye on the market and may adjust rates as necessary.

We understand that this is a difficult change for you and for many of your current customers, and this is not something that we take lightly. However, it is a necessary step to avoid shutting down the offering prematurely. Please reach out to us with further questions.

Stay safe and healthy,
Focus on Energy

REDUCING ENERGY WASTE ACROSS WISCONSIN

Wisconsin utilities' statewide program for energy efficiency and renewable energy helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy information, resources and financial incentives help to implement energy efficiency and renewable energy projects that otherwise would not be completed. ©2020 Wisconsin Focus on Energy

WISCONSIN

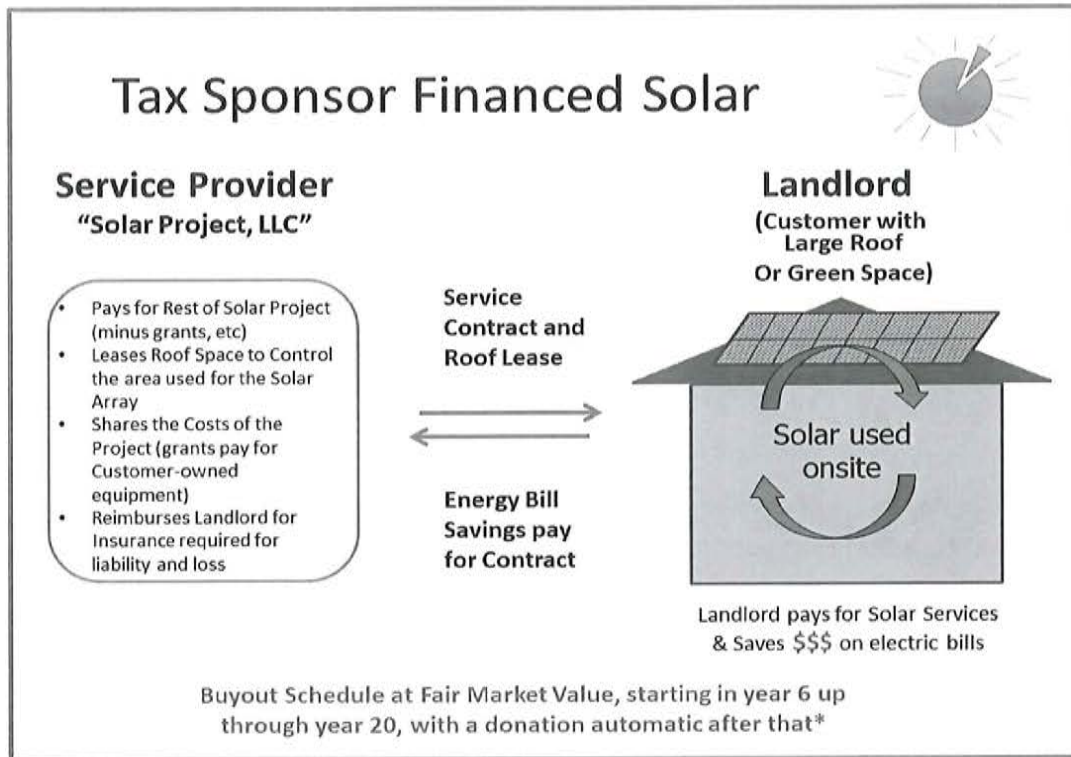


Focus on Energy
1 South Pinckney St., Suite 340, Madison, WI 53703

Click to [unsubscribe](#).

Legacy Solar Co-op

Introduction to Tax Financing for Solar Projects:



We have helped over 2 dozen Institutions in Wisconsin take advantage of this opportunity to reduce their up-front costs by 50% or more by having a **Tax Sponsor** own part of the solar array and reduce the cost of the solar energy equipment by virtue of the federal tax credit and 1st-year depreciation.

Like a lease, the Community Institution (Landlord) puts solar on their facility at a low cost, and pays for the service generated at a discount for at least the first 6 years, with the following options afterwards:

1. Buy out the rest of the solar project at **Fair Market Value**;
2. **Receive as a donation** the project to your Non-Profit; and/or
3. **A combination of both**, sometime within the first 12 years*.

These options allow the hosting Community Group to maximize their energy dollar and enjoy a legacy of clean energy electric bill savings over the next 30 to 40 years.

Let us know if your Community Institution has a good roof to lease out to a tax sponsor for this type of arrangement and we'd be happy to work with you to see if tax financing will be a good fit for your organization or municipality.

**Donation to non-profit depends on the Tax Sponsor's willingness and ability to either take a loss as early as year 6 or break-even by year 10, or earn a small profit by year 12. Each case is unique and requires a professional appraisal for Fair Market Value that the parties must agree upon. The donation option may be limited or unavailable in some cases.*

Contact us for more information:

608-957-6801 or Info@Legacysolarcoop.org Check out our track record: www.LegacySolarCoop.org



FINANCING CLEAN ENERGY

Communities are finding resources for financing clean energy from state and federal agencies. This section highlights programs and opportunities available to help a community identify funding for clean energy.

THE OFFICE OF ENERGY INNOVATION

The Wisconsin Office of Energy Innovation (OEI) is the state of Wisconsin's designated "Energy Office." Every state and territory has an energy office, funded by the US Department of Energy. Wisconsin's office seeks to promote innovative and effective energy policies and programs that benefit Wisconsin's citizens and businesses. OEI offers a number of programs and resources that can support local governments as they shift to renewable energy. The following programs may be especially useful for school districts, municipalities, and counties. OEI and UW Extension have compiled resources for local governments which can be found on the Energy On Wisconsin webpage.

ENERGY INDEPENDENT COMMUNITIES have either adopted a goal to source 25 percent of energy used from renewables by the year 2025 or have implemented another thoughtful plan towards achieving energy independence.

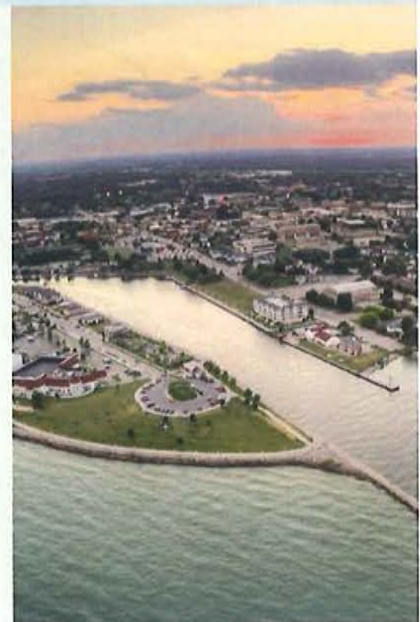
ENERGY INNOVATION GRANT PROGRAM offers competitive grant funding to support the reduction of energy consumption and its cost to businesses and taxpayers, increased use of renewable energy and transportation technologies, comprehensive energy planning, and bolstered preparedness and resiliency in energy systems.

FOCUS ON ENERGY is a ratepayer-funded energy efficiency and renewable energy program to help schools, government facilities, residences, and businesses reduce energy waste through partnerships with utilities across Wisconsin. Focus on Energy offers a number of financial incentives and technical resources to install renewable energy systems and energy efficient equipment and to reduce energy consumption. Learn more about Focus on Energy here: focusonenergy.com

MUNICIPAL ENERGY EFFICIENCY TECHNICAL ASSISTANCE PROGRAM (MEETAP) helps municipalities, cities, towns, counties, and K-12 School districts reach their energy efficiency goals. The program offers a number of services including a wastewater infrastructure accelerator, baseline analysis of building and vehicle usage to calculate energy expenditures, a plan to control energy costs, verification of energy savings, water utility benchmarking analysis, and more. MEETAP places a particular emphasis on helping municipalities, Tribal Nations, and schools execute successful Energy Saving Performance Contracts (ESPC). MEETAP has RFP, RFQ, and contract templates available, as well as advice for communities about measurement and verification of savings from energy projects. Local governments can request water utility benchmarking reports via email to oei@Wisconsin.gov or Megan.Levy@Wisconsin.gov.

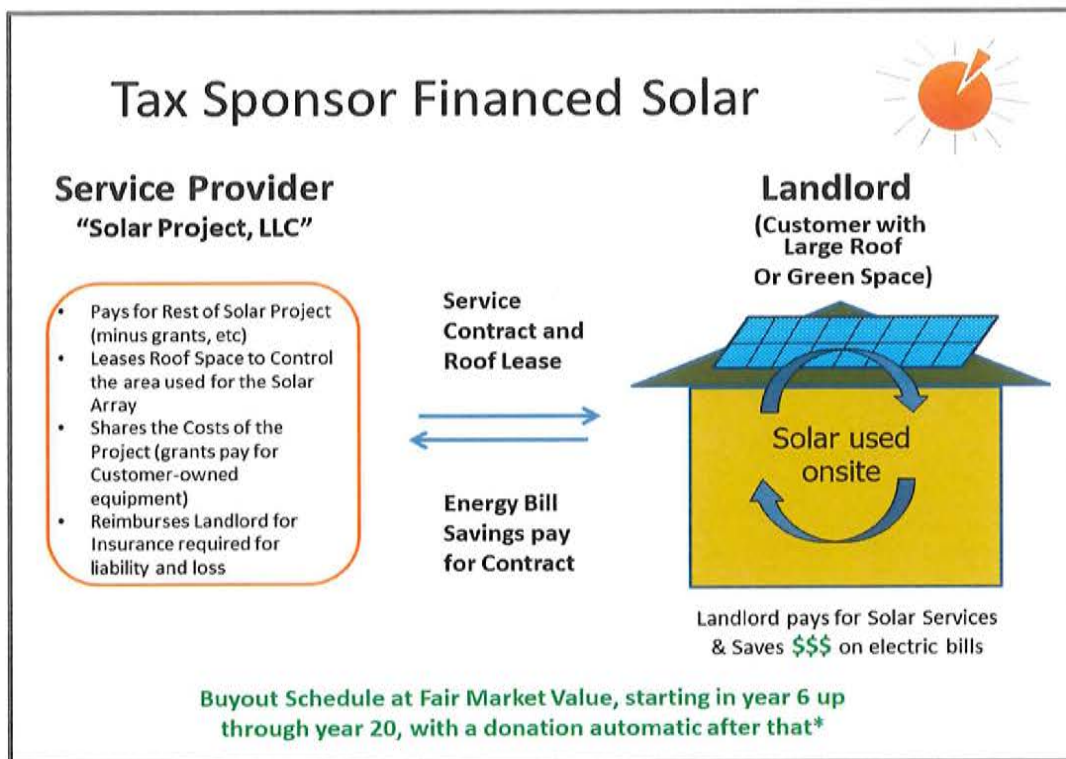
Sheboygan is probably similar to most cities. The city passed a voluntary resolution to meet the 25% clean energy goals by 2025 in 2008. They struggled for a couple of years without a political driver to move the goals forward into implementation. Committees would meet, but they didn't make much progress until Mayor Vandersteen was elected in 2012. It was a personal priority of his to have Sheboygan be more sustainable. There is limited bonding ability under the levy limits to invest in clean energy projects or technology. There are also limited overall funds to hire contractors to assist with developing plans. Convincing local leaders to spend more money upfront for cleaner, more sustainable projects is hard to do with overall limited funds.

Chad Pelishek
Director of Planning & Development: Sustainability Coordinator
for the City of Sheboygan



Legacy Solar Co-op

Introduction to Tax Financing for Solar Projects:



We have helped over 2 dozen Institutions in Wisconsin take advantage of this opportunity to reduce their up-front costs by 50% or more by having a **Tax Sponsor** own part of the solar array and reduce the cost of the solar energy equipment by virtue of the federal tax credit and 1st-year depreciation.

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Contact us for more information:

608-957-6801 or Info@Legacysolarcoop.org Check out our track record: www.LegacySolarCoop.org



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Community Development

CONTACT: Andrew Bremer, Comm & Eco Dev Director

AGENDA ITEM: Discussion and action regarding a request for a driveway variance by Sarah and John Sheehan for 6115 South Court.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

The Community & Economic Development Department received a request from Sarah and John Sheehan, 6115 South Court, to reconstruct two existing driveways into one driveway. The existing driveways are separated by a 3-4 foot green space and 1-3 foot curb space at the street. Individually each driveway complies with the requirements of Sec. 53-576 requiring a maximum 30 foot curb opening and 24 foot width at the front property line, along with being three feet off the side lot lines. The number of driveways is non-conforming to Sec. 53-509, which only allows one per residence, except where deemed necessary and feasible by the Director of Public Works for reasonable service to the property (language pre-Ordinance 2020-13). It is unclear when and under what circumstances the second driveway was permitted.

Removing the space between the two driveways is not permitted as the new driveway would be wider than permitted under the Village's driveway ordinance, Division 4, Sec. 53-546. Sec. 53-518 allows the Village Board to grant variances to driveway location, design and construction requirements; however, as written, Sec. 53-518 only applies to Division 3 and does not apply to the requirements of Division 4, Sec. 53-546. Staff and the Village Attorney find that this is an unintended omission of the Municipal Code. Assuming approval of Ordinance 2020-13, appearing earlier on the agenda, the Village Board could then grant a variance to the driveway requirements in the entire Article IX and not just those in Article IX, Division 3.

The proposed driveway design would maintain roughly the same net length of driveway opening at the street, compared to current conditions, by slightly widening the curb flares and the edge of driveway for each side lot line. Thus with approval of the variance, the existing non-conformity of having two driveways would be removed and replaced with a single driveway that is nonconforming in width at the curb and property line; but with limited net change compared to existing conditions.



The applicant has stated on page five of the application that there will be no change in the amount of impervious space devoted to driveways. The total amount of driveway space (impervious area) would increase slightly by approximately 90-100 square feet due to the removal of the 3'7" green space between the current driveways; however, the property will still meet the minimum usable open space requirement of 1,000 SF for the R-1B District with the proposed driveway design.

FINANCIAL/BUDGET IMPACT:

None.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

Sec. 53-509, Number of Driveways
Sec. 53-518, Driveway Variances
Sec. 53-576, Width of Urban Residential Zoned Driveways

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommend approval of the variance request.

ATTACHMENTS:

1. Request for Variance - 6115 South Court - Sheehan

Request is for a driveway variance by the Village Board under Sec. 53-518. References on this form to the Board of Zoning Appeals are not applicable or can be substituted for the Village Board.
- C&ED Director Bremer

VILLAGE OF McFarland

Community Development

Notice of Appeal and Application for Review

TO: The Board of Zoning Appeals, Village of McFarland, WI

\$380.00 filing fee required with each application.

Applicant is responsible for publication fees and notification charges, plus actual legal, engineering and financial consulting costs incurred by the Village, to be billed later. No permits can be issued until all monies owed are paid. Filing fee is non-refundable.

1) Name of Appellant/Applicant John & Sarah Sheehan
Address 6115 South Court
McFarland, WI 53558
Phone 608-286-0957

2) Address of Property Street 6115 South Court
Parcel No. _____
Lot _____ Block: _____

Present use of property _____
Proposed use of property _____
Zoning classification _____
Owner's name/address _____
(if other than shown in #1) _____

3) Has a previous appeal or application been made with respect to this property? ☐ Yes ☒ No If "yes", state nature of previous appeal: _____

Disposition of previous appeal: _____

Date of decision in previous case: _____

4) Date of decision or order of administrative official from which appeal is taken: _____

N/A

Date of notice of such decision received by applicant _____

5915 Milwaukee St. • P.O. Box 110 • McFarland, WI 53558-0110 • FAX: (608) 838-3619

Administration
838-3153

Community Development
838-3154

EMS
838-3152

Fire
838-3278

Outreach
838-7117

Police
838-3151

5) **Purpose and grounds of appeal.**
Check below the relief requested by this appeal.

- ☒ (A) Request for interpretation of zoning ordinance and reversal of order, requirement, decision, or determination of administrative official. Use the lines provided below stating the reasons why you claim this order, requirement, decision, or determination is erroneous.

SEE ATTACHMENT

☒ (B) **Request for variance.**

- Use lines below each item for the purpose of explanation.
- For the Board of Appeals to grant a variance, it must find that all six items are met:

1. Why the denial of the variance may result in hardship to the property owner due to physiographical consideration. There must be exceptional, extraordinary or unusual circumstances or conditions applying to the lot or parcel, structure, use or intended use that do not apply generally to other properties or uses in the same district and the granting of the variance would not be of so general or recurrent nature as to suggest that the Zoning Code should be changed.

SEE ATTACHMENT

2. The hardship must not be self-created.

" "

3. The conditions upon which a petition for a variance is based are unique to the property for which the variance is being sought and that such variance is necessary for the preservation and enjoyment of substantial property rights possessed by other properties in the same district and vicinity.

" "

4. The purpose of the variance is not based exclusively upon a desire to increase the value or income potential of the property.

" "

5. The granting of the variance will not be detrimental to the public welfare or injurious to the other property or improvements in the neighborhood in which the property is located.

" "

6. The proposed variance will not undermine the spirit and general and specific purposes of the Zoning Code, specifically the purpose in Subdivision II – Conditional Uses – Section 62-105.

☒ (C) Other: _____

State relief requested on the lines given below giving reasons why appellant is entitled to such relief.

SEE ATTACHMENT

- 6) Do you grant permission for the Board of Zoning Appeals and staff, either individually or as a group, to enter onto the subject property for a site inspection? ☒ Yes ☐ No

w/ notice if possible

Each application for appeal must be accompanied by a scale drawing showing the location and size of property, existing improvements, all abutting properties and improvements thereon and the requested change or addition.

I hereby swear that all of the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my knowledge and belief.



Signature of Applicant

May 11, 2020

Date

Office Use Only	
Received By	
Date Received	
Fee Received	
Hearing Date	
Notice Published	
Notice Mailed	
Billed	

Attachment - Notice of Appeal and Application for Review

5)

A. *Interpretation of zoning ordinance:* We request that Sec. 53-576, Div. 5 be expanded to give the Village Board the authority to grant variances for the width of urban residential driveways.

B.

1. *Unnecessary hardships:*

- Driveway access is hindered by angled driveway, concrete hump and narrow street:
 1. We have two driveways, which are unevenly divided by a concrete “hump”. The driveways are constructed at a less-than-90 degree angle with a narrow 12-ft opening, making it difficult for the average vehicle (15 ft long) to access without driving over the hump.
- Improper grading causing water flow into crawlspace:
 1. We currently experience excessive water flow into our crawlspace as a result of our current driveway being improperly graded and in disrepair. In order to re-grade the driveway and encourage water flow to the street, we’ll need to remove the greenspace and concrete hump.
- Wear-and-tear to vehicles:
 1. Due to the necessity, in some instances, for vehicles to drive over the hump in order to access the driveway there is unnecessary wear-and-tear to the homeowners’ and visitors’ vehicles.
- Consequences of granting variance:
 1. Our request is unique and granting of this variance would be such a unique and singular situation that the Village Board would not need to worry that this means that the ordinance itself needs to be changed.

2. *Hardship not self-created:*

- The hardships listed above are due to causes outside of the property owners’ control and are not self-created.

3. *Unique geographical limitations/preservation of rights of others:*

- *Variance is unique to the property:*
 1. Our property is the only lot in our neighborhood with two driveways and presents a unique challenge.
 2. Our neighborhood is constructed on an island, which presents unique geographical challenges and limitations. On the eastern edge of South Court, specifically, lots are quite small and the city street is very narrow, with no available parking.
- *Obtaining a variance is necessary for the preservation and enjoyment of substantial property rights possessed by other properties in the same district and vicinity:*
 1. Neighboring properties on South Court contain single, oversized (wider than 24’ not including the curb opening) driveways. Thus, our current driveway layout, with two driveways of unequal widths, deviates from the norm and interrupts the appearance of our neighborhood as a whole.
 - a. Here are some examples of houses in our neighborhood with single, over-sized (wider than 24’ not including the curb opening) driveways:

- i. 6107 South Court - 38.5'
 - ii. 6113 South Court - 45.5
 - iii. 6116 South Court - 30'
 - iv. 6117 South Court - 48.5
 - v. 6208 South Court - 45'
4. *Purpose of variance is not based exclusively upon a desire to increase the value or income potential of the property:*
 - Our request for a variance is based solely on improving functionality and use of the property.
5. *Will granting of variance be detrimental to the public welfare or injurious to other property or improvements in the neighborhood:*
 - Allowing this variance will affect the property in question only and should not, in any negative way, impact or affect other properties or improvements in the neighborhood.
 - McFarland Public Works came to look at our driveway and stated that the "hump" and greenspace may be removed and that doing so will not have any effect whatsoever on water drainage, flow, etc.
 - If a variance is granted, there will be no change in the amount of impervious space devoted to driveways, while also functionally keeping the same width of each driveway under present condition.
6. *Variance will not undermine the spirit and purpose of the Zoning Code, specifically Sec. 62-105:*
 - The reasons listed above supporting our request for a variance go directly towards the goal of Sec. 62-105, which is to consider and grant exceptions in cases where a hardship(s) can be shown and the end result brings a positive impact to the property and surrounding properties.
- C. Should the Village Board decide to expand the meaning of Sec. 53-576, Div. 5 to include the ability to grant a width variance for urban residential driveways, we request a variance be granted under Sec. 53-576, Div. 5 to remove the "hump" by redistributed it's width evenly to both sides of the driveway.



6115 South Ct

McFarland, Wisconsin



Google

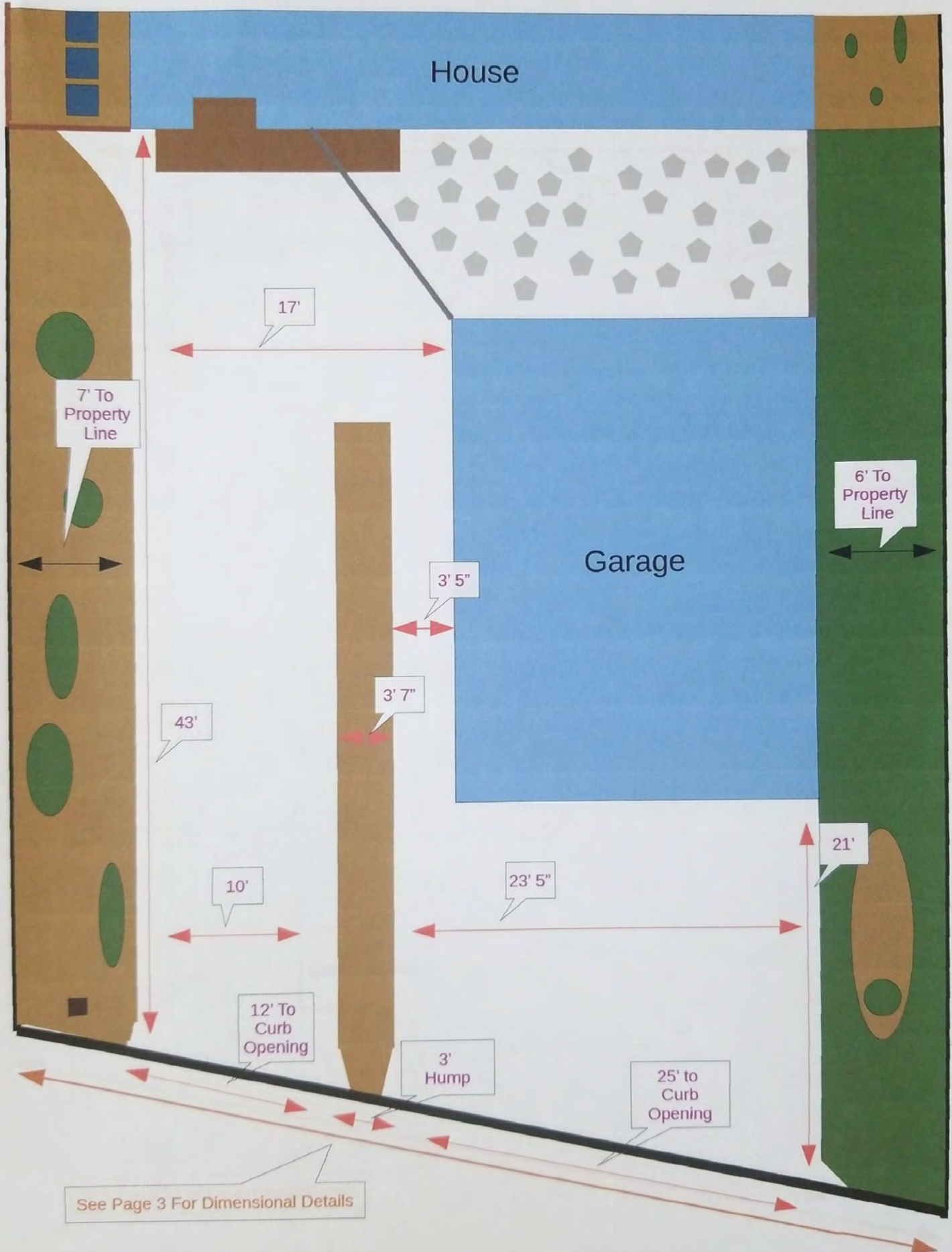


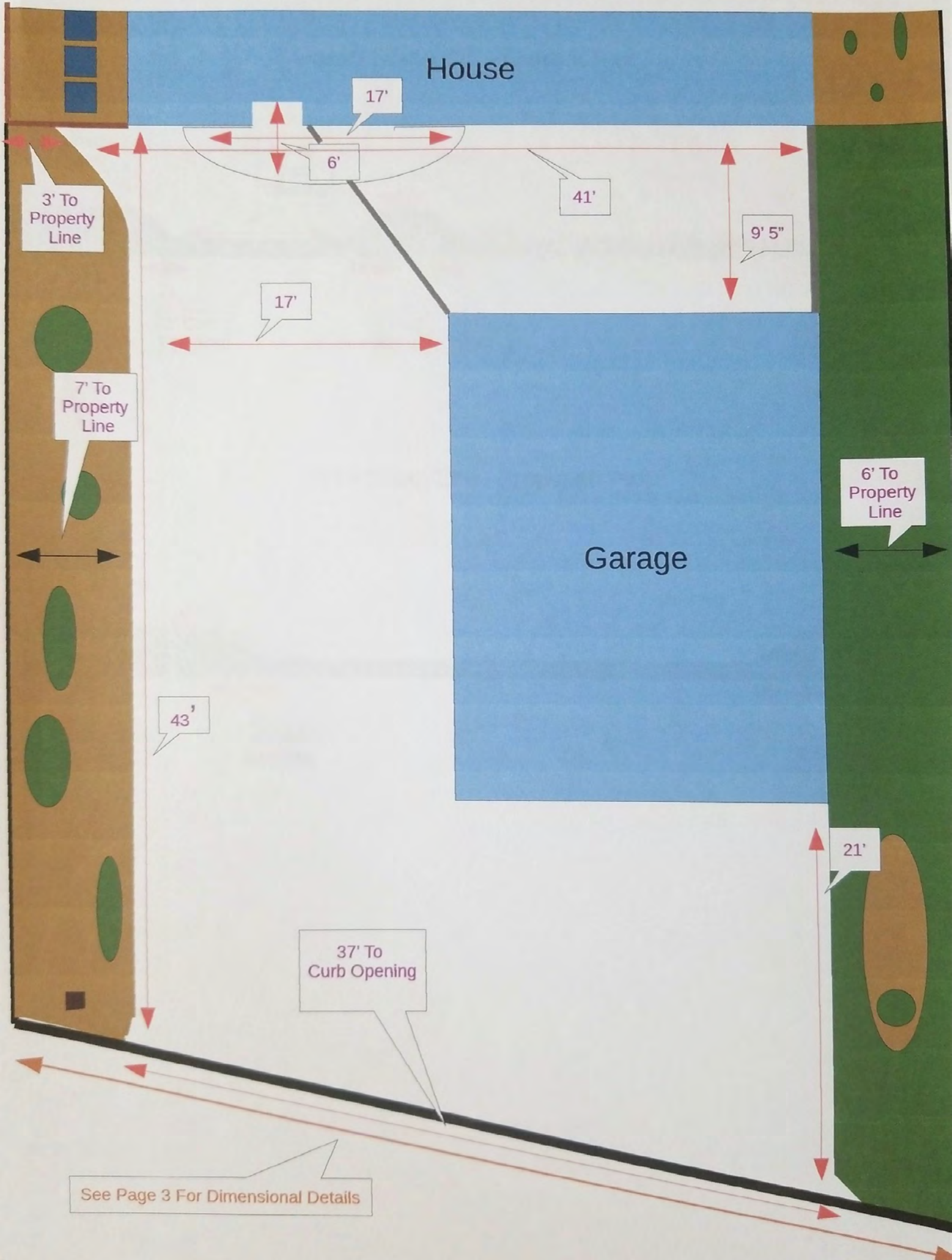
Street View



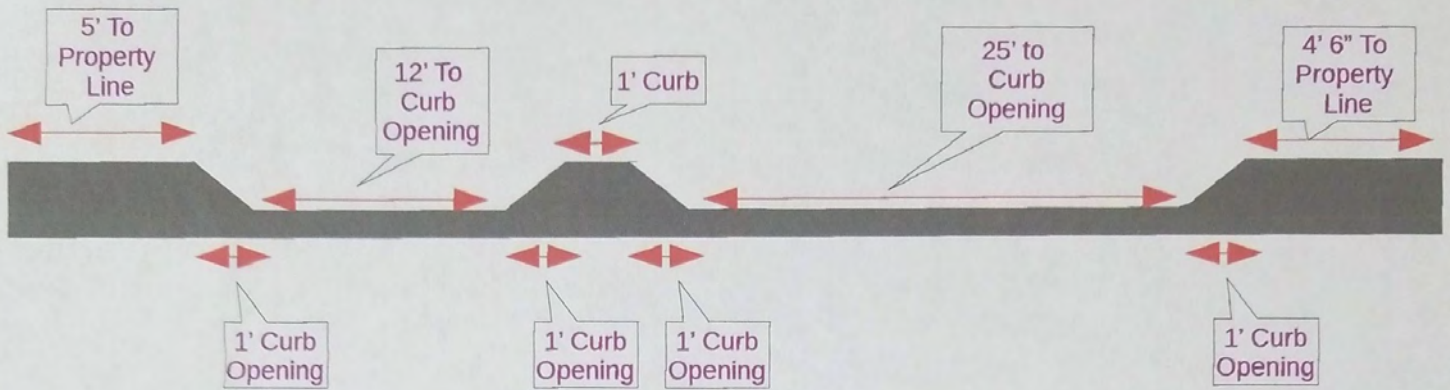
Google

6115 South Ct --- Current Plot

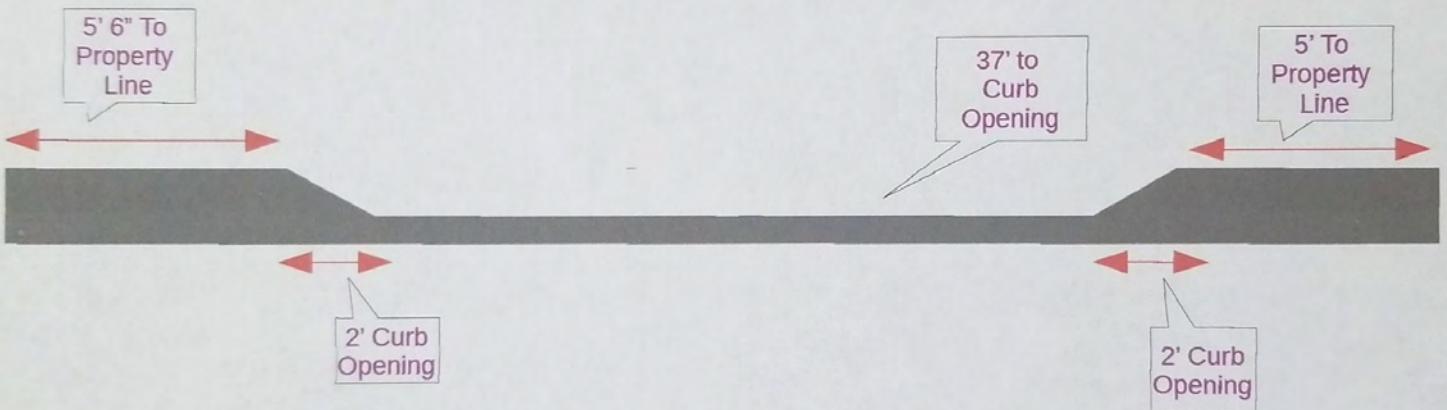




6115 South Ct --- Current Plot



6115 South Ct --- Proposed Plot





VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, May 26, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion regarding setting dates for annual Village Board retreat.

PREVIOUS ACTION:

None.

ISSUE SUMMARY:

Annually the Village Board holds a Retreat of its members to discuss priorities of the Village over the next year. Typically these priorities involve budgetary items that are sometimes discussed and built into the next year's budget if desired. Other times these might be key policy or staffing initiatives the board wishes to work on. In all cases, it gives the Village Board members a chance to meet, discuss, and collaborate on issues of shared concern.

Enclosed are the current goals and objectives for 2019-2020. At the first retreat, Staff will provide an update on our progress in these various areas.

Typically this meeting is held outside of a normal board meeting to not take away from other regular business. Our objective on Tuesday night is to plan dates to hold the retreat at potentially different time periods over the coming weeks, months as people are available.

FINANCIAL/BUDGET IMPACT:

There is no cost to this as the meetings are facilitated by the Village Administrator.

VILLAGE PLAN REFERENCE:

The Strategic Plan was completed earlier and likely a point of reference for these meetings in the future. The plan can be found at www.mcfarland.wi.us/mcfarlandstrategicplan.

The goals and objectives from the prior year are included in your packet.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

No action required, presented for discussion to set some dates.



ATTACHMENTS:

1. 2019 Village Board Goals-Objectives - Action Steps 08262019 FINAL

Village of McFarland

Updated July 26, 2018

VISION STATEMENT

The vision of the Village of McFarland is to create an inviting, dynamic, diverse community that offers a high quality of life and a supportive environment in which all citizens may practice their individual value choices. The community actively seeks to preserve its proud heritage, protect its abundant natural resources, plan for responsible and balanced residential and commercial growth, promote a viable economic base, support educational excellence, provide diverse leisure options, and foster a healthy social fabric.

MISSION STATEMENT

With direction encouraged from an engaged citizenry, Village elected officials and employees will maintain and enhance the quality of life of the community by delivering quality services in an efficient and accountable manner and by providing an orderly, unbiased system of government that is transparent and accessible. To create and sustain a high level of confidence in Village government, we pledge to function with: professional integrity; fiscal responsibility; open communications; environmental sustainability; sensitivity to the values of each individual; full cooperation in achieving the priority goals determined by the community.

2019/2020 - Village Board Goals

*****All goals should be consistent with the Village Mission statement and vision statement.***

A. Goal: A safe, healthy, and secure community.

Objective		Committee	Staff
1	Develop opportunities to create amenities for special needs kids, adults, and other health/wellness initiatives not otherwise provided through Community.	Parks Senior Outreach	Hessling Andersen
Action Steps:		Cost	Timeline
Continue to evaluate alternatives for Senior Outreach.		TBD	December 31, 2019
Research devel. of park amenities for those with special needs.		\$10,000	March 31, 2020
Review Public/Private Partnerships in Parks as Econ. Benefit.		TBD	June 30, 2020
Collaborate with other public entities to achieve VB objective.		TBD	December 31, 2020
Phased Implementation of Urso/Schuetz Master Plan.		\$500,000	December 31, 2020
2	Address traffic, transportation, biking, and walking deficiencies through joint initiatives and capital projects.	Public Works	Hessling, Berquist
Action Steps:		Cost	Timeline
Evaluate pedestrian alt. with constr. projects and develop.		\$100,000	December 31, 2019
Develop sign installation and replacement policy/program.		None	March 31, 2020
Develop policy on pedestrian improvement implementation.		None	June 30, 2020
Improve bike route connectivity through paths and lanes.		\$10k - \$100k	June 30, 2020
Study bus transportation, consult State and County Reps.		TBD	December 31, 2020
3	Implement recommendations from Comprehensive Building Security Plan prepared for all Village Buildings.	Public Safety	Sherven
Action Steps:		Cost	Timeline
Reassess implementation of Security Plan for Parks, Other		\$50,000	June 30, 2020
Develop policy on the use of lighting as safety enhancement.		None	June 30, 2020
Reassess implementation of Security Plan for Municipal Center.		\$150,000	December 31, 2020
4	Proactive recommendations from Public Safety Departments that advance services and meet necessary demands.	Public Safety Senior Outreach	Dennis Sherven Andersen
Action Steps:		Cost	Timeline
Changes to Fire Personnel Staffing Schedule.		\$15,000	June 30, 2020
Evaluate need for comprehensive Senior check in program.		TBD	June 30, 2020
Create uniform employee identification cards for display.		\$2,500	June 30, 2020
Foster relationships btw families w/ special needs, Police.		Ongoing	December 31, 2020
5	Develop measureable actions and standards for the advancement of sustainable initiatives within the Village.	As Assigned	Bremer Hessling
Action Steps:		Cost	Timeline
Complete hiring of Comm and Econ Devel Director.		Ongoing	August 15, 2019
Assess energy consumption through energy use audit.		\$25,000	June 30, 2020
Develop program that promotes sustainability in Community.		TBD	December 31, 2020
Build in sustainable features into facilities planning.		TBD	December 31, 2020

2019/2020 - Village Board Goals

B. Goal: A well-run, efficient and responsive government that provides a high level of quality-of-life services to the community.

Objective	Committee	Staff
1 Continue to work with Community to advance recommendations from Facilities Master Plan that includes the development of a Public Safety Building and Community Center.	Village Board	Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Reaffirm Community Center development as a priority.	None	September 30, 2019
Study Public Safety Facility concept through master planning.	\$15,000	March 31, 2020
Study Community Center concept through master planning.	\$15,000	March 31, 2020
Decide steps necessary to transition from plan to design.	None	June 30, 2020
2 Engage a strategic planning process for the Village.	Village Board	Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Participate in the input development process.	None	July 31, 2019
Attend workshops that engage discussion on long term vision.	None	August 31, 2019
Collectively review and prepare final plan for acceptance.	None	September 30, 2019
Actively follow plan for implementation.	TBD	January 1, 2020
3 Creation of a program that advances and promotes community art throughout the Village.	Village Board	Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Develop mural design on well house at Discovery Garden Park.	None	March 31, 2020
Implement mural design on well house.	\$5,000	September 30, 2020
Develop plan for art feature at "Conversation Corner".	None	December 31, 2020
Inventory other areas for possible community art development.	None	December 31, 2020
4 Prioritize and update Village policies as may be applicable and necessary.	Village Board	Schuenke Suettinger
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Develop Policy List inventory with relevant tracking.	None	December 31, 2019
Make accessible on website all applicable Village policies.	None	March 31, 2020
Create priority new development and revision list with VB.	None	June 30, 2020
5 Complete the transition of meeting development process to online management platform including paperless packets.	Village Board	Suettinger
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Convert all meetings to paperless format.	None	December 31, 2019
Paper packets for all meetings to be provided by request only.	None	January 1, 2020
Link meeting videos with meeting agendas (if possible).	TBD	March 31, 2020
Upload historical agendas and minutes to CivicClerk.	\$2,500	March 31, 2020
Continue to market subscription ability to CivicClerk platform.	None	June 30, 2020
6 The injection and incorporation of technology to improve the efficiency of day to day operations.	Village Board Comm Tech	Suettinger Miller
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Update records retention policy and procedures.	None	December 31, 2019
Convert to a digital time sheet process within payroll.	\$10,000	December 31, 2019
Review and draft process to digitize Village records.	None	June 30, 2020
Upgrade Meeting Room(s) Technology	\$50,000	December 31, 2020
Integrate paperless process into website.	TBD	December 31, 2020

2019/2020 - Village Board Goals

C. Goal: A government that promotes and supports active citizenry participation in the community

Objective		Committee	Staff
1	Enhance Community communication and presence through a strategic communications plan which includes improved electronic mediums and meetings with various community groups, entities, and stakeholders.	Comm Tech	Miller Schuenke
<u>Action Steps:</u>		<u>Cost</u>	<u>Timeline</u>
Create policy for better utilization of Polco.		\$3,000	December 31, 2019
Implementation of E-Newsletter.		\$500	December 31, 2019
New opportunities for social media interaction.		TBD	March 30, 2020
Develop and maintain a Community Calendar		\$1,000	June 30, 2020
Electronic/digital sign development to promote various events.		\$50,000	September 30, 2020
Develop Village Board program to increase public interaction.		TBD	December 31, 2020
Create interactive map showing projects under consideration.		TBD	December 31, 2020

2	Research committee structure and make recommendations to improve meeting efficiency and communication.	Village Board	Schuenke Suettinger
<u>Action Steps:</u>		<u>Cost</u>	<u>Timeline</u>
Develop master roster/list of Committees.		None	December 31, 2019
Align efficient and consistent minutes with meeting mgmt.		None	March 30, 2020
Conduct orientation program for new members and chairs.		None	March 30, 2020
Consider creation of instructional videos on various topics.		None	December 31, 2020

3	Create and promote opportunities to become involved in the Community.	Volunteer	Andersen
<u>Action Steps:</u>		<u>Cost</u>	<u>Timeline</u>
Enhance community Volunteer Day.		TBD	March 30, 2020
Showcase other opportunities to volunteer in the Community.		TBD	June 30, 2020

2019/2020 - Village Board Goals

D. Goal: A healthy and growing, regionally and globally integrated economy that supports local initiatives.

Objective	Committee	Staff
1 Actively promote and support affordable housing in the Village.	Village Board	Bremer Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Education efforts on the benefits and options for AH.	\$5,000	June 30, 2020
Conduct Gap Analysis, utilize State, County, CARPC.	\$25,000	September 30, 2020
Review, leverage opportunities as available.	TBD	December 31, 2020
Establish Benchmarks, Goals to address Gap	None	December 31, 2020
2 Continuation of the implementation of Branding Initiative (Phase 2)	Comm Tech	Miller
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Trademark new logo and tagline.	\$10,000	March 31, 2020
Implement banner program with new brand design.	\$5,000	March 31, 2020
Develop inventory of personal items with new branding.	\$5,000	June 30, 2020
Initiate phase replacement of park signage.	\$20,000	June 30, 2020
Pursue new Gateway Signage on USH 51.	\$50,000	September 30, 2020
Design new wayfinding system with new brand.	\$25,000	December 31, 2020
3 Continue Streetscaping enhancements through out the Village as applicable.	CDA Public Works	Bremer Hessling
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Plan for Phase 2 of Farwell Underground Utility Work	\$25,000	March 31, 2020
Develop inventory of areas desired for streetscape impr.	None	June 30, 2020
Consider additional decorative Downtown Streetlight.	\$100,000	September 30, 2020
Engage consultant on planning/design effort for inventory.	TBD	December 31, 2020
4 Evaluation of ways to become more business friendly and flexible for economic growth.	Village Board	Bremer Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Pursue annexation requests to diversify land use.	\$5,000	Case by Case basis
Pursue land acquisitions that advance local economy.	TBD	Case by Case basis
Build relationship with banks, brokers, developers.	None	Ongoing
Build more formal relationship with Chamber of Commerce.	None	Ongoing
Business wayfinding signage from bike trail.	\$15,000	September 30, 2020
Survey local businesses to identify areas of improvement.	\$10,000	December 31, 2020
Review code efficiencies to support Development.	\$5,000	December 31, 2020
5 Study and pursue opportunities for shared services with other local governments.	Village Board	Schuenke
<u>Action Steps:</u>	<u>Cost</u>	<u>Timeline</u>
Each Department Head will determine 1-3 Opportunities.	None	March 30, 2020
Each Opportunity will be vetted with surrounding municipalities.	None	June 30, 2020
Committees will evaluate each opportunity case by case.	TBD	September 30, 2020