

Monday, January 22, 2024**6:00 PM****McFarland Municipal Center**
5915 Milwaukee St, McFarland
Community Room

AGENDA

The public may attend in-person or remotely through the Zoom webinar or telephone options listed below.

PLEASE CLICK THE LINK BELOW TO JOIN THE ZOOM WEBINAR:

<https://us02web.zoom.us/j/87543994777>

Or by Telephone: +1 (312) 626-6799

Webinar ID: 875 4399 4777

Press *9 to raise/lower hand. Press *6 to mute/unmute.

1. CALL TO ORDER, ROLL CALL.
2. PUBLIC APPEARANCES.
 - a. This is an opportunity for members of the public to address the Public Works and Utilities Committee for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Committee about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Committee should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Committee for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to public.works@mcfarland.wi.us to be included as part of the meeting.

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.
3. APPROVAL OF MINUTES.
 - a. Motion to approve the minutes of the December 20, 2023, Public Works & Utilities Committee meeting.
4. BUSINESS.
 - a. Discussion and action to make a recommendation to the Village Board regarding the award of contract for the 2024 Exchange Street project.
 - b. Discussion and action to make a recommendation to the Village Board regarding the award of contract for the 2024 Lift Station 2 project.
 - c. Discussion and action to make a recommendation to the Village Board regarding a proposal from Town & Country Engineering for design and construction engineering for the Lift Station 2 project.
5. SCHEDULE NEXT MEETING DATE.
 - a. Monday, February 26, 2024 at 6:00 p.m.

6. ADJOURNMENT.

Any person who has a qualifying disability as defined by the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible location or format should contact the McFarland Municipal Center at (608)838-3153, 5915 Milwaukee Street, McFarland, Wisconsin, or village.clerk@mcfarland.wi.us by 2:00 p.m. at least 5 business days prior to the meeting so that any necessary arrangements can be made to accommodate each request. If the meeting or request is less than 5 business days from the meeting, requests for accommodations may still be made and reasonable efforts will be made to accommodate each request.

VILLAGE OF MCFARLAND

Public Works & Utilities Committee Minutes

Wednesday, December 20, 2023 - 6:00 PM

1. CALL TO ORDER, ROLL CALL.

Trustee Wreh called the regular meeting of the Public Works & Utilities Committee to order at 6:00 PM in the Community Room of the Municipal Center. This meeting was also held via Zoom webinar.

Members present: Edward Wreh, Hilary Brandt, Pauline Boness, Marc Nielsen, Chris Fredrick, Eric Kindschi, Matthew Coan, Village President Carolyn Clow

Members not present: n/a

Staff Present: Village Administrator Matt Schuenke, Assistant to the Public Works Director Aimee Irwin, Town & Country staff Brian Berquist and Tim Stieve.

2. PUBLIC APPEARANCES.

a. *This is an opportunity for members of the public to address the Public Works and Utilities Committee for items that are not on the agenda. Please remember this is a hybrid meeting conducted in person and through the Zoom online meeting platform. Meeting attendees wishing to address the Committee about items not on the agenda may do so at this time. Zoom attendees should type their name and address in the Question and Answer feature within the Zoom online meeting platform at this time. Members of the public who are present in person and wish to address the Committee should fill out a public comment form and turn into the meeting chairperson. When you are called upon to speak, state your name, address, and provide your comments to the Committee for their consideration. Please adhere to the 3-minute time limit. Additionally, you may send your public comments to public.works@mcfarland.wi.us to be included as part of the meeting.*

Members of the public may also speak during their selected agenda item as they designate on the public comment form or in the Question and Answer feature on Zoom.

None.

3. APPROVAL OF MINUTES.

a. *Motion to approve the minutes of the November 27, 2023 Public Works & Utilities Committee meeting.*

Motion by Trustee Wreh, seconded by Fredrick, to approve the minutes of the November 27, 2023, Public Works & Utilities Committee meeting. Motion carries 7 - 0 - 0.

4. BUSINESS.

a. *Discussion and action to make a recommendation to the Village Board regarding the Maintenance Plan for Village-Owned Stormwater Improvements.*

Stieve presented the finalized maintenance plan for Village-Owned Stormwater improvements. Changes included in the final version are a cost impact breakdown for

projected dredging needs and site information accuracy.

- Trustee Wreh asked what project is prioritized for dredging to five feet over a lesser amount. Stieve responded that it is recommended for all sites to be dredged to the five-foot level.
- Trustee Wreh asked if a policy or procedure would be created for ongoing measurements of depth for the BMP sites. Schuenke stated that a policy could be included in the recommendation.

Schuenke provided an overview for Appendix B which refers to the Babcock Channel and Farwell Outfall. The area in blue will be maintained as part of the maintenance plan while the other three areas, referred to as the channel, will require additional planning. Schuenke stated that the plan for the channel areas would be brought back to the committee in 2024 along with discussion about funding options.

- Trustee Wreh recommended that the plan for the channel includes cost impact of the recommended work.
- Boness recommended that the BMP sites are measured annually.
- Nielsen asked if there were standards for the vegetation around the BMP sites. Stieve responded, yes, there are common standards that will be followed and maintained.
- Trustee Wreh asked if there were restrictions on maintenance of the sites for wildlife. Stieve stated that, as part of the DNR permitting process, there are certain times of year that, due to wildlife, work may not be conducted.
- Fredrick recommended seeking volunteer assistance with general clean-up of the sites.

Motion by Trustee Wreh, seconded by Boness, to recommend approval to the Village Board regarding the Maintenance Plan for Village-Owned Stormwater Improvements including the creation of policy regarding BMP site measurements. Motion carries 7 - 0 - 0.

b. Discussion and action to make a recommendation to the Village Board regarding the final Water Utility Financial Forecast as prepared by Baker Tilly.

Schuenke presented the updated Water Utility Financial Forecast which will serve as a guide for the water utility.

- Trustee Wreh asked for clarification on Attachment 3, page 8 of the document, regarding the subparagraph labeled B. The statement reads that the current authorized rate of return is 4.9%. While the utility may be eligible for up to a 6.2% rate of return, the recommended rate for this study was maintained at 6.0%. Trustee Wreh asked why 6.0% was being utilized instead of 6.2%. Schuenke responded that additional clarification would be asked of Baker Tilly.

Motion by Trustee Wreh, seconded by Trustee Brandt, to recommend approval to the Village Board regarding the final Water Utility Financial Forecast as enclosed. Motion

carries 7 - 0 - 0.

5. SCHEDULE NEXT MEETING DATE.

a. Monday, January 22, 2024, at 6:00 p.m.

6. ADJOURNMENT.

Motion by Fredrick, seconded by Trustee Wreh, to adjourn at 6:32 p.m.

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

Respectfully submitted,
Aimee Irwin
Assistant to the Public Works Director

McFarland
SUMMARY SHEET

MEETING DATE: Monday, January 22, 2024

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director, Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and action to make a recommendation to the Village Board regarding the award of contract for the 2024 Exchange Street project.

PREVIOUS ACTION:

The Public Works Committee:

- Recommended approval regarding the State Municipal Agreement (SMA) at their June 9, 2020 meeting.
- Discussed the project and recommended scheduling of a Public Information Meeting on February 16, 2021 at their January 12, 2021 meeting.
- Discussed the project and recommended scheduling of the next Public Information Meeting on October 12, 2021 at their July 13, 2021 meeting.

The Public Utilities Committee:

- Recommended approval regarding the State Municipal Agreement (SMA) at their June 16, 2020 meeting.
- Discussed the project and recommended scheduling of a Public Information Meeting on February 16, 2021 at their January 19, 2021 meeting.

Joint Public Works & Public Utilities Committees:

- Public Information Meeting was held on February 16, 2021.

The Public Works & Utilities Committee:

- Update and discussion about the project on May 23, 2022. Committee members discussed updates related to driveway concerns on the north and south ends of the project corridor.
- Recommended scheduling of the next Public Information meeting on September 26, 2022 at their August 22, 2022 meeting.
- Public Information Meeting was held on September 26, 2022.
- Recommended approval to the Village Board regarding the final plan set and authorized



the project for bid on October 23, 2023.

The Village Board:

- Approved the final plan set and authorized the project for bid on December 21, 2023.

ISSUE SUMMARY:

Exchange Street Reconstruction will occur from Farwell Street to Sleepy Hollow Road in 2024. The project will include a full street reconstruction, addition of on-street bike lanes, a new sidewalk on the northern side of the road, and utility replacements. The Village is receiving grant funding for the project through the WisDOT Surface Transportation Program (STP) in the amount of \$1,177,000.

This project has been in design and development since 2019. The project has held multiple public information meetings throughout the design process. Regulatory agencies have approved all the project's cultural, historical, and environmental information. Detailed plan development, reporting documentation, and real estate documentation has been ongoing. This plan set was bid in December by WisDOT through their process with the project recommended for award to James Peterson Sons as the low bidder. There were 5 total bids with an approximately 15% spread from low to high.

FINANCIAL/BUDGET IMPACT:

The 2024 Budget was approved to allocate \$4,872,750 for the contract award to construct the project. Additional funds up to \$225,000 were borrowed in prior years to fund design and consulting efforts.

Revenues - The following revenues have been allocated to fund the project by fund:

\$ 225,000	Capital Projects Fund (2021-2023 Note Issuance - Design and Consultant Services)
\$2,101,250	Capital Projects Fund (2024 Note Issuance)
\$1,177,000	State/Federal through MPO
\$1,039,750	Water Utility (2024/2025 Revenue Bond)
\$ 390,750	Stormwater Utility (2024 Note Issuance)
<u>\$ 164,000</u>	<u>Sewer Utility (2022/2023 Revenue Bond)</u>
\$5,097,750	Total Project Revenue

These are the amounts of monies budgeted for the project based on the engineer's estimate that were accepted in the 2024-2028 Capital Improvement Plan and approved in the 2024 Budget.

Expenses - Included within your packet is the bid tab for the project as conducted by WisDOT with the following cost breakdown for all known or anticipate costs to date:

\$4,021,988 Exchange Street Low Bid



\$	11,000	Pre-construction Tree Removal
\$	477,050	Design Engineering/Consulting
\$	300,000	Construction Administration
\$	81,890	Temporary Limited Easements (TLEs)
\$	201,099	Contingency
\$	(27)	Rounding
\$5,093,000	Total Project Expense	

The project as bid is projected to be under budget by a small margin as estimated by the Village Engineer with the bid received. The Village Engineer will review this with the Committee in the meeting as well as the plan to make up for the difference as it impacts the funds fueling the project.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended Action:

Motion, second to make a recommendation to the Village Board to award contract to James Peterson Sons Inc. of Medford in an amount of \$4,021,987.94 for the reconstruction Exchange Street including base bid with additional expenses for engineering, construction administration, and contingency for a total project cost in an amount of \$5,093,000.

ATTACHMENTS:

1. Bid Summary Ltr

January 17, 2024

Village of McFarland
5915 Milwaukee Street, P.O. Box 110
McFarland, WI 53558

Attention: Mr. Matthew Schuenke, Administrator

Subject: Summary and Analysis of Bids; Exchange Street Reconstruction; Village of McFarland

Bid Deadline: December 12, 2023

Ladies and Gentlemen:

The purpose of this letter is to summarize and analyze the bids received for the Exchange Street Reconstruction project. This project involves the complete reconstruction of Exchange Street from Farwell Street to Sleepy Hollow Road, including the construction of new street lighting and replacement of storm sewer, sanitary sewer and water main utilities.

The pre-bid estimate was \$4,056,039.24. Five contractors submitted a bid.

A summary of the bids is as follows:

Contractor	Base Bid Total
James Peterson Sons, Inc.	\$4,021,987.94
R.G. Huston Company, Inc.	\$4,273,000.00
Rock Road Companies, Inc.	\$4,485,562.80
Integrity Grading and Excavating, Inc.	\$4,589,118.41
Parisi Construction, LLC	\$4,660,059.49

The bid was properly submitted.

James Peterson Sons, Inc. of Medford, WI is an excavation and roadway contractor that has completed similar projects for the City of Rhinelander and in Marathon County. The bid prices are similar to the original budget. This project is administered by the Wisconsin Department of Transportation (WisDOT) and has been already awarded to James Peterson Sons, Inc.

This will be a unit price contract. That is, the contractor will be paid for the work actually performed on the basis on the unit prices bid. This means that the final line item costs could be either greater than or less than the bid totals. Also, unexpected conditions are

sometimes encountered which result in increased project costs. Therefore, it would be wise to continue to carry the recommended 10% contingency.

If you have any questions with respect to our thoughts on this matter, I am available at your convenience to discuss them with you.

Respectfully,
TOWN & COUNTRY ENGINEERING, INC.

Tim Stieve, P.E., ENV-SP
Project Engineer

TS:sai
J:\JOB#S\McFarland\MC-134-M4 Exchange Street Preliminary Engineering (FILE)\Bidding\Recommendation Ltr.docx

**All Bids Received
December 12, 2023**

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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Type Of Work: General Constr - No Dominant Work Type

Bidder No. 1	JAMES PETERSON SONS, INC.	Po Box 120	Medford, WI 54451-0120
Bidder No. 2	R.G. HUSTON COMPANY, INC.	Po Box 399	Cottage Grove, WI 53527
Bidder No. 3	ROCK ROAD COMPANIES, INC.	Po Box 1818	Janesville, WI 53547-1818
Bidder No. 4	INTEGRITY GRADING AND EXCAVATING, INC.	605 Grossman Drive	Schofield, WI 54476-0138
Bidder No. 5	PARISI CONSTRUCTION, LLC	508 S. Nine Mound Road	Verona, WI 53593

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
201.0120	Clearing	ID	555.000	27.00	14,985.00	26.38	14,640.90	26.38	14,640.90
201.0220	Grubbing	ID	555.000	32.00	17,760.00	15.83	8,785.65	15.83	8,785.65
204.0110	Removing Asphaltic Surface	SY	500.000	7.50	3,750.00	2.30	1,150.00	4.94	2,470.00
204.0150	Removing Curb & Gutter	LF	8,560.000	8.21	70,277.60	3.65	31,244.00	5.33	45,624.80
204.0155	Removing Concrete Sidewalk	SY	2,060.000	8.64	17,798.40	4.80	9,888.00	6.96	14,337.60
204.0220	Removing Inlets	EACH	9.000	500.00	4,500.00	420.00	3,780.00	491.58	4,424.22
204.0245	Removing Storm Sewer (size) 01. 12-inch	LF	200.000	35.69	7,138.00	37.00	7,400.00	11.02	2,204.00
204.0245	Removing Storm Sewer (size) 02. 15-inch	LF	117.000	35.69	4,175.73	37.00	4,329.00	11.02	1,289.34
205.0100	Excavation Common	CY	15,520.000	18.98	294,569.60	21.80	338,336.00	25.17	390,638.40
213.0100	Finishing Roadway (project) 01. 5685-00-05	EACH	1.000	5,000.00	5,000.00	8,700.00	8,700.00	12,924.44	12,924.44
305.0120	Base Aggregate Dense 1 1/4-Inch	TON	8,785.000	17.85	156,812.25	20.40	179,214.00	17.27	151,716.95
305.0130	Base Aggregate Dense 3-Inch	TON	14,410.000	14.30	206,063.00	18.40	265,144.00	14.30	206,063.00
312.0110	Select Crushed Material	TON	2,610.000	6.39	16,677.90	17.25	45,022.50	17.95	46,849.50
455.0605	Tack Coat	GAL	540.000	3.00	1,620.00	3.00	1,620.00	3.00	1,620.00
460.2000	Incentive Density HMA Pavement	DOL	3,360.000	1.00	3,360.00	1.00	3,360.00	1.00	3,360.00
460.5224	HMA Pavement 4 LT 58-28 S	TON	3,500.000	69.45	243,075.00	69.45	243,075.00	69.45	243,075.00
460.5225	HMA Pavement 5 LT 58-28 S	TON	1,750.000	84.46	147,805.00	84.46	147,805.00	84.57	147,997.50

**All Bids Received
December 12, 2023**

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5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
465.0120	Asphaltic Surface Driveways and Field Entrances	TON	60.000	283.70	17,022.00	283.70	17,022.00	283.70	17,022.00
520.8000	Concrete Collars for Pipe	EACH	6.000	500.00	3,000.00	445.00	2,670.00	876.84	5,261.04
601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	8,168.000	22.12	180,676.16	21.41	174,876.88	20.75	169,486.00
601.0600	Concrete Curb Pedestrian	LF	110.000	75.05	8,255.50	35.35	3,888.50	50.00	5,500.00
602.0405	Concrete Sidewalk 4-Inch	SF	33,665.000	4.86	163,611.90	5.25	176,741.25	5.90	198,623.50
602.0415	Concrete Sidewalk 6-Inch	SF	6,765.000	6.82	46,137.30	6.36	43,025.40	6.70	45,325.50
602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	350.000	41.99	14,696.50	45.45	15,907.50	55.00	19,250.00
602.0810	Concrete Driveway 6-Inch	SY	1,473.000	61.46	90,530.58	65.45	96,407.85	66.00	97,218.00
602.1500	Concrete Steps	SF	15.000	85.00	1,275.00	131.31	1,969.65	100.00	1,500.00
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	1,563.000	116.15	181,542.45	93.00	145,359.00	107.72	168,366.36
608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	782.000	97.15	75,971.30	109.00	85,238.00	103.57	80,991.74
611.0430	Reconstructing Inlets	EACH	2.000	1,750.00	3,500.00	545.00	1,090.00	924.71	1,849.42
611.0530	Manhole Covers Type J	EACH	6.000	1,095.95	6,575.70	845.00	5,070.00	658.72	3,952.32
611.0624	Inlet Covers Type H	EACH	26.000	1,146.60	29,811.60	1,155.00	30,030.00	863.66	22,455.16
611.2004	Manholes 4-FT Diameter	EACH	6.000	4,908.01	29,448.06	4,625.00	27,750.00	3,291.51	19,749.06
611.3230	Inlets 2x3-FT	EACH	26.000	4,045.74	105,189.24	2,075.00	53,950.00	2,642.25	68,698.50
611.8110	Adjusting Manhole Covers	EACH	21.000	645.00	13,545.00	220.00	4,620.00	653.10	13,715.10
619.1000	Mobilization	EACH	1.000	168,350.00	168,350.00	265,646.29	265,646.29	195,017.75	195,017.75
624.0100	Water	MGA L	200.000	40.00	8,000.00	79.00	15,800.00	0.01	2.00
625.0100	Topsoil	SY	9,350.000	5.56	51,986.00	7.35	68,722.50	9.93	92,845.50
627.0200	Mulching	SY	9,350.000	1.00	9,350.00	1.00	9,350.00	1.00	9,350.00
628.1504	Silt Fence	LF	230.000	3.00	690.00	3.00	690.00	3.00	690.00

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				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
628.1905	Mobilizations Erosion Control	EACH	2.000	400.00	800.00	400.00	800.00	400.00	800.00
628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	200.00	400.00	200.00	400.00	200.00	400.00
629.0210	Fertilizer Type B	CWT	6.000	150.00	900.00	150.00	900.00	150.00	900.00
630.0140	Seeding Mixture No. 40	LB	168.000	15.00	2,520.00	15.00	2,520.00	15.00	2,520.00
630.0500	Seed Water	MGA L	168.000	20.00	3,360.00	20.00	3,360.00	20.00	3,360.00
634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	18.000	150.00	2,700.00	150.00	2,700.00	150.00	2,700.00
637.2210	Signs Type II Reflective H	SF	24.250	25.00	606.25	25.00	606.25	25.00	606.25
637.2230	Signs Type II Reflective F	SF	78.500	25.00	1,962.50	25.00	1,962.50	25.00	1,962.50
638.2102	Moving Signs Type II	EACH	2.000	200.00	400.00	200.00	400.00	200.00	400.00
638.2602	Removing Signs Type II	EACH	16.000	30.00	480.00	30.00	480.00	30.00	480.00
638.3000	Removing Small Sign Supports	EACH	16.000	30.00	480.00	30.00	480.00	30.00	480.00
638.4000	Moving Small Sign Supports	EACH	2.000	100.00	200.00	100.00	200.00	100.00	200.00
642.5001	Field Office Type B	EACH	1.000	17,500.00	17,500.00	13,000.00	13,000.00	13,600.00	13,600.00
643.0300	Traffic Control Drums	DAY	52,049.000	0.15	7,807.35	0.15	7,807.35	0.15	7,807.35
643.0410	Traffic Control Barricades Type II	DAY	1,284.000	0.30	385.20	0.30	385.20	0.30	385.20
643.0420	Traffic Control Barricades Type III	DAY	3,745.000	0.60	2,247.00	0.61	2,284.45	0.60	2,247.00
643.0705	Traffic Control Warning Lights Type A	DAY	3,745.000	0.08	299.60	0.08	299.60	0.08	299.60
643.0900	Traffic Control Signs	DAY	3,103.000	0.51	1,582.53	0.52	1,613.56	0.51	1,582.53
643.0920	Traffic Control Covering Signs Type II	EACH	5.000	42.00	210.00	42.42	212.10	42.00	210.00
643.3970	Temporary Marking Removable Mask Out Tape 10-Inch	LF	40.000	3.50	140.00	3.54	141.60	3.50	140.00
643.5000	Traffic Control	EACH	1.000	11,500.00	11,500.00	11,616.16	11,616.16	11,500.00	11,500.00

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V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
644.1440	Temporary Pedestrian Surface Matting	SF	7,700.000	3.25	25,025.00	3.28	25,256.00	3.25	25,025.00
644.1601	Temporary Pedestrian Curb Ramp	DAY	24.000	60.00	1,440.00	60.61	1,454.64	60.00	1,440.00
644.1605	Temporary Pedestrian Detectable Warning Field	SF	440.000	10.00	4,400.00	10.10	4,444.00	10.00	4,400.00
644.1810	Temporary Pedestrian Barricade	LF	1,424.000	7.00	9,968.00	7.07	10,067.68	7.00	9,968.00
646.1020	Marking Line Epoxy 4-Inch	LF	20,323.000	0.52	10,567.96	0.52	10,567.96	0.52	10,567.96
646.5020	Marking Arrow Epoxy	EACH	4.000	350.00	1,400.00	350.00	1,400.00	350.00	1,400.00
646.5220	Marking Symbol Epoxy	EACH	33.000	235.00	7,755.00	235.00	7,755.00	235.00	7,755.00
646.6120	Marking Stop Line Epoxy 18-Inch	LF	135.000	16.10	2,173.50	16.10	2,173.50	16.10	2,173.50
646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	325.000	8.25	2,681.25	8.25	2,681.25	8.25	2,681.25
646.7520	Marking Crosswalk Epoxy Block Style 24-Inch	LF	462.000	19.50	9,009.00	19.50	9,009.00	19.50	9,009.00
650.4000	Construction Staking Storm Sewer	EACH	32.000	200.00	6,400.00	200.00	6,400.00	50.00	1,600.00
650.4500	Construction Staking Subgrade	LF	4,322.000	0.01	43.22	0.01	43.22	0.01	43.22
650.5000	Construction Staking Base	LF	4,322.000	1.00	4,322.00	1.00	4,322.00	0.01	43.22
650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	8,278.000	1.00	8,278.00	1.00	8,278.00	1.00	8,278.00
650.9000	Construction Staking Curb Ramps	EACH	35.000	300.00	10,500.00	300.00	10,500.00	20.00	700.00
650.9500	Construction Staking Sidewalk (project) 01. 5685-00-05	EACH	1.000	3,000.00	3,000.00	3,000.00	3,000.00	5,000.00	5,000.00
650.9911	Construction Staking Supplemental Control (project) 01. 5685-00-05	EACH	1.000	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
650.9920	Construction Staking Slope Stakes	LF	4,322.000	1.00	4,322.00	1.00	4,322.00	0.50	2,161.00
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,360.000	8.25	19,470.00	8.25	19,470.00	8.25	19,470.00
652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	80.000	11.00	880.00	11.00	880.00	11.00	880.00

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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
653.0154	Pull Boxes Non-Conductive 24x36-Inch	EACH	4.000	1,675.00	6,700.00	1,675.00	6,700.00	1,675.00	6,700.00
654.0102	Concrete Bases Type 2	EACH	18.000	1,050.00	18,900.00	1,050.00	18,900.00	1,050.00	18,900.00
654.0200	Concrete Control Cabinet Bases Type 6	EACH	1.000	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00	1,500.00
655.0625	Electrical Wire Lighting 6 AWG	LF	7,620.000	1.70	12,954.00	1.70	12,954.00	1.70	12,954.00
659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	6,700.00	6,700.00	6,700.00	6,700.00	6,700.00	6,700.00
690.0150	Sawing Asphalt	LF	215.000	1.75	376.25	1.75	376.25	1.75	376.25
690.0250	Sawing Concrete	LF	1,100.000	2.25	2,475.00	2.25	2,475.00	2.25	2,475.00
740.0440	Incentive IRI Ride	DOL	3,292.000	1.00	3,292.00	1.00	3,292.00	1.00	3,292.00
ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	450.000	5.00	2,250.00	5.00	2,250.00	5.00	2,250.00
ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	400.000	5.00	2,000.00	5.00	2,000.00	5.00	2,000.00
SPV.0060	Special 01. Inlet Protection Type D-RF	EACH	41.000	325.00	13,325.00	325.00	13,325.00	325.00	13,325.00
SPV.0060	Special 02. Remove and Reinstall Mailbox	EACH	59.000	125.00	7,375.00	250.00	14,750.00	167.71	9,894.89
SPV.0060	Special 03. Existing Sanitary Sewer Connection	EACH	8.000	1,723.65	13,789.20	1,000.00	8,000.00	1,323.84	10,590.72
SPV.0060	Special 04. Sanitary Lateral Tracer Wire Box	EACH	15.000	212.80	3,192.00	300.00	4,500.00	574.89	8,623.35
SPV.0060	Special 05. Sanitary Service Lateral Connection	EACH	16.000	229.40	3,670.40	2,250.00	36,000.00	1,626.19	26,019.04
SPV.0060	Special 06. Sanitary Sewer 18"x4" Wye	EACH	14.000	1,338.40	18,737.60	1,775.00	24,850.00	1,491.97	20,887.58
SPV.0060	Special 07. Sanitary Sewer 8"x4" Wye	EACH	2.000	110.60	221.20	650.00	1,300.00	487.20	974.40
SPV.0060	Special 08. Sanitary Manhole Casting	EACH	15.000	1,734.52	26,017.80	980.00	14,700.00	1,336.70	20,050.50

**All Bids Received
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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
SPV.0060	Special 09. 10" Valves and Boxes	EACH	17.000	4,771.20	81,110.40	4,430.00	75,310.00	4,172.68	70,935.56
SPV.0060	Special 10. 8" Valves and Boxes	EACH	2.000	3,283.00	6,566.00	3,125.00	6,250.00	2,955.77	5,911.54
SPV.0060	Special 11. 6" Valves and Boxes	EACH	6.000	2,364.60	14,187.60	2,365.00	14,190.00	2,240.26	13,441.56
SPV.0060	Special 12. 1" Curb Stops	EACH	49.000	597.20	29,262.80	400.00	19,600.00	650.86	31,892.14
SPV.0060	Special 13. 1" Corporation Stops	EACH	49.000	349.40	17,120.60	250.00	12,250.00	465.14	22,791.86
SPV.0060	Special 14. Water Service Lateral Reconnections	EACH	49.000	231.50	11,343.50	225.00	11,025.00	1,166.61	57,163.89
SPV.0060	Special 15. Existing Main Reconnections	EACH	13.000	2,057.87	26,752.31	2,820.00	36,660.00	4,126.23	53,640.99
SPV.0060	Special 16. New Hydrants	EACH	9.000	5,939.80	53,458.20	5,500.00	49,500.00	5,973.84	53,764.56
SPV.0060	Special 17. Existing Hydrant Removals	EACH	9.000	1,375.00	12,375.00	600.00	5,400.00	1,036.12	9,325.08
SPV.0060	Special 18. Lighting Unit Type Special 1	EACH	11.000	15,851.77	174,369.47	15,851.77	174,369.47	15,851.77	174,369.47
SPV.0060	Special 19. Lighting Unit Type Special 2	EACH	7.000	15,851.77	110,962.39	15,851.77	110,962.39	15,851.77	110,962.39
SPV.0060	Special 20. Utility Line Opening	EACH	10.000	753.00	7,530.00	730.00	7,300.00	460.00	4,600.00
SPV.0060	Special 21. Sanitary Sewer Spot Repair	EACH	2.000	7,358.08	14,716.16	3,800.00	7,600.00	12,470.99	24,941.98
SPV.0060	Special 22. Remove and Reinstall RRFB Crossing System	EACH	1.000	2,100.00	2,100.00	2,000.00	2,000.00	2,100.00	2,100.00
SPV.0090	Special 01. Sanitary Sewer, PVC 18-Inch	LF	775.000	137.13	106,275.75	191.00	148,025.00	186.78	144,754.50
SPV.0090	Special 02. Sanitary Sewer, PVC 12-Inch	LF	14.000	131.68	1,843.52	256.00	3,584.00	240.43	3,366.02
SPV.0090	Special 03. Sanitary Sewer, PVC 8-Inch	LF	25.000	117.42	2,935.50	212.00	5,300.00	143.55	3,588.75
SPV.0090	Special 04. Sanitary Sewer, PVC 4-Inch	LF	616.000	91.25	56,210.00	36.00	22,176.00	216.74	133,511.84
SPV.0090	Special 05. 12" Water Main Ductile Iron	LF	22.000	502.61	11,057.42	504.00	11,088.00	481.10	10,584.20

**All Bids Received
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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 1		Bidder No. 2		Bidder No. 3	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
SPV.0090	Special 06. 10" Water Main, Ductile Iron	LF	2,535.000	112.86	286,100.10	165.00	418,275.00	143.15	362,885.25
SPV.0090	Special 07. 8" Water Main, Ductile Iron	LF	60.000	147.73	8,863.80	158.00	9,480.00	191.06	11,463.60
SPV.0090	Special 08. 6" Water Main, Ductile Iron	LF	200.000	128.97	25,794.00	138.00	27,600.00	140.42	28,084.00
SPV.0090	Special 09. 1" Copper Water Service Laterals	LF	1,372.000	119.78	164,338.16	100.00	137,200.00	171.23	234,927.56
SPV.0090	Special 10. Temporary Sewer Bypassing and Connections	LF	729.000	15.85	11,554.65	16.00	11,664.00	14.12	10,293.48
SPV.0090	Special 11. Remove and Reinstall Fencing	LF	80.000	20.00	1,600.00	20.00	1,600.00	20.00	1,600.00
SPV.0200	Special 01. Sanitary Manhole Masonry 48-Inch Diameter	VF	40.200	558.16	22,438.03	535.00	21,507.00	798.11	32,084.02
Proposal Total:					\$4,021,987.94		\$4,273,000.00		\$4,485,562.80

**All Bids Received
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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Bidder No. 1	JAMES PETERSON SONS, INC.	Po Box 120	Medford, WI 54451-0120
Bidder No. 2	R.G. HUSTON COMPANY, INC.	Po Box 399	Cottage Grove, WI 53527
Bidder No. 3	ROCK ROAD COMPANIES, INC.	Po Box 1818	Janesville, WI 53547-1818
Bidder No. 4	INTEGRITY GRADING AND EXCAVATING, INC.	605 Grossman Drive	Schofield, WI 54476-0138
Bidder No. 5	PARISI CONSTRUCTION, LLC	508 S. Nine Mound Road	Verona, WI 53593

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
201.0120	Clearing	ID	555.000	26.38	14,640.90	28.00	15,540.00	0.00	0.00
201.0220	Grubbing	ID	555.000	15.83	8,785.65	16.75	9,296.25	0.00	0.00
204.0110	Removing Asphaltic Surface	SY	500.000	2.50	1,250.00	8.00	4,000.00	0.00	0.00
204.0150	Removing Curb & Gutter	LF	8,560.000	6.50	55,640.00	3.90	33,384.00	0.00	0.00
204.0155	Removing Concrete Sidewalk	SY	2,060.000	7.00	14,420.00	12.75	26,265.00	0.00	0.00
204.0220	Removing Inlets	EACH	9.000	290.00	2,610.00	720.00	6,480.00	0.00	0.00
204.0245	Removing Storm Sewer (size) 01. 12-inch	LF	200.000	14.50	2,900.00	28.50	5,700.00	0.00	0.00
204.0245	Removing Storm Sewer (size) 02. 15-inch	LF	117.000	14.50	1,696.50	30.50	3,568.50	0.00	0.00
205.0100	Excavation Common	CY	15,520.000	18.50	287,120.00	24.50	380,240.00	0.00	0.00
213.0100	Finishing Roadway (project) 01. 5685-00-05	EACH	1.000	5,000.00	5,000.00	950.00	950.00	0.00	0.00
305.0120	Base Aggregate Dense 1 1/4-Inch	TON	8,785.000	26.00	228,410.00	17.50	153,737.50	0.00	0.00
305.0130	Base Aggregate Dense 3-Inch	TON	14,410.000	19.00	273,790.00	14.75	212,547.50	0.00	0.00
312.0110	Select Crushed Material	TON	2,610.000	14.00	36,540.00	14.50	37,845.00	0.00	0.00
455.0605	Tack Coat	GAL	540.000	3.00	1,620.00	3.20	1,728.00	0.00	0.00
460.2000	Incentive Density HMA Pavement	DOL	3,360.000	1.00	3,360.00	1.00	3,360.00	0.00	0.00
460.5224	HMA Pavement 4 LT 58-28 S	TON	3,500.000	75.00	262,500.00	79.00	276,500.00	0.00	0.00
460.5225	HMA Pavement 5 LT 58-28 S	TON	1,750.000	79.00	138,250.00	84.00	147,000.00	0.00	0.00

**All Bids Received
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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
465.0120	Asphaltic Surface Driveways and Field Entrances	TON	60.000	160.00	9,600.00	170.00	10,200.00	0.00	0.00
520.8000	Concrete Collars for Pipe	EACH	6.000	850.00	5,100.00	620.00	3,720.00	0.00	0.00
601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	8,168.000	22.12	180,676.16	20.75	169,486.00	0.00	0.00
601.0600	Concrete Curb Pedestrian	LF	110.000	75.05	8,255.50	50.00	5,500.00	0.00	0.00
602.0405	Concrete Sidewalk 4-Inch	SF	33,665.000	4.86	163,611.90	5.90	198,623.50	0.00	0.00
602.0415	Concrete Sidewalk 6-Inch	SF	6,765.000	6.82	46,137.30	6.70	45,325.50	0.00	0.00
602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	350.000	41.99	14,696.50	55.00	19,250.00	0.00	0.00
602.0810	Concrete Driveway 6-Inch	SY	1,473.000	61.46	90,530.58	66.00	97,218.00	0.00	0.00
602.1500	Concrete Steps	SF	15.000	85.00	1,275.00	100.00	1,500.00	0.00	0.00
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	1,563.000	110.00	171,930.00	110.00	171,930.00	0.00	0.00
608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	782.000	120.00	93,840.00	130.00	101,660.00	0.00	0.00
611.0430	Reconstructing Inlets	EACH	2.000	900.00	1,800.00	2,200.00	4,400.00	0.00	0.00
611.0530	Manhole Covers Type J	EACH	6.000	1,000.00	6,000.00	680.00	4,080.00	0.00	0.00
611.0624	Inlet Covers Type H	EACH	26.000	1,250.00	32,500.00	870.00	22,620.00	0.00	0.00
611.2004	Manholes 4-FT Diameter	EACH	6.000	3,000.00	18,000.00	2,850.00	17,100.00	0.00	0.00
611.3230	Inlets 2x3-FT	EACH	26.000	2,500.00	65,000.00	2,400.00	62,400.00	0.00	0.00
611.8110	Adjusting Manhole Covers	EACH	21.000	850.00	17,850.00	480.00	10,080.00	0.00	0.00
619.1000	Mobilization	EACH	1.000	311,031.22	311,031.22	140,000.00	140,000.00	0.00	0.00
624.0100	Water	MGA L	200.000	45.00	9,000.00	37.75	7,550.00	0.00	0.00
625.0100	Topsoil	SY	9,350.000	12.00	112,200.00	6.70	62,645.00	0.00	0.00
627.0200	Mulching	SY	9,350.000	1.00	9,350.00	1.10	10,285.00	0.00	0.00
628.1504	Silt Fence	LF	230.000	3.00	690.00	3.20	736.00	0.00	0.00

**All Bids Received
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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
628.1905	Mobilizations Erosion Control	EACH	2.000	400.00	800.00	420.00	840.00	0.00	0.00
628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	200.00	400.00	210.00	420.00	0.00	0.00
629.0210	Fertilizer Type B	CWT	6.000	150.00	900.00	160.00	960.00	0.00	0.00
630.0140	Seeding Mixture No. 40	LB	168.000	15.00	2,520.00	16.00	2,688.00	0.00	0.00
630.0500	Seed Water	MGA L	168.000	20.00	3,360.00	21.25	3,570.00	0.00	0.00
634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	18.000	150.00	2,700.00	160.00	2,880.00	0.00	0.00
637.2210	Signs Type II Reflective H	SF	24.250	25.00	606.25	26.50	642.63	0.00	0.00
637.2230	Signs Type II Reflective F	SF	78.500	25.00	1,962.50	26.50	2,080.25	0.00	0.00
638.2102	Moving Signs Type II	EACH	2.000	200.00	400.00	210.00	420.00	0.00	0.00
638.2602	Removing Signs Type II	EACH	16.000	30.00	480.00	31.75	508.00	0.00	0.00
638.3000	Removing Small Sign Supports	EACH	16.000	30.00	480.00	31.75	508.00	0.00	0.00
638.4000	Moving Small Sign Supports	EACH	2.000	100.00	200.00	110.00	220.00	0.00	0.00
642.5001	Field Office Type B	EACH	1.000	15,210.00	15,210.00	8,900.00	8,900.00	0.00	0.00
643.0300	Traffic Control Drums	DAY	52,049.000	0.15	7,807.35	0.16	8,327.84	0.00	0.00
643.0410	Traffic Control Barricades Type II	DAY	1,284.000	0.30	385.20	0.30	385.20	0.00	0.00
643.0420	Traffic Control Barricades Type III	DAY	3,745.000	0.60	2,247.00	0.65	2,434.25	0.00	0.00
643.0705	Traffic Control Warning Lights Type A	DAY	3,745.000	0.08	299.60	0.10	374.50	0.00	0.00
643.0900	Traffic Control Signs	DAY	3,103.000	0.51	1,582.53	0.55	1,706.65	0.00	0.00
643.0920	Traffic Control Covering Signs Type II	EACH	5.000	42.00	210.00	44.50	222.50	0.00	0.00
643.3970	Temporary Marking Removable Mask Out Tape 10-Inch	LF	40.000	3.50	140.00	3.70	148.00	0.00	0.00
643.5000	Traffic Control	EACH	1.000	11,500.00	11,500.00	12,200.00	12,200.00	0.00	0.00

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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
644.1440	Temporary Pedestrian Surface Matting	SF	7,700.000	3.25	25,025.00	3.40	26,180.00	0.00	0.00
644.1601	Temporary Pedestrian Curb Ramp	DAY	24.000	60.00	1,440.00	64.00	1,536.00	0.00	0.00
644.1605	Temporary Pedestrian Detectable Warning Field	SF	440.000	10.00	4,400.00	10.50	4,620.00	0.00	0.00
644.1810	Temporary Pedestrian Barricade	LF	1,424.000	7.00	9,968.00	7.40	10,537.60	0.00	0.00
646.1020	Marking Line Epoxy 4-Inch	LF	20,323.000	0.52	10,567.96	0.55	11,177.65	0.00	0.00
646.5020	Marking Arrow Epoxy	EACH	4.000	350.00	1,400.00	370.00	1,480.00	0.00	0.00
646.5220	Marking Symbol Epoxy	EACH	33.000	235.00	7,755.00	24.25	800.25	0.00	0.00
646.6120	Marking Stop Line Epoxy 18-Inch	LF	135.000	16.10	2,173.50	17.00	2,295.00	0.00	0.00
646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	325.000	8.25	2,681.25	8.70	2,827.50	0.00	0.00
646.7520	Marking Crosswalk Epoxy Block Style 24-Inch	LF	462.000	19.50	9,009.00	20.75	9,586.50	0.00	0.00
650.4000	Construction Staking Storm Sewer	EACH	32.000	200.00	6,400.00	210.00	6,720.00	0.00	0.00
650.4500	Construction Staking Subgrade	LF	4,322.000	0.01	43.22	0.01	43.22	0.00	0.00
650.5000	Construction Staking Base	LF	4,322.000	1.00	4,322.00	1.10	4,754.20	0.00	0.00
650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	8,278.000	1.00	8,278.00	1.10	9,105.80	0.00	0.00
650.9000	Construction Staking Curb Ramps	EACH	35.000	300.00	10,500.00	320.00	11,200.00	0.00	0.00
650.9500	Construction Staking Sidewalk (project) 01. 5685-00-05	EACH	1.000	3,000.00	3,000.00	3,200.00	3,200.00	0.00	0.00
650.9911	Construction Staking Supplemental Control (project) 01. 5685-00-05	EACH	1.000	5,000.00	5,000.00	5,300.00	5,300.00	0.00	0.00
650.9920	Construction Staking Slope Stakes	LF	4,322.000	1.00	4,322.00	1.10	4,754.20	0.00	0.00
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,360.000	8.25	19,470.00	8.70	20,532.00	0.00	0.00
652.0325	Conduit Rigid Nonmetallic Schedule 80 2-Inch	LF	80.000	11.00	880.00	11.75	940.00	0.00	0.00

**All Bids Received
December 12, 2023**

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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
653.0154	Pull Boxes Non-Conductive 24x36-Inch	EACH	4.000	1,675.00	6,700.00	1,800.00	7,200.00	0.00	0.00
654.0102	Concrete Bases Type 2	EACH	18.000	1,050.00	18,900.00	1,100.00	19,800.00	0.00	0.00
654.0200	Concrete Control Cabinet Bases Type 6	EACH	1.000	1,500.00	1,500.00	1,600.00	1,600.00	0.00	0.00
655.0625	Electrical Wire Lighting 6 AWG	LF	7,620.000	1.70	12,954.00	1.80	13,716.00	0.00	0.00
659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	6,700.00	6,700.00	7,100.00	7,100.00	0.00	0.00
690.0150	Sawing Asphalt	LF	215.000	1.90	408.50	5.00	1,075.00	0.00	0.00
690.0250	Sawing Concrete	LF	1,100.000	2.35	2,585.00	2.50	2,750.00	0.00	0.00
740.0440	Incentive IRI Ride	DOL	3,292.000	1.00	3,292.00	1.00	3,292.00	0.00	0.00
ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	450.000	5.00	2,250.00	5.00	2,250.00	0.00	0.00
ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	400.000	5.00	2,000.00	5.00	2,000.00	0.00	0.00
SPV.0060	Special 01. Inlet Protection Type D-RF	EACH	41.000	325.00	13,325.00	340.00	13,940.00	0.00	0.00
SPV.0060	Special 02. Remove and Reinstall Mailbox	EACH	59.000	150.00	8,850.00	210.00	12,390.00	0.00	0.00
SPV.0060	Special 03. Existing Sanitary Sewer Connection	EACH	8.000	4,000.00	32,000.00	850.00	6,800.00	0.00	0.00
SPV.0060	Special 04. Sanitary Lateral Tracer Wire Box	EACH	15.000	33.76	506.40	220.00	3,300.00	0.00	0.00
SPV.0060	Special 05. Sanitary Service Lateral Connection	EACH	16.000	3,750.00	60,000.00	3,900.00	62,400.00	0.00	0.00
SPV.0060	Special 06. Sanitary Sewer 18"x4" Wye	EACH	14.000	907.30	12,702.20	300.00	4,200.00	0.00	0.00
SPV.0060	Special 07. Sanitary Sewer 8"x4" Wye	EACH	2.000	71.74	143.48	81.00	162.00	0.00	0.00
SPV.0060	Special 08. Sanitary Manhole Casting	EACH	15.000	1,000.00	15,000.00	1,500.00	22,500.00	0.00	0.00

**All Bids Received
December 12, 2023**

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Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
SPV.0060	Special 09. 10" Valves and Boxes	EACH	17.000	3,840.20	65,283.40	5,900.00	100,300.00	0.00	0.00
SPV.0060	Special 10. 8" Valves and Boxes	EACH	2.000	2,664.93	5,329.86	4,600.00	9,200.00	0.00	0.00
SPV.0060	Special 11. 6" Valves and Boxes	EACH	6.000	2,015.05	12,090.30	3,800.00	22,800.00	0.00	0.00
SPV.0060	Special 12. 1" Curb Stops	EACH	49.000	232.10	11,372.90	280.00	13,720.00	0.00	0.00
SPV.0060	Special 13. 1" Corporation Stops	EACH	49.000	73.85	3,618.65	81.00	3,969.00	0.00	0.00
SPV.0060	Special 14. Water Service Lateral Reconnections	EACH	49.000	2,500.00	122,500.00	3,200.00	156,800.00	0.00	0.00
SPV.0060	Special 15. Existing Main Reconnections	EACH	13.000	2,500.00	32,500.00	3,200.00	41,600.00	0.00	0.00
SPV.0060	Special 16. New Hydrants	EACH	9.000	7,500.00	67,500.00	6,500.00	58,500.00	0.00	0.00
SPV.0060	Special 17. Existing Hydrant Removals	EACH	9.000	1,250.00	11,250.00	3,000.00	27,000.00	0.00	0.00
SPV.0060	Special 18. Lighting Unit Type Special 1	EACH	11.000	15,851.77	174,369.47	16,800.00	184,800.00	0.00	0.00
SPV.0060	Special 19. Lighting Unit Type Special 2	EACH	7.000	15,851.77	110,962.39	16,800.00	117,600.00	0.00	0.00
SPV.0060	Special 20. Utility Line Opening	EACH	10.000	1,400.00	14,000.00	750.00	7,500.00	0.00	0.00
SPV.0060	Special 21. Sanitary Sewer Spot Repair	EACH	2.000	7,500.00	15,000.00	8,000.00	16,000.00	0.00	0.00
SPV.0060	Special 22. Remove and Reinstall RRFB Crossing System	EACH	1.000	2,100.00	2,100.00	2,200.00	2,200.00	0.00	0.00
SPV.0090	Special 01. Sanitary Sewer, PVC 18-Inch	LF	775.000	235.00	182,125.00	440.00	341,000.00	0.00	0.00
SPV.0090	Special 02. Sanitary Sewer, PVC 12-Inch	LF	14.000	140.00	1,960.00	350.00	4,900.00	0.00	0.00
SPV.0090	Special 03. Sanitary Sewer, PVC 8-Inch	LF	25.000	80.00	2,000.00	260.00	6,500.00	0.00	0.00
SPV.0090	Special 04. Sanitary Sewer, PVC 4-Inch	LF	616.000	80.00	49,280.00	53.00	32,648.00	0.00	0.00
SPV.0090	Special 05. 12" Water Main Ductile Iron	LF	22.000	400.00	8,800.00	270.00	5,940.00	0.00	0.00

**All Bids Received
December 12, 2023**

Page 90 of 358

Proposal Call: 008 **Proposal ID:** 20231212008**State Project(s):** 5685-00-05
5685-00-06**Location:** Dane

V of McFarland, Exchange Street; Farwell St to Sleepy Hollow Road

LOC STR, Dane County

V of McFarland, Exchange Street

Item Number	Item Description	Unit	Estimated Quantity	Bidder No. 4		Bidder No. 5		Bidder No. 6	
				Bid Price	Amount	Bid Price	Amount	Bid Price	Amount
SPV.0090	Special 06. 10" Water Main, Ductile Iron	LF	2,535.000	170.00	430,950.00	190.00	481,650.00	0.00	0.00
SPV.0090	Special 07. 8" Water Main, Ductile Iron	LF	60.000	165.00	9,900.00	170.00	10,200.00	0.00	0.00
SPV.0090	Special 08. 6" Water Main, Ductile Iron	LF	200.000	145.00	29,000.00	180.00	36,000.00	0.00	0.00
SPV.0090	Special 09. 1" Copper Water Service Laterals	LF	1,372.000	65.00	89,180.00	36.75	50,421.00	0.00	0.00
SPV.0090	Special 10. Temporary Sewer Bypassing and Connections	LF	729.000	0.01	7.29	56.00	40,824.00	0.00	0.00
SPV.0090	Special 11. Remove and Reinstall Fencing	LF	80.000	20.00	1,600.00	21.25	1,700.00	0.00	0.00
SPV.0200	Special 01. Sanitary Manhole Masonry 48-Inch Diameter	VF	40.200	950.00	38,190.00	680.00	27,336.00	0.00	0.00
Proposal Total:					\$4,589,118.41		\$4,660,059.49		\$0.00

McFarland
SUMMARY SHEET

MEETING DATE: Monday, January 22, 2024

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director, Matt Schuenke, Village Administrator

AGENDA ITEM: Discussion and action to make a recommendation to the Village Board regarding the award of contract for the 2024 Lift Station 2 project.

PREVIOUS ACTION:

The Public Works & Utilities committee recommended approval to the Village Board regarding a proposal from Town & Country Engineering to complete final engineering design and bidding for Lift Station #2 at their May 22, 2023 meeting.

The Public Works & Utilities committee recommended approval to the Village Board regarding the final design and authorized the project for bid on October 23, 2023.

The Village Board approved the final design for Lift Station 2 and authorized the project for bid on December 12, 2023.

ISSUE SUMMARY:

Lift Station #2, located along Pheasant Run, is in the process of planning for an upgrade. This station was constructed back in the late 1970's and is an underground steel-canned unit that houses the pumps and motors along with controls. This station handles over 50% of the village's daily volume of sewage pumped into Madison Metropolitan Sewerage District's conveyance pipes. Lift station #2 is responsible for handling the ongoing growth on the eastside of the village.

Village staff met with engineering personnel from Town & Country Engineers to discuss the needs of a station to handle today's flows while looking into future projections related to village growth on the east side. As part of the concept of a building layout, confined space entry elimination was included. This elimination helps to promote worker safety. Another aspect of the design is the inclusion of a permanent indoor backup electrical generator with an instantaneous start. All new controls along with pumping apparatuses are being planned to be incorporated too.

The current wetwell, where the sewage is stored until pumping time, will be turned into a manhole structure. A new wetwell will be constructed to accommodate the new submissible pumping system along with capacity for future growth.

Bids were opened on December 21, 2023. While 29 companies or subcontractors requested plan sets, only one bid was received. Companies informed us that our project was relatively small



compared to other sewer projects out for bid. Through discussions with sewer companies and Town and Country regarding receiving additional bids, we do not feel that putting the project back out for bid would guarantee additional bids nor a lower bid. Thus, staff recommends recommendation of approval of the bid to the Village Board.

Town and Country Engineering presented the project design to the committee on October 23, 2023. The Committee recommended approval to the Village Board and authorized the project for bid. Approved plans are enclosed within the packet.

FINANCIAL/BUDGET IMPACT:

The 2024 Budget was approved to allocate \$2,600,000 for the construction of Lift Station #2 along with \$187,000 of funds previously authorized to develop the project. The Utility Fund is responsible to pay for the project via a borrowing from the State's Clean Water Fund Program offset by sanitary sewer rates. Total revenues planned for the project to date are \$2,787,000.

Expenses - Included within your packet is the recommendation letter for the project based on the bid received:

\$2,870,575	Lift Station #2 Low Bid
\$ 187,000	Design Engineering/Consulting
\$ 165,000	Construction Administration
\$ 55,000	Solar Installation
\$ 287,000	Contingency
\$ (575)	Rounding
\$3,564,000	Total Project Expense

The project as bid is over budget by \$777,000 as is currently bid and presented within the packet. Cost escalations of this magnitude were not entirely unexpected. The 2023 estimates placed the project around \$2 million and the 2024 Budget was updated to \$2.6 million based on economic trends; however, that unfortunately did not go far enough. Having one bidder is not ideal but this work being highly specialty in nature, it is a difficult segment of the market to generate competition. There were up to three bidders engaged in the process up until bids were opened, but unfortunately only one was submitted. The Village Engineer will be present to discuss this and what options Staff considered when making our recommendation to proceed with the bid that was submitted.

VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended Action:

Motion, second to make a recommendation to the Village Board to award contract to



Portzen Construction, Inc. of Dubuque, IA in an amount of \$2,870,575 for the reconstruction Lift Station #2 including base bid with additional expenses for engineering, construction administration, and contingency for a total project cost in an amount of \$3,564,000.

ATTACHMENTS:

1. Recommendation Ltr
2. LS2 Current Compilation 10.18.23

January 8, 2024

Village of McFarland
5915 Milwaukee Street, P.O. Box 110
McFarland, WI 53558

Attention: Mr. Matthew Schuenke, Administrator

Subject: Analysis of Bids and Recommendation for Award of Contracts; Lift Station
No. 2 Improvements; Village of McFarland

Bid Deadline: December 21, 2023 at 10:30 a.m. local time

Ladies and Gentlemen:

The purpose of this letter is to analyze the bids received for the Lift Station No. 2 Improvements project and to recommend award of a contract. This project involves the complete replacement of the existing Lift Station 2 facility, including the construction of a new wetwell, new above-ground structure, provision and installation of all equipment in the new wetwell, piping, site work, electrical, security, HVAC and plumbing.

The pre-bid estimate for the base bid was \$2,175,212. Twenty-nine general contractors, subcontractors, and material suppliers requested sets of the plans, specifications and bidding documents. One contractor submitted a bid.

A summary of the bids is as follows:

Contractor	Base Bid, Allowance and Supplemental Bid Items Total
Portzen Construction, Inc.	\$2,870,575.00

The bid was properly submitted.

Portzan Construction, Inc. of Dubuque, Iowa is an experienced commercial and industrial construction contractor that has completed similar projects for the Village of Cross Plains, Blanchardville, and the City of Dodgeville. The bid prices are higher than the original budget due to rapidly rising construction inflation costs within, particularly within this industry sector, coupled with the project's relatively small size in comparison to other projects available for bidding at this time. We recommend that Portzen Construction, Inc. be awarded a contract for the base bid, plus the supplemental bids, if the budgets allow, for a total of \$2,870,575.00.

This will be a unit price contract. That is, the contractor will be paid for the work actually performed on the basis on the unit prices bid. This means that the final line item costs could be either greater than or less than the bid totals. Also, unexpected conditions are

sometimes encountered which result in increased project costs. Therefore, it would be wise to continue to carry the recommended 10% contingency.

If you have any questions with respect to our thoughts on this matter, I am available at your convenience to discuss them with you.

Respectfully,
TOWN & COUNTRY ENGINEERING, INC.

Tim Stieve, P.E., ENV-SP
Project Engineer

TS:sai
J:\JOB#S\McFarland\MC-198-W2 Lift Station #2 Improvements\Bidding\Recommendation Ltr.docx

2023 LIFT STATION 2 IMPROVEMENTS

Marsh Woods Drive

Village of McFarland, Wisconsin

MEMBER

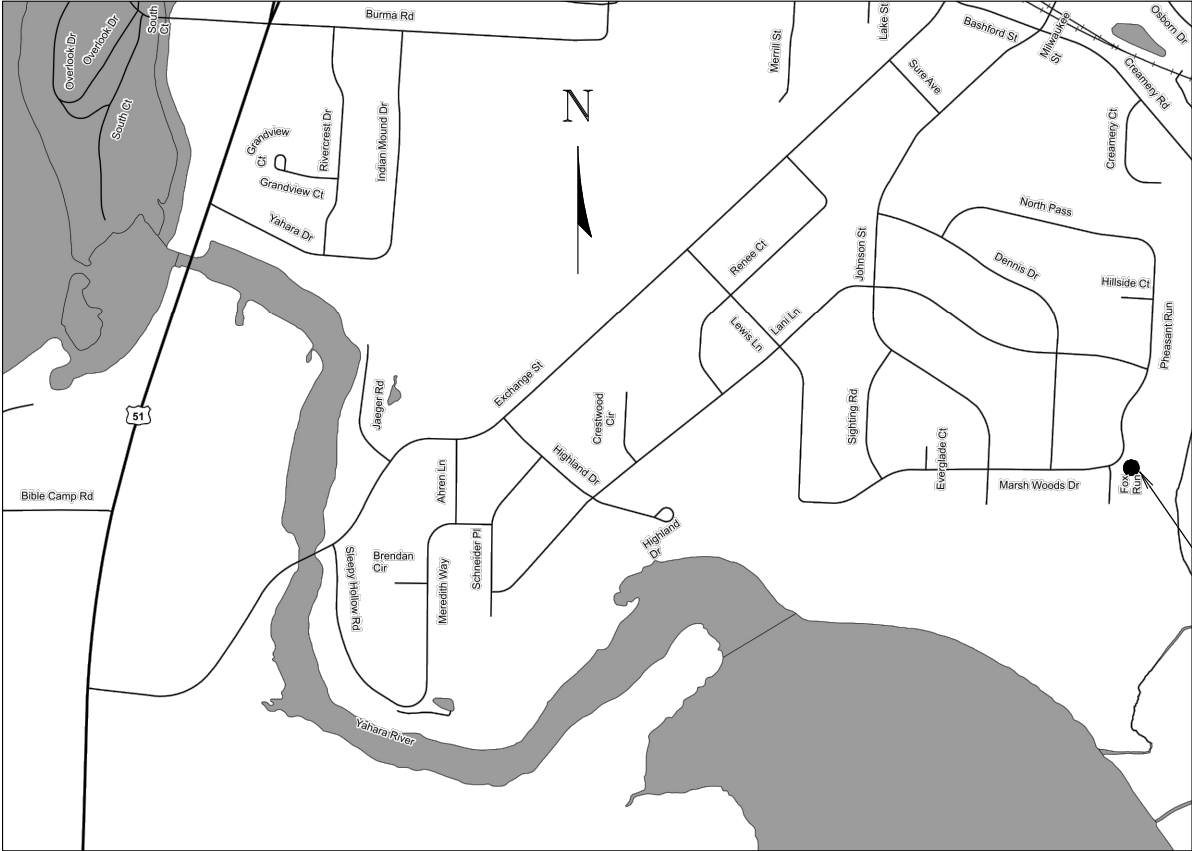
TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE

1-800-242-8511

TOLL FREE

WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.



NO SCALE

PROJECT SITE
MARSH WOODS DRIVE
MCFARLAND, WI 53558



VILLAGE OF MCFARLAND
DANE COUNTY, WISCONSIN

ELECTRICAL ENGINEER	PLUMBING ENGINEER	HVAC ENGINEER	STRUCTURAL ENGINEER	ARCHITECT	CIVIL/PROCESS ENGINEER	CIVIL/PROCESS ENGINEER	CIVIL/PROCESS ENGINEER	BY	DATE	
2023 LIFT STATION 2 IMPROVEMENTS										
Marsh Woods Drive										
Village of McFarland, Wisconsin										
PROJECT NO.: MC 198	DRAWN BY: D.D.E.									
DRAWING FILE: 00-G	CHECKED BY: T.J.S.									
DATE: 9-6-23	REV. DATE:									

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00 – G – 04	ELECTRICAL SYMBOLS AND ABBREVIATIONS
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INDEX SHEET

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.:
MC 198
DRAWING FILE:
00-G
DRAWN BY:
D.D.E.
CHECKED BY:
T.J.S.
DATE:
9-6-23
REVISIONS:
SCALE:

SHEET:

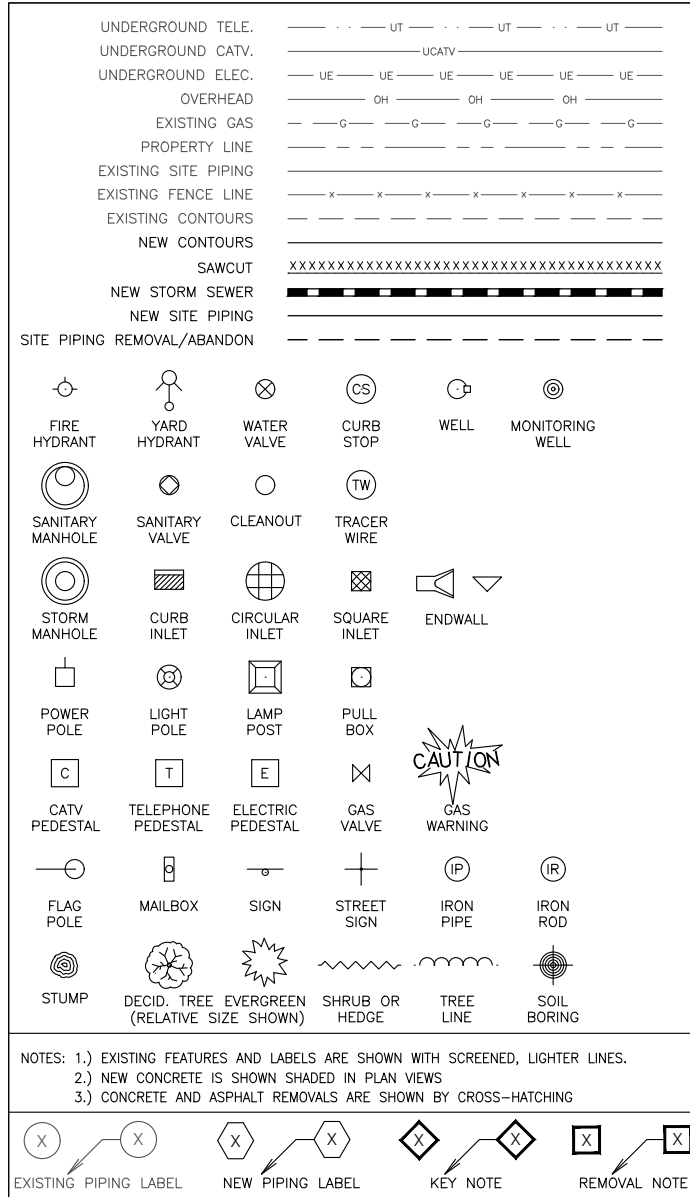
00-G-01

6264 Nesbit Road
Madison, WI 53719
(608) 273-3350
www.tceengineers.net
tc TOWN & COUNTRY
ENGINEERING, INC.

STANDARD ABBREVIATIONS

AER	ACTUATED	M	METER
AFF	AERATION, AEROBIC	MATL	MATERIAL
AHP	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ALP	AIR — HIGH PRESSURE	MECH	MECHANICAL
ALT	AIR — LOW PRESSURE	MFR	MANUFACTURER
ALUM	ALTERNATE	MGD	MILLION GALLONS PER DAY
APPROX	ALUMINUM	MH	MANHOLE
ARCH	APPROXIMATE, —LY	MID	MIDDLE
ASPH	ARCHITECTUAL	MIN	MINIMUM
ASSY	ASPHALT	MISC	MISCELLANEOUS
AVG	ASSEMBLY	MJ	MECHANICAL JOINT
	AVERAGE	ML	MIXED LIQUOR
		MLSS	MIXED LIQUOR SUSPENDED SOLIDS
B/	BOTTOM OF	MM	MILLIMETER
BAF	BAFFLE	MOT	MOTOR, —IZED
BCKWSH	BACKWASH	MTL	METAL
BFV	BUTTERFLY VALVE		
BF	BLIND FLANGE	N	NORTHING
BIT	BITUMINOUS	NH3—N	AMMONIA—NITROGEN
BLDG	BUILDING	NO.	NUMBER
BM	BENCH MARK	NPT	NATIONAL PIPE THREAD
BOD	BIOCHEMICAL OXYGEN DEMAND	NPW	NONPOTABLE WATER
BOT	BOTTOM	NTS	NOT TO SCALE
BSMT	BASEMENT		
BV	BALL VALVE	OC	ON CENTER
BYP	BYPASS	OD	OUTSIDE DIAMETER
		OPNG	OPENING
C/C	CENTER TO CENTER	OVER	OVER, —FLOW
CF	CUBIC FEET		
CFM	CUBIC FEET PER MINUTE	P	PHOSPHORUS
CHAN	CHANNEL	PNEU	PNEUMATIC
CHEM	CHEMICAL	PNV	PINCH VALVE
CI	CAST IRON	PE	POLYETHYLENE
C/L	CENTERLINE	PLMB	PLUMBING
CLASS	CLASSIFICATION	POLY	POLYMER
CLG	CEILING	PP	POWER POLE
CMP	CORRUGATED METAL PIPE	PRV	PRESSURE REDUCING VALVE
CON	CONCENTRIC	PSF	POUNDS PER SQUARE FOOT
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONN	CONNECTION	PT	POINT
CONTR	CONTRACTOR	PV	PLUG VALVE
CTR, CTRD	CENTER, —ED	PVC	POLYVINYL CHLORIDE
CV	CHECK VALVE	PVMT	PAVEMENT
CY	CUBIC YARD	PW	POTABLE WATER
DAF	DISSOLVED AIR FLOTATION THICKENER	R	RADIUS
DEC	DECANT	R/W	RIGHT—OF—WAY
DEG	DEGREE	RAS	RETURN ACTIVATED SLUDGE
DG	DIGESTER GAS	RCP	REINFORCED CONCRETE PIPE
DIA	DIAMETER	RCY	RECYCLE
DIG	DIGESTER	RED	REDUCER
DI	DUCTILE IRON	REF	REFERENCE
DISCH	DISCHARGE	REQ'D	REQUIRED
DN	DOWN	RM	ROOM
DNR	DEPARTMENT OF NATURAL RESOURCES	ROT	ROTATE, —D
DRN	DRAIN	RR	RAILROAD
DWG	DRAWING	RT	RIGHT
		RWW	RAW WASTEWATER
E	EASTING		
EA	EACH	SAN	SANITARY
ECC	ECCENTRIC	SBR	SEQUENCING BATCH REACTOR
EFFL	EFFLUENT	SCH	SCHEDULE
ELB	ELBOW	SDR	STRUCTURAL DIMENSION RATIO
ELEC	ELECTRIC, —AL	SEC	SECTION
EL, ELEV	ELEVATION	SEP	SEPTAGE
EQ	EQUALIZATION	SF	SQUARE FOOT
EQUIP	EQUIPMENT	SHT	SHEET
EST	ESTIMATE, —D	SLG	SLUDGE
EX	EXISTING	SPEC	SPECIFICATION
		SQ	SQUARE
FH	FIRE HYDRANT	SS	STAINLESS STEEL
FFC	FLANGED FLEXIBLE CONNECTOR	STA	STATION
FL	FLOW LINE	STL	STEEL
FLR	FLOOR	STR	STRUCTURE
FLTR	FILTER	SUP	SUPERNATANT
FM	FORCE MAIN	SNV	SOLENOID VALVE
FRP	FIBERGLASS REINFORCED PLASTIC	SW	SIDEWALK
FT	FEET	SY	SQUARE YARD
FTG	FOOTING		
		T/	TOP OF
GAL	GALLON	T/W	TOP OF WALL
GALV	GALVANIZED	TEMP	TEMPERATURE
GC	GENERAL CONTRACTOR	TSS	TOTAL SUSPENDED SOLIDS
GND	GROUND	TYP	TYPICAL
GR	GRIT		
GV	GATE VALVE	UV	ULTRAVIOLET
HORIZ	HORIZONTAL	VERT	VERTICAL
HP	HORSEPOWER	VF	VERTICAL FEET
HR	HOUR		
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	W/	WITH
HWL	HIGH WATER LEVEL	W/O	WITHOUT
HYD	HYDRANT	WAS	WASTE ACTIVATED SLUDGE
		WAT	WATER
ID	INSIDE DIAMETER	WW	WASTEWATER
IN	INCH		
INCL	INCLUDE, —ING	YD	YARD
INFL	INFLUENT	YR	YEAR
INV	INVERT		
LB(S)	POUND(S)		
LF	LINEAL FEET		
LIN	LINEAR		
LR	LONG RADIUS		
LS	LUMP SUM		
LT	LEFT		
LWL	LOW WATER LEVEL		

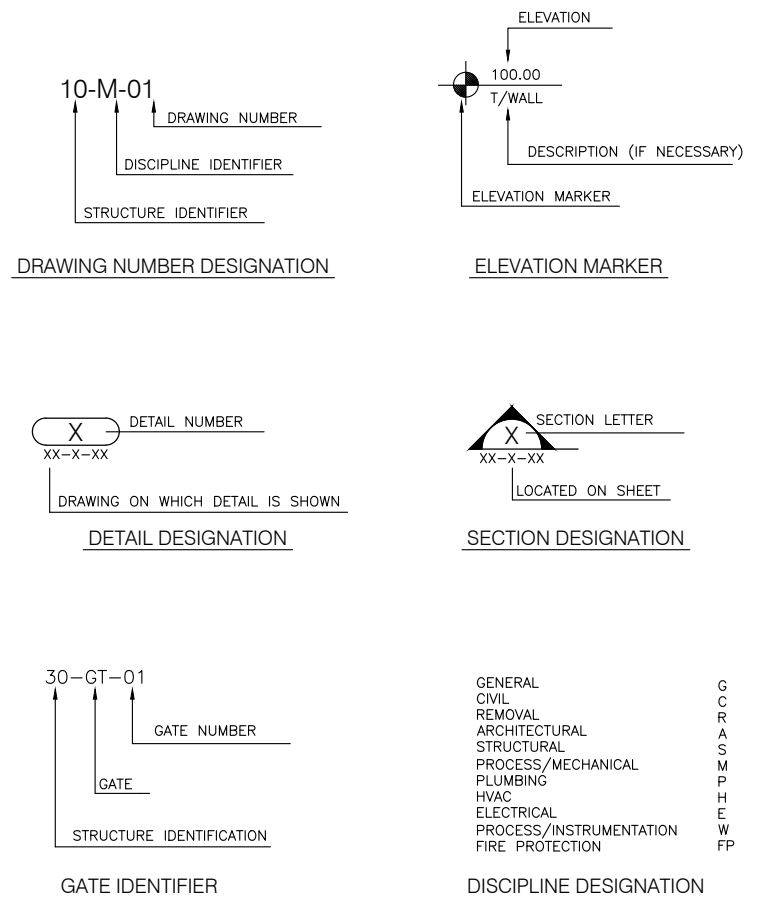
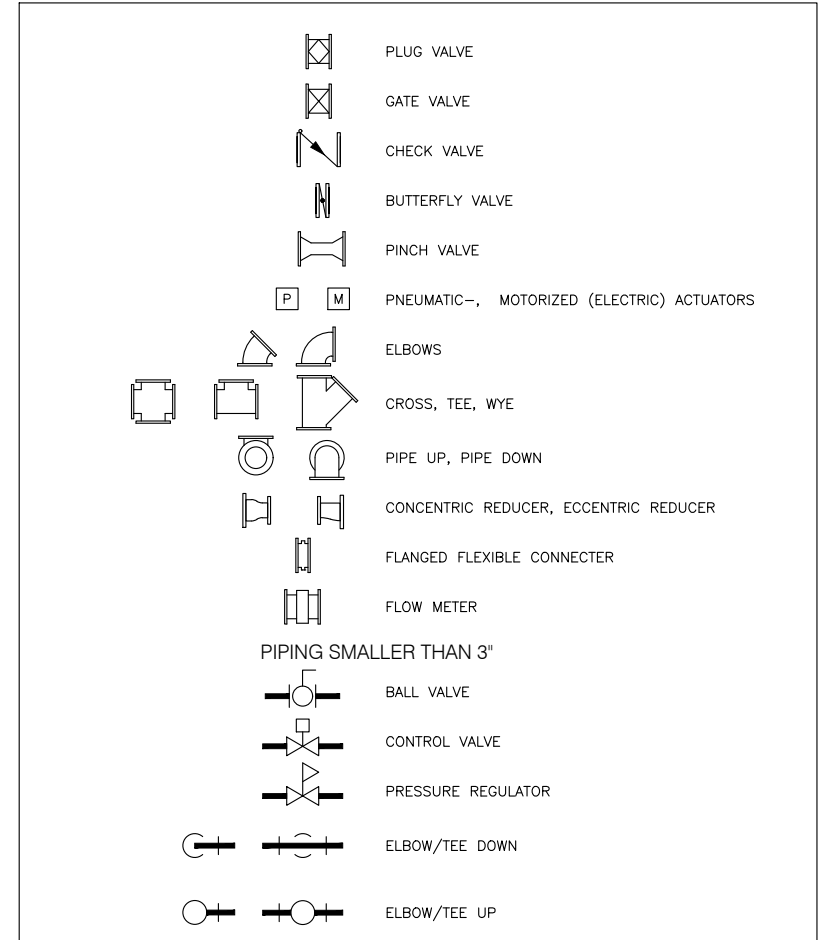
SITE LEGEND



GENERAL NOTES

1. EXISTING INFORMATION, INCLUDING UNDERGROUND PIPING AND UTILITIES, SHOWN ON THE PLANS WAS OBTAINED FROM OWNER INFORMATION AND FIELD MEASUREMENTS WHERE AVAILABLE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL EXISTING INFORMATION AS REQUIRED TO ACCOMMODATE NECESSARY CONSTRUCTION. UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION MUST BE MAINTAINED AND ANY DAMAGES TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF PROPERTY AND RESTORATION OF DAMAGED PROPERTY CAUSED BY CONSTRUCTION ACTIVITIES. AFTER THE COMPLETION OF CONSTRUCTION, ANY EXISTING PROPERTY DAMAGED AS A RESULT OF THE CONTRACTOR'S ACTIVITIES DURING EXECUTION OF THE CONTRACT SHALL BE RESTORED SO AS TO MATCH THE EXISTING AT NO COST TO THE OWNER.
3. DRAWINGS SCALES MAY VARY FROM ONE SHEET TO THE NEXT. ALL PERSONS SHALL BE RESPONSIBLE FOR VERIFYING THE CORRECT SCALE OF ANY MEASUREMENTS MADE ON THE PLAN SHEETS. DRAWINGS IN GENERAL DO NOT SHOW DIMENSIONS OF EXISTING CONSTRUCTION. CONSTRUCTION SHALL BE APPROXIMATELY TO SCALE. CONTRACTOR SHALL OBTAIN ALL DIMENSIONS REQUIRED FOR CONSTRUCTION.
4. WHEN THE TERM "REMOVE" IS USED ON DRAWINGS IT SHALL MEAN THAT THE CONTRACTOR IS TO REMOVE THE REFERENCED MATERIAL OR EQUIPMENT AND DISPOSE OF IT IN A PROPER MANNER. WHEN THE TERM "REMOVE AND SALVAGE" IS USED THE CONTRACTOR SHALL REMOVE THE REFERENCED MATERIAL OR EQUIPMENT, TRANSPORT TO THE DESTINATION INDICATED, AND UNLOAD THE MATERIAL OR EQUIPMENT AS DIRECTED BY THE OWNER. THE PLANS DO NOT NECESSARILY SPELL OUT ALL ITEMS REQUIRING REMOVAL, DEMOLITION, OR PATCHING. WHERE NOT SHOWN, ALL REMOVAL, DEMOLITION, CUTTING, PATCHING AND OTHER WORK NECESSARY TO ACCOMMODATE NEW CONSTRUCTION SHALL BE PROVIDED AS A PART OF THE CONTRACT.

PROCESS PIPING LEGEND



ELECTRICAL PLAN SYMBOLS

OUTLETS AND DEVICES

	DUPLEX
	DUPLEX (COUNTER TOP HEIGHT)
	SINGLE
	DOUBLE DUPLEX
	SPECIAL OUTLET
	EQUIPMENT CONNECTION
	DATA OUTLET
	TELEPHONE/DATA OUTLET
	TELEPHONE OUTLET
	TELEPHONE BLACKBOARD

LIGHTING

	LUMINAIRE, CEILING MOUNTED, RECESSED OR SURFACE
	WALL MOUNTED FIXTURE
	FIXTURE - DOUBLE OR SINGLE HEAD SPOTLIGHT
	EXIT FIXTURE
	EMERGENCY BATTERY REMOTE HEADS
	EMERGENCY BATTERY UNIT WITH HEADS
	SINGLE POLE MOUNTED FIXTURE
	TWIN POLE MOUNTED FIXTURE

SWITCHES

\$	SINGLE POLE SWITCH
\$ ₂	DOUBLE POLE SWITCH
\$ ₃	THREE WAY SWITCH
\$ ₄	FOUR WAY SWITCH
\$ _a \$ _b \$ _c	SWITCH CONTROL A, B, C
\$ _K	KEY OPERATED
\$ _P	SWITCH WITH PILOT LIGHT
\$ _{WP}	WEATHERPROOF SWITCH
\$ _D	DIMMER SWITCH
	OCCUPANCY SENSOR, WALL MOUNTED
	OCCUPANCY SENSOR, CEILING MOUNTED
\$ _M	MOTOR RATED SWITCH
\$ _{MS}	MANUAL MOTOR STARTER

SERVICE AND DISTRIBUTION

	LIGHTING OR POWER PANEL - RECESSED
	LIGHTING OR POWER PANEL - SURFACE
	DISTRIBUTION PANEL
	MOTOR CONTROL CENTER
	TRANSFORMER - REFER TO ONE-LINE. XX-XFMR-01 INDICATES LOCATION AT STRUCTURE XX.
	CURRENT TRANSFORMER CABINET (UTILITY METERING)
	METER AND SOCKET

MOTOR CONTROL

	DISCONNECT SWITCH, NON-FUSED
	DISCONNECT SWITCH, FUSED
	ENCLOSED CIRCUIT BREAKER
	MAGNETIC CONTACTOR
	ADJUSTABLE FREQUENCY DRIVE
	MAGNETIC MOTOR STARTER
	COMBINATION MAGNETIC MOTOR STARTER
	EQUIPMENT CONTROL PANEL - XXX INDICATES EQUIPMENT SERVED
	PUSHBUTTON
	ON/OFF PUSHBUTTON
	THREE FUNCTION PUSHBUTTON (UP/DOWN/STOP)
	THERMOSTAT
	SOLENOID VALVE
	MOTOR - NUMBER INDICATES HORSEPOWER

GENERAL NOTES

- THIS DRAWING IS A STANDARD LEGEND. SYMBOLS SHOWN MAY NOT ALL APPEAR ON DRAWINGS FOR THIS PROJECT.
- ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED (SHELF) POSITION. BI-STABLE RELAYS ARE SHOWN IN THE RESET POSITION.
- ONE-LINE DIAGRAMS FOR POWER SWITCHGEAR, USE ANSI STANDARD SYMBOLS AND ABBREVIATIONS.
- SEE INSTRUMENTATION I + C SYMBOLS LEGEND FOR INSTRUMENTATION SYMBOLS AND DETAILS.
- OTHER ABBREVIATIONS PER NECA 100-213 AND ISA S5.1
- ELEVATIONS ADJACENT TO SYMBOLS ARE BASED ON STATION DATUM. HEIGHTS ADJACENT TO SYMBOLS (+4.0) ARE REFERENCED TO FINISHED FLOOR GRADE.
- SEE SPECIFICATIONS AND SCHEDULES FOR COMPONENT REQUIREMENTS FOR MOTOR CONTROLLERS AND FOR CONTRACTORS.

SECURITY AND FIRE PROTECTION

	DOOR HOLDER
	HORN AND STROBE
	HORN ONLY
	STROBE ONLY
	MANUAL PULL STATION
	SMOKE DETECTOR
	HEAT DETECTOR - RATE OF RISE
	HEAT DETECTOR - FIXED TEMPERATURE
	WATER FLOW SWITCH
	LOW PRESSURE SWITCH
	TAMPER SWITCH
	SECURITY CAMERA - WP INDICATES WEATHERPROOF EXTERIOR CAMERA
	MOTION DETECTOR
	FIRE ALARM ANNUNCIATOR
	FIRE ALARM CONTROL PANEL

WIRING AND CONDUIT

- SIZE CONDUIT PER NEC. MINIMUM SIZE $\frac{3}{4}$ ".
- (X)#12 & #12G

REFERS TO NUMBER OF WIRE(S) AND SIZE OF WIRE(S) REQUIRED, WHERE AS:
(1)= ONE WIRE
#12 = THE SIZE OF WIRE REQUIRED
G = GROUND WIRE

- (X) 1-1/2"C

REFERS TO NUMBER OF CONDUIT(S) AND SIZE OF CONDUIT(S) REQUIRED, WHERE AS:

(1)= ONE CONDUIT
1-1/2"C = THE SIZE OF CONDUIT REQUIRED

*REFER TO DRAWINGS FOR REQ'D WIRE AND CONDUIT SIZES AND AMOUNTS

CIRCUITS

	CONDUIT STUB - TERMINATE WITH CAP
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	HOMERUN TO PANELBOARD - H(X)-(Y,Z) OR L(X)-(Y,Z) - HIGH OR LOW VOLTAGE PANEL (X) - CIRCUIT (Y,Z) AS INDICATED
	JUNCTION BOX

ELECTRICAL ABBREVIATIONS

1P	ONE POLE
2P	TWO POLE
3P	THREE POLE
4P	FOUR POLE
1P1W	ONE POLE, ONE WIRE
1P2W	ONE POLE, TWO WIRE
2P2W	TWO POLE, TWO WIRE
2P3W	TWO POLE, THREE WIRE
3P2W	THREE POLE, TWO WIRE
3P3W	THREE POLE, THREE WIRE
3P4W	THREE POLE, FOUR WIRE
4P4W	FOUR POLE, FOUR WIRE
A	AMPERE
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AS	AMP SWITCH
AT	AMP TRIP
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
AUD	AUDIOMETER BOX CONNECTION
AUX	AUXILIARY
A/V	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT (GENERIC TERM FOR RACEWAY.)
CAM	CAMERA
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COL	COLUMN
C.T.	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DC	DIRECT CURRENT
Δ	DELTA
DET	DETECTOR
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DWG	DRAWING

E	WIRED ON EMERGENCY CIRCUIT
EA	EACH
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EDH	ELECTRICAL DUCT HEATER
EF	EXHAUST FAN
ELEC	ELECTRIC(AL)
ELEV	ELEVATION
EM	EMERGENCY
EMT	ELECTRIC METALLIC TUBING
ENCL	ENCLOSURE
EOL	END OF LINE
EP	EXPLOSION PROOF
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EUH	ELECTRIC UNIT HEATER
EW	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
EXIST.	EXISTING
F	FLUSH
FA	FIRE ALARM
FBO	FURNISHED BY OTHERS
FC	FIRE PROTECTION CONTRACTOR
FCU	FAN COIL UNIT
FDN	FOUNDATION
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FMC	FLEXIBLE METALLIC CONDUIT
FRE	FIBERGLASS REINFORCED EPOXY CONDUIT
FURN	FURNITURE
G	GROUND
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION EQUIPMENT
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HGT	HEIGHT
HP	HORSEPOWER
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HZ	HERTZ (CYCLE) PER SECOND

IAM	INDIVIDUAL ADDRESSABLE MODULE
ID	IDENTIFICATION
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
I/O	INPUT/OUTPUT
IR	PASSIVE INFARED
I.S.	INTRINSICALLY SAFE
J-JO	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
K/O	KNOCK-OUT
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LP	LIGHTING PANELBOARD
LS	LIMIT SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
MAINT	MAINTAINED
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MISC	MISCELLANEOUS
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MOD	MOTOR OPERATED DISCONNECT SWITCH
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
N	NORTH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NM	NONMETALLIC SHEATHED CABLE
NO	NORMALLY OPEN
NRTL	NATIONALLY RECOGNIZED TESTING LAB
#	NUMBER
NTS	NOT TO SCALE

OHD	OVERHEAD DOOR OPERATOR
OL	OVERLOAD
P	POLE
PB	PULL BOX
PC	PLUMBING SYSTEM CONTRACTOR
PE	PRIMARY SERVICE
PEC	PHOTO ELECTRIC CONTROL
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL(BOARD)
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
RE	REMOVE EXISTING
REC	RECESSED
RECP	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RMC	RIGID METAL CONDUIT
RTU	ROOFTOP UNIT
S	SURFACE MOUNTED
SCH	SCHEDULE
SEC	SECONDARY
SIG	SIGNAL
SN	SOLID NEUTRAL
SP	SPARE
SPD	160KA/ PHASE MINIMUM SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
STL	CARBON STEEL
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TELEPHONE CABINET
TCI	TELECOMMUNICATIONS CABLING INSTALLER
TCP	TEMPERATURE CONTROL PANEL
TEL	TELEPHONE/DATA
TEL/DATA	TELEPHONE
TEMP	TEMPORARY
TERM	TERMINAL(S)
TV	TELEVISION
TYP	TYPICAL

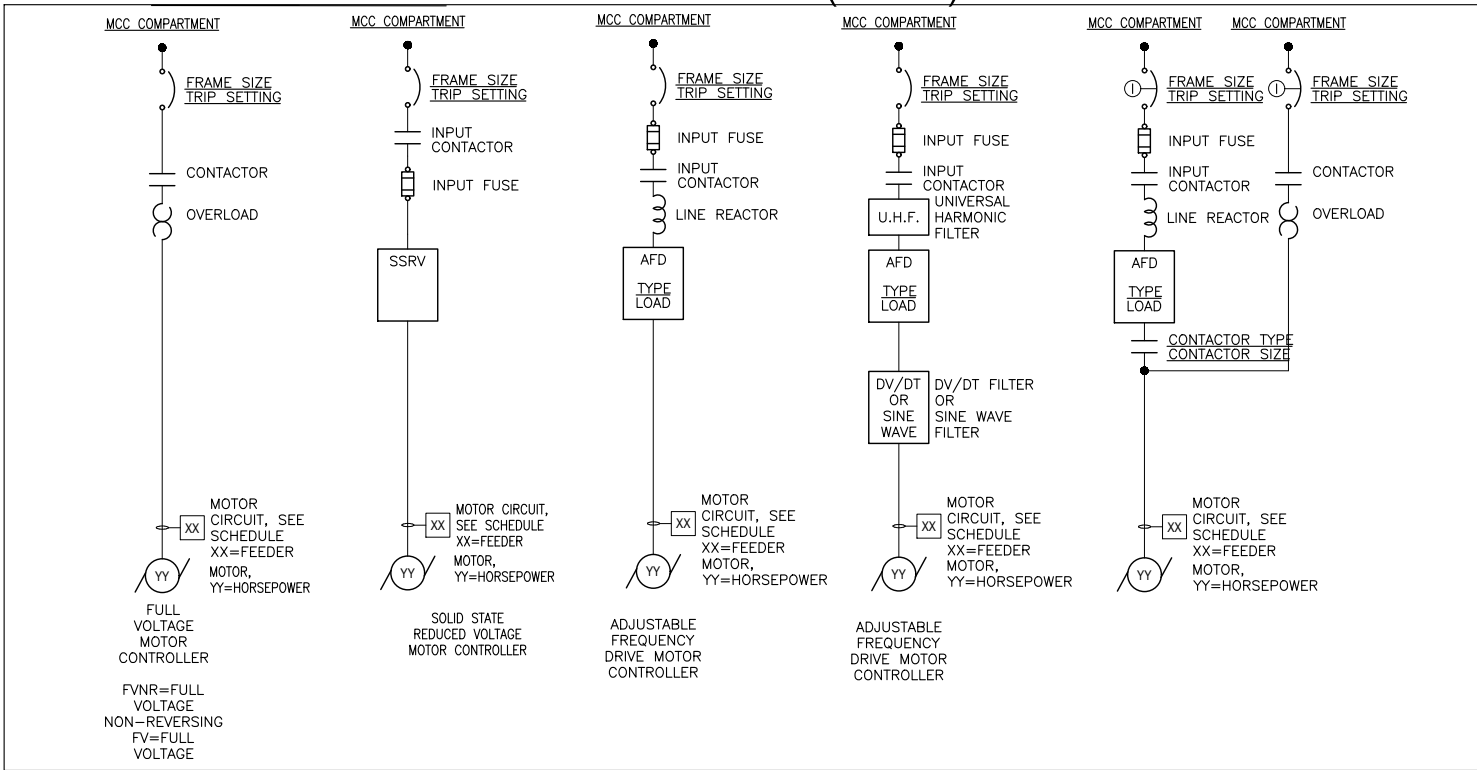
UC	UNDER COUNTER
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SOURCE
UTIL	UTILITY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT
VPD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
WH	WATTHOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
XLP	CROSS LINKED POLETHYLENE
Y	WYE
ZAM	ZONE ADAPTER MODULE

PROJECT NO.: MC 198
DRAWING FILE: 00-G-03
DRAWN BY: N.W.W
CHECKED BY: S.R.M.
DATE: 7-17-23
REVISIONS:
SCALE:
N.T.S.
SHEET:

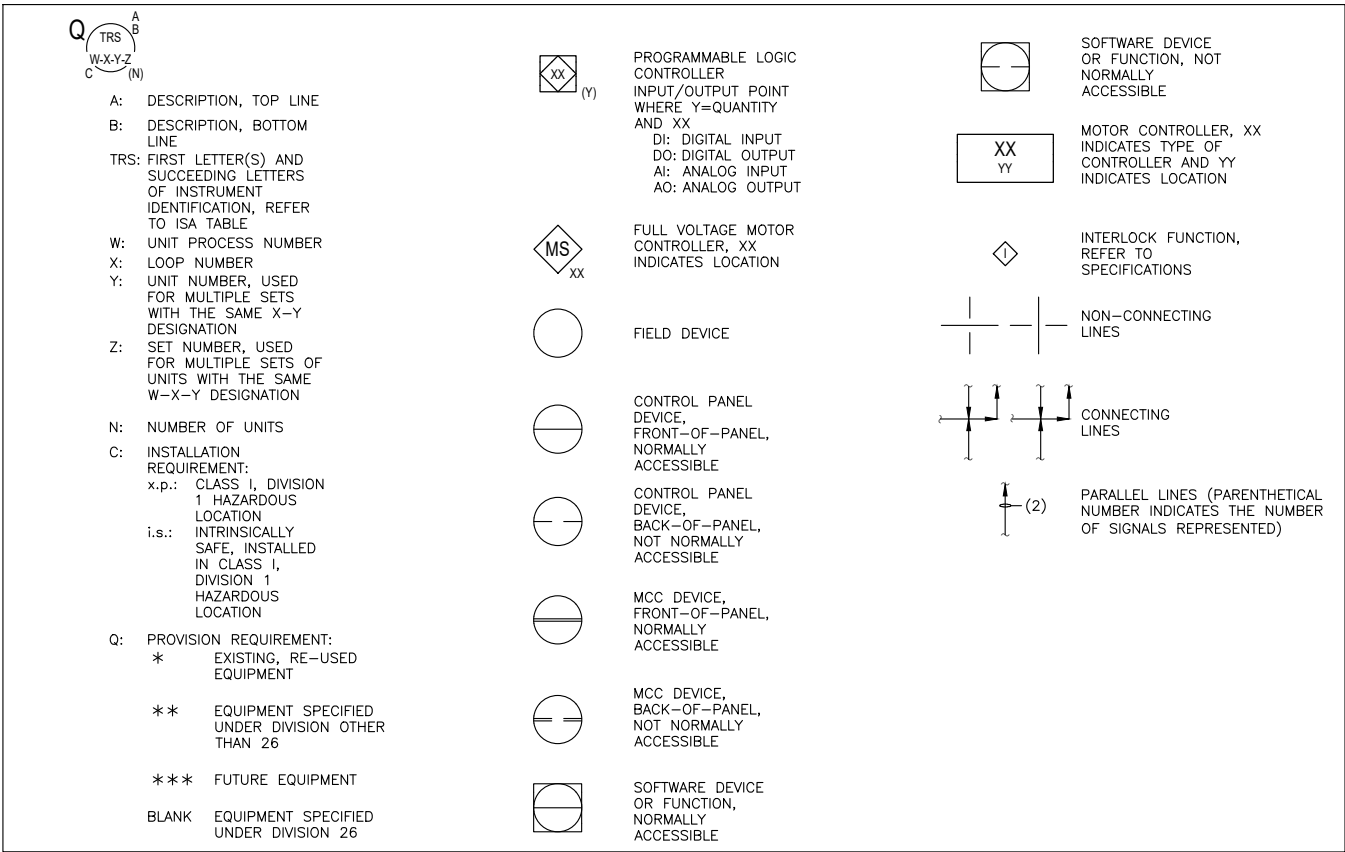
INTERNATIONAL SOCIETY OF AUTOMATION
INSTRUMENT IDENTIFICATION

	FIRST LETTER(S)		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	VARIABLE	READOUT / PASSIVE FUNCTION	OUTPUT / ACTIVE FUNCTION	FUNCTION
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	CLOSE
D	USER'S CHOICE	DIFFERENCES			DEVIATION
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER				
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE				MIDDLE, INTERMEDIATE
N	TORQUE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE (VACUUM)		POINT, TEST CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y AXIS	AUXILIARY DEVICES		
Z	POSITION, DIMENSION	Z AXIS, SAFETY INSTRUMENT OF SYSTEM		DRIVE ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

MOTOR CONTROL (MCC) SYMBOLS



P&ID SYMBOLS (TYPICAL)



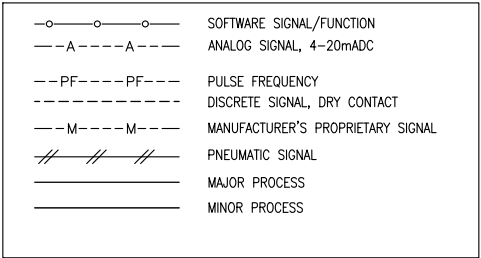
INSTRUMENT WIRING LEGEND

- AX = 2C#16 SHIELDED, TWISTED PAIR CABLE (X = NUMBER OF CABLES)
- DX = #14 THHN WIRE (X = NUMBER OF WIRES)
- MX = 1" CONDUIT FOR CABLE SUPPLIED BY MANUFACTURER (X = NUMBER OF CONDUITS)
- ELX = 3/4" CONDUIT AND CAT6(X) 300V CABLE(S) (X = NUMBER OF CABLES)
- EHX = 3/4" CONDUIT AND CAT6(X) 600V CABLE(S)
- FO(X) = CONDUIT AND FIBER OPTIC CABLE (X = NUMBER OF STRANDS)

PROCESS NOTES

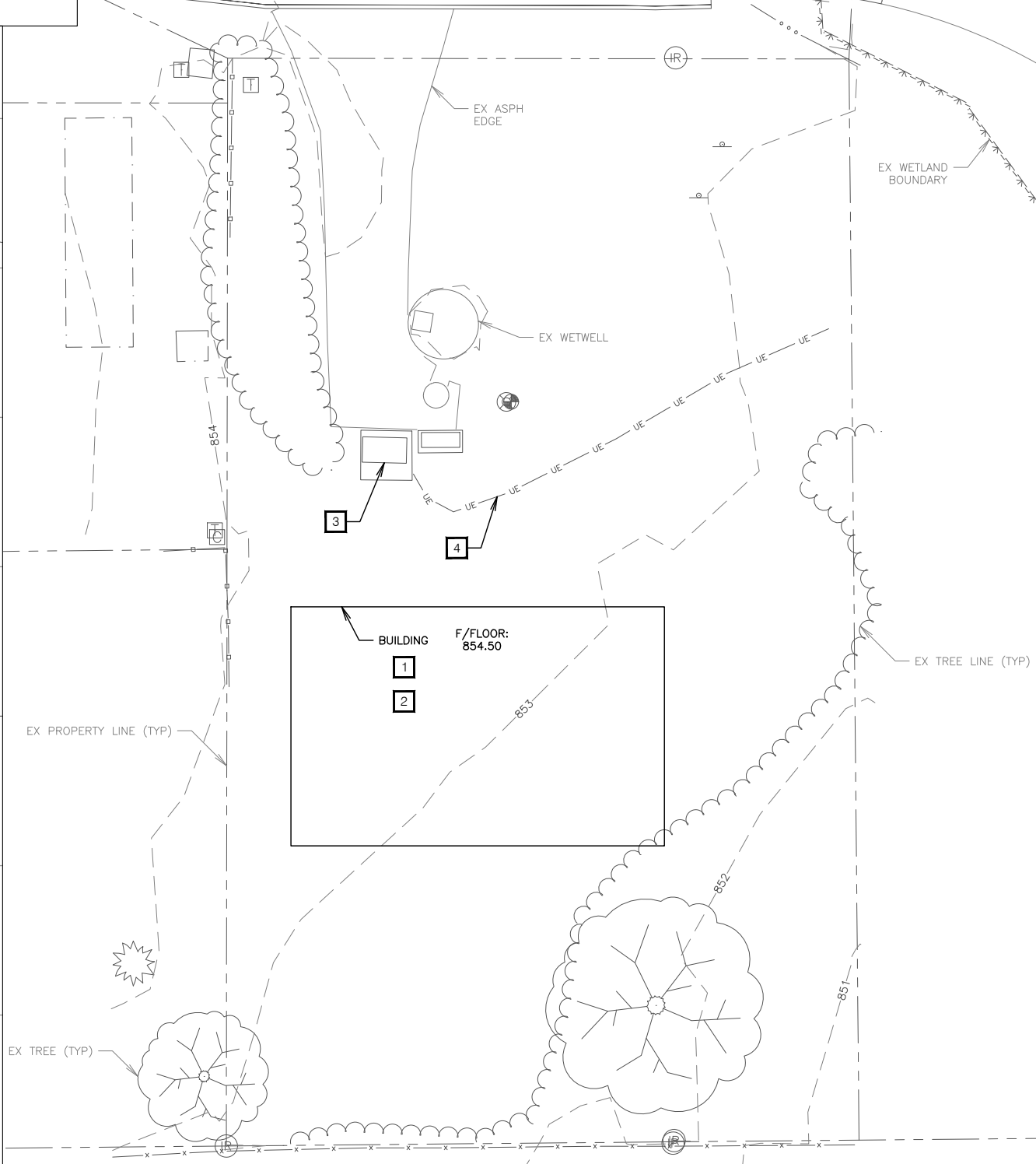
- PROVIDE SEPARATE CONDUITS FOR THE FOLLOWING:
 - 24 V DC ANALOG
 - 24 V DC CONTROL/ DC PULSE
 - INTRINSICALLY SAFE
 - MANUFACTURERS CABLE
 - 120 VOLT CONTROL
 - 120 VOLT POWER
 - 480 VOLT POWER
 - LOW VOLTAGE INSTRUMENTATION COMMUNICATION
- REFER TO SPECIFICATION 26 90 00 FOR LOOP AND OPERATOR INTERFACE FUNCTIONS.
- REFER TO RESPECTIVE DIVISION SPECIFICATIONS FOR ADDITIONAL DETAILS REGARDING INSTRUMENTATION AND CONTROL EQUIPMENT FURNISHED UNDER THOSE SPECIFICATIONS.

LINETYPE LEGEND





-



6405 PHEASANT RUN

STRUCTURE SCHEDULE	
10	WETWELL
20	LIFT STATION BUILDING



GENERAL NOTES

1. ANY EXCESS MATERIAL CAN BE SPREAD ON SITE TO MATCH FINAL GRADES OR DISTRIBUTED TO THE PLAT GRADING CONTRACTOR.
2. EROSION CONTROL TO COMPLY WITH SPEC SECTION 02270 AND THE DNR TECHNICAL STANDARDS FOR EROSION CONTROL AND STABILIZATION PROCESS PER SHEETS 100-C-01. ALL EROSION CONTROL MUST BE MAINTAINED THROUGH OUT CONSTRUCTION AND REMOVED AT END OF PROJECT.
3. DISTURBED AREAS LEFT INACTIVE FOR MORE THAN 7 CALENDAR DAYS MUST BE TEMPORARY SEEDED OR WOOD CHIPPED.
4. THE CONSTRUCTION LIMITS PROVIDE THE AREA THAT THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN DURING CONSTRUCTION. THE FINAL GRADES NEED TO BLEND INTO THE PLAT CONTRACTOR'S FINAL GRADES AND IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE.
5. THE ENTIRE AREA SHALL BE HYDROMULCHED UNLESS DIRECTED OTHERWISE
6. ALL SIDEWALKS SHALL BE 5 FEET WIDE, 5 INCH THICKNESS, EXCEPT AT DOOR STOOPS.
7. CONTRACTOR SHALL SPREAD 6" OF TOPSOIL OVER THE ENTIRE AREA WITHIN THE CONSTRUCTION LIMITS.
8. SPOT ELEVATIONS SHOWN ARE FOR DRAINAGE PURPOSES. FINAL ELEVATIONS WILL BE DETERMINED ON SITE.

KEY NOTES

1. ALL PAVED AREAS SHALL HAVE A COMBINED MINIMUM DEPTH OF 12" OF BASE COURSE, 2-1/4" OF BINDER PAVEMENT AND 1-3/4" OF SURFACE PAVEMENT. ACCORDING TO THE CITY STANDARD SPECIFICATIONS, 12" OF BASE COURSE SHALL HAVE A LOWER LAYER OF DENSE 3" CRUSHED AGGREGATE, 7"-8" DEEP, AND AN UPPER LAYER OF DENSE 1-1/4" CRUSHED AGGREGATE 4"-5" DEEP.
2. CONTRACTOR RESPONSIBLE FOR PROVIDING 12" BASE COURSE FOR TRANSFORMER PAD BY OTHERS. TOP OF BASE COURSE=XXX.XX'. PROPOSED LOCATION OF UTILITY TRANSFORMER PAD. COORDINATE EXACT LOCATION WITH ENGINEER.
3. COORDINATE RELOCATION OF EXISTING TRANSFORMER TO NEW LOCATION. EXISTING LIFT STATION MUST REMAIN IN SERVICE UNTIL NEW LIFT STATION IS FULLY OPERATIONAL. COORDINATE ANY OUTAGES WITH OWNER AND ENGINEER.
4. COORDINATE RELOCATION OF EXISTING SERVICE WITH UTILITY TO FEED EXISTING LIST STATION DURING CONSTRUCTION. EXISTING LIFT STATION MUST REMAIN IN SERVICE UNTIL NEW LIFT STATION IS FULLY OPERATIONAL.
5. APPROXIMATE LOCATION OF ELECTRIC UTILITY METER. COORDINATE EXACT LOCATION WITH ENGINEER.

PRELIMINARY

6407 FOX RUN

6407 FOX RUN

6409 FOX RUN

N: 457,570.18
E: 847,426.02

N: 457,570.18
E: 847,476.02

N: 457,590.95
E: 847,469.48

N: 457,538.18
E: 847,426.02

N: 457,538.18
E: 847,476.02

20

F/FLOOR:
854.50

B-1

B-2

NEW TRANSFORMER PAD

EX TREE LINE (TYP)

EX PROPERTY LINE (TYP)

EX TREE (TYP)

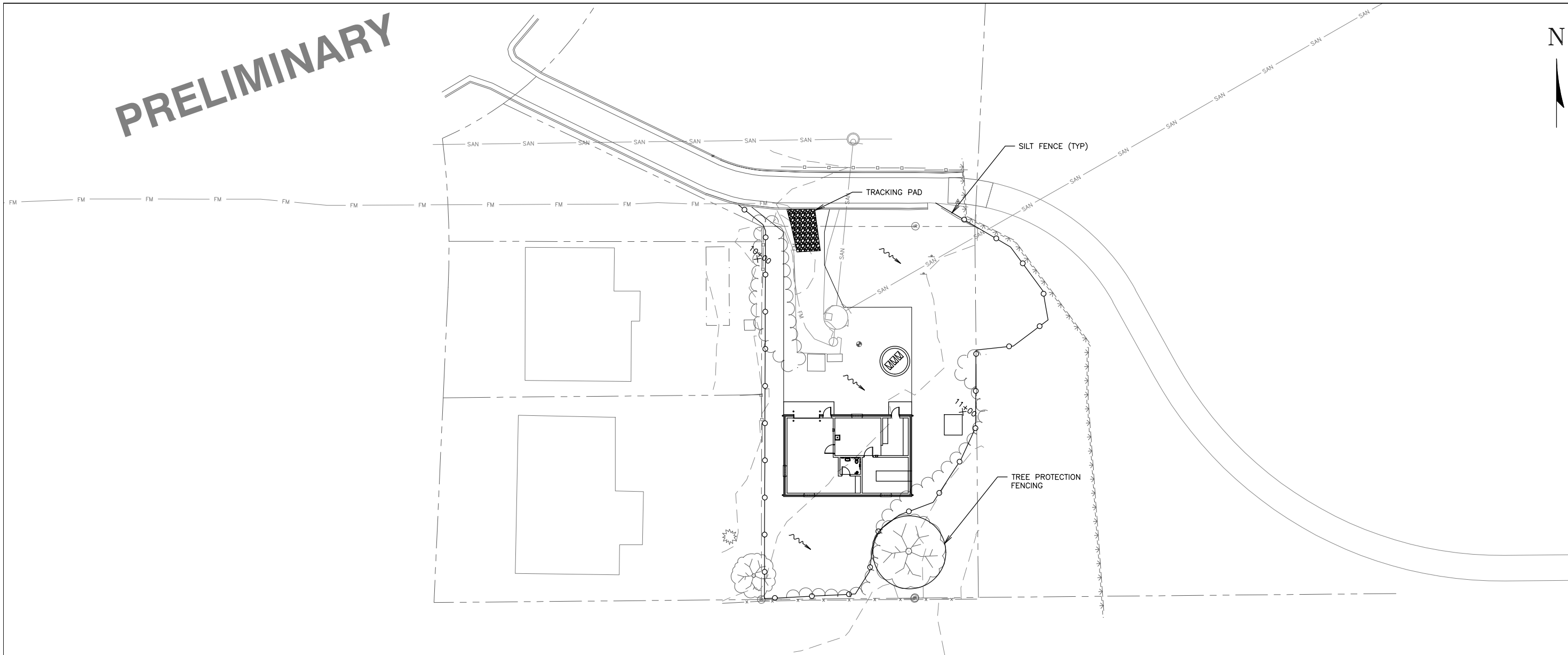
EX WETLAND
BOUNDARY

EX ASPH
EDGE

EX WETWELL
RIM = 854.03
N. INV. = 841.16 (10")
NE. INV. = 840.93 (16")
SE. INV. = 839.43 (24")

NEW ASPH EDGE

PRELIMINARY



EROSION CONTROL NOTES:

- LOCATIONS MARKED WITH "■" TO RECEIVE INLET FILTER PROTECTION DURING CONSTRUCTION. ALL NEW STREET INLETS MUST ALSO RECEIVE INLET FILTER PROTECTION.
- CONSTRUCT A STONE CHECK DAM IN GUTTER LINE AT ALL LOCATIONS MARKED WITH "▲"
- SURFACE FLOW DIRECTION IS INDICATED WITH
- SILT FENCE INSTALLATION IS INDICATED WITH
- POST WDNR CERTIFICATE OF PERMIT COVERAGE ON SITE AND MAINTAIN UNTIL CONSTRUCTION ACTIVITIES HAVE CEASED, THE SITE IS STABILIZED, AND A NOTICE OF TERMINATION IS FILED WITH WDNR.
- KEEP A COPY OF THE CURRENT EROSION CONTROL PLAN ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
- SUBMIT PLAN REVISIONS OR AMENDMENTS TO THE WDNR AT LEAST 5 DAYS PRIOR TO FIELD IMPLEMENTATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ROUTINE SITE INSPECTIONS AT LEAST ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. KEEP INSPECTION REPORTS ON-SITE AND MAKE THEM AVAILABLE UPON REQUEST.
- INSPECT AND MAINTAIN ALL INSTALLED EROSION CONTROL PRACTICES UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
- WHEN POSSIBLE: PRESERVE EXISTING VEGETATION (ESPECIALLY ADJACENT TO SURFACE WATERS), MINIMIZE LAND-DISTURBING CONSTRUCTION ACTIVITY ON SLOPES OF 20% OR MORE, MINIMIZE SOIL COMPACTION, AND PRESERVE TOPSOIL.
- REFER TO THE WDNR STORMWATER CONSTRUCTION TECHNICAL STANDARDS AT http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
- INSTALL PERIMETER EROSION CONTROLS AND ROCK TRACKING PAD CONSTRUCTION ENTRANCE(S) PRIOR TO ANY LAND-DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRUBBING. USE WDNR TECHNICAL STANDARD STONE TRACKING PAD AND TIRE WASHING #1057 FOR ROCK CONSTRUCTION ENTRANCE(S).
- INSTALL INLET PROTECTION PRIOR TO LAND-DISTURBING ACTIVITIES IN THE CONTRIBUTING DRAINAGE AREA AND/OR IMMEDIATELY UPON INLET INSTALLATION. COMPLY WITH WDNR TECHNICAL STANDARD STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES #1060.
- STAGE CONSTRUCTION GRADING ACTIVITIES TO MINIMIZE THE CUMULATIVE EXPOSED AREA. CONDUCT TEMPORARY GRADING

FOR EROSION CONTROL PER WDNR TECHNICAL STANDARD TEMPORARY GRADING PRACTICES FOR EROSION CONTROL #1067.

- NOTIFY THE OWNER IF DEWATERING IS SCHEDULED TO OCCUR IN AREAS OF SOIL AND/OR GROUNDWATER CONTAMINATION, OR IF DEWATERING WILL OCCUR FROM A HIGH CAPACITY WELL (70 GPM OR MORE). DEWATER ONLY AFTER THE APPROPRIATE WDNR DEWATERING DISCHARGE PERMIT HAS BEEN OBTAINED.
- PROVIDE ANTI-SCOUR PROTECTION AND MAINTAIN NON-EROSIVE FLOW DURING DEWATERING. LIMIT PUMPING RATES TO EITHER (A) THE SEDIMENT BASIN/TRAP DESIGN DISCHARGE RATE, OR (B) THE BASIN DESIGN RELEASE RATE WITH THE CORRECTLY-FITTED HOSE AND GEOTEXTILE FILTER BAG. PERFORM DEWATERING OF ACCUMULATED SURFACE RUNOFF IN ACCORDANCE WITH WDNR TECHNICAL STANDARD DE-WATERING #1061.
- COMPLETE AND STABILIZE SEDIMENT BASINS/TRAPS OR WET PONDS PRIOR TO MASS LAND DISTURBANCE TO CONTROL RUNOFF DURING CONSTRUCTION. REMOVE SEDIMENT AS NEEDED TO MAINTAIN 3 FEET OF DEPTH TO THE OUTLET, AND PROPERLY DISPOSE OF SEDIMENT REMOVED DURING MAINTENANCE (REFER TO NR 528). CONSTRUCT AND MAINTAIN THE SEDIMENT BASIN PER WDNR TECHNICAL STANDARD SEDIMENT BASIN #1064 AND SEDIMENT TRAP #1063.
- CONSTRUCT AND PROTECT THE BIOINFILTRATION BASIN AND VEGETATION FROM RUNOFF AND SEDIMENT DURING CONSTRUCTION. REFERENCE THE WDNR TECHNICAL STANDARD BIORETENTION FOR INFILTRATION #1004.
- INSTALL AND MAINTAIN SILT FENCING PER WDNR TECHNICAL STANDARD SILT FENCE #1056. REMOVE SEDIMENT FROM BEHIND SILT FENCES AND SEDIMENT BARRIERS BEFORE SEDIMENT REACHES A DEPTH THAT IS EQUAL TO ONE-HALF OF THE FENCE AND/OR BARRIER HEIGHT.
- REPAIR BREAKS AND GAPS IN SILT FENCES AND BARRIERS IMMEDIATELY. REPLACE DECOMPOSING STRAW BALES (TYPICAL BALE LIFE IS 3 MONTHS). LOCATE, INSTALL, AND MAINTAIN STRAW BALES PER WDNR TECHNICAL STANDARD DITCH CHECKS #1062.
- INSTALL AND MAINTAIN FILTER SOCKS IN ACCORDANCE WITH WDNR TECHNICAL STANDARD INTERIM MANUFACTURED PERIMETER CONTROL AND SLOPE INTERRUPTION PRODUCTS #1071.
- IMMEDIATELY STABILIZE STOCKPILES AND SURROUND STOCKPILES AS NEEDED WITH SILT FENCE OR OTHER PERIMETER CONTROL IF STOCKPILES WILL REMAIN INACTIVE FOR 7 DAYS OR LONGER.
- IMMEDIATELY STABILIZE ALL DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR 14 DAYS OR LONGER. BETWEEN SEPTEMBER 15 AND OCTOBER 15: STABILIZE WITH MULCH, TACKIFIER, AND A PERENNIAL SEED MIXED WITH WINTER WHEAT, ANNUAL OATS, OR ANNUAL RYE, AS APPROPRIATE FOR REGION AND SOIL TYPE. OCTOBER 15 THROUGH COLD WEATHER: STABILIZE WITH A POLYMER AND DORMANT SEED MIX, AS APPROPRIATE FOR REGION AND SOIL TYPE.
- STABILIZE AREAS OF FINAL GRADING WITHIN 7 DAYS OF REACHING FINAL GRADE.
- SWEEP/CLEAN UP ALL SEDIMENT/TRASH THAT MOVES OFF-SITE DUE TO CONSTRUCTION ACTIVITY OR STORM EVENTS

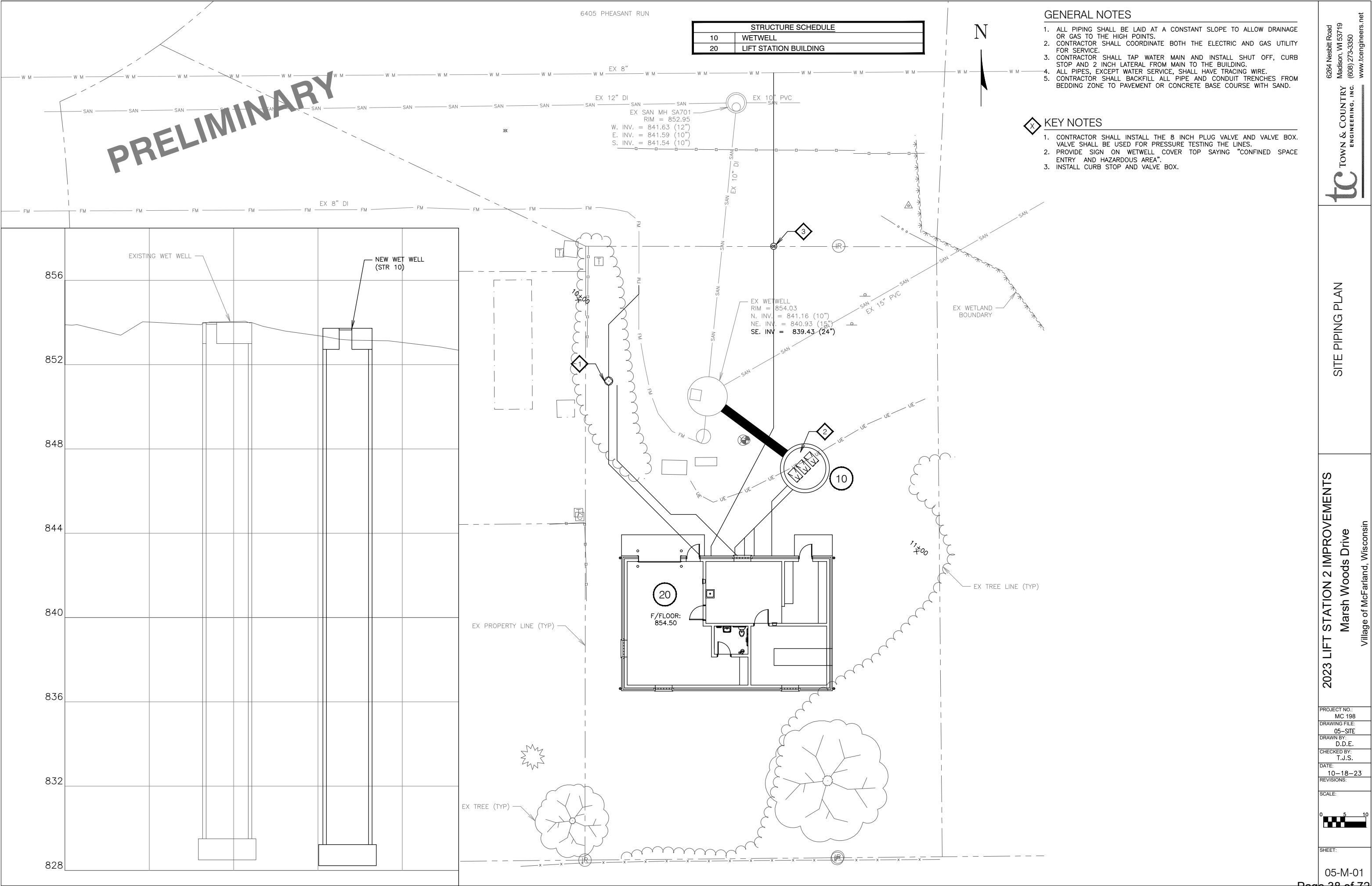
- BEFORE THE END OF THE SAME WORKDAY OR AS DIRECTED BY THE OWNER. SEPARATE SWEEPED MATERIALS (SOILS AND TRASH) AND DISPOSE OF APPROPRIATELY. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST PER WDNR TECHNICAL STANDARD DUST CONTROL ON CONSTRUCTION SITES #1068.
- PROPERLY DISPOSE OF ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, OR OTHER CONSTRUCTION MATERIALS) AND DO NOT ALLOW THESE MATERIALS TO BE CARRIED BY RUNOFF INTO THE RECEIVING CHANNEL.
- COORDINATE WITH THE OWNER TO UPDATE THE LAND DISTURBANCE PERMIT TO INDICATE THE ANTICIPATED OR LIKELY DISPOSAL LOCATIONS FOR ANY EXCAVATED SOILS OR CONSTRUCTION DEBRIS THAT WILL BE HAULED OFF-SITE FOR DISPOSAL. THE DEPOSITED OR STOCKPILED MATERIAL NEEDS TO INCLUDE PERIMETER SEDIMENT CONTROL MEASURES (SUCH AS SILT FENCE, HAY BALES, FILTER SOCKS, OR COMPACTED EARTHEN BERMS).
- FOR NON-CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED SLOPES, PROVIDE CLASS I, II OR III TYPE A EROSION CONTROL MATTING. SELECT EROSION MATTING FROM APPROPRIATE MATRIX IN WDOT'S WIDOT PRODUCT ACCEPTABILITY LIST (PAL); INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD NON-CHANNEL EROSION MAT #1052.
- FOR CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED AREAS, PROVIDE CLASS I, II, OR III TYPE B EROSION CONTROL MATTING. SELECT EROSION MATTING FROM APPROPRIATE MATRIX IN WDOT'S WIDOT PRODUCT ACCEPTABILITY LIST (PAL); INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD CHANNEL EROSION MAT #1053.
- MAKE PROVISIONS FOR WATERING DURING THE FIRST 8 WEEKS FOLLOWING SEEDING OR PLANTING OF DISTURBED AREAS WHENEVER MORE THAN 7 CONSECUTIVE DAYS OF DRY WEATHER OCCUR.
- INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES (SUCH AS TEMPORARY SEDIMENT BASINS, DITCH CHECKS, EROSION CONTROL MATTING, SILT FENCING, FILTER SOCKS, WATTLES, SWALES, ETC.), OR AS DIRECTED BY THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE WDNR REMEDIATION AND WASTE MANAGEMENT REQUIREMENTS FOR HANDLING AND DISPOSING OF CONTAMINATED MATERIALS. SITE-SPECIFIC INFORMATION FOR AREAS WITH KNOWN OR SUSPECTED SOIL AND/OR GROUNDWATER CONTAMINATION CAN BE FOUND ON WDNR'S BUREAU OF REMEDIATION AND REDEVELOPMENT TRACKING SYSTEM (BRRTS) PUBLIC DATABASE AT: <http://dnr.wi.gov/botw/>

EROSION CONTROL PLAN
AND GENERAL NOTES

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.: MC 198
DRAWING FILE: 05-SITE
DRAWN BY: D.D.E.
CHECKED BY: T.J.S.
DATE: 9-27-23
REVISIONS:
SCALE:
0 5 10 20
SHEET:

05-C-03



6264 Nesbit Road
Madison, WI 53719
(608) 273-3350
www.tceengineers.net

tc TOWN & COUNTRY
ENGINEERING, INC.

SITE PIPING PLAN

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.: MC 198
DRAWING FILE: 05-SITE
DRAWN BY: D.D.E.
CHECKED BY: T.J.S.
DATE: 10-18-23
REVISIONS:
SCALE:
0 5 10
SHEET:

05-M-01

4" DI AIR VENT
W/STAINLESS STEEL
SCREEN (#24 MESH)

ACCESS HATCH (TYP-3)

XXX.XX
T/SLAB

6" 90° ELB
(TYP-3)

10'-0"

4" TEE

4" MJ CONNECTOR

847.50

INV 4" DRN

846.50

C/L 6" SAN FM

845.17

C/L 6" SAN FM

843.84

C/L 6" SAN FM

6" MJ
CONNECTOR
(TYP-3)

5

XXX.XX
T/BASE

SUBMERSIBLE PUMP (TYP-3)

SECTION

B

ACCESS HATCH (TYP-3)

SUBMERSIBLE PUMP (TYP-3)

4" DI AIR VENT
W/STAINLESS STEEL
SCREEN (#24 MESH)

4" TEE

4" MJ CONNECTOR

4" DRN
STR 20

6" SAN FM
STR 20

4" TEE

6" MJ CONNECTOR (TYP-3)

PROCESS PLAN

Wetwell

SUBMERSIBLE
PUMP (TYP-3)

6"x4" RED

XXX.XX
T/BASE

SECTION

A

GENERAL NOTES

1. ALL PIPING THROUGH THE WETWELL WALLS SHALL BE CORED WITH WATER TIGHT SEALS.
2. CONTRACTOR SHALL GROUT THE BOTTOM OF WETWELL AS SHOWN AND PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL EXPOSED PIPING SHALL BE EPOXY PAINTED CLASS 53 DI AND PAINTED ACCORDING TO THE HIGH PERFORMANCE COATINGS SPECIFICATION UNLESS NOTED OTHERWISE.
4. ALL MATERIAL IN WETWELL WILL BE 304SS, DUCTILE IRON EPOXY COATED, AND PVC COATED RIGID ELECTRIC CONDUIT.

KEY NOTES

1. ALL CONSTRUCTION MATERIALS INSTALLED IN THE WETWELL SHALL BE 304 STAINLESS STEEL UNLESS NOTED OTHERWISE.
2. PROVIDE SS PIPE BRACING PER THE PIPING SPECIFICATIONS.
3. PROVIDE SS GUIDE RAILINGS AND APPROPRIATE INTERMEDIATE SUPPORT BRACING AS PER THE PUMP MANUFACTURERS RECOMMENDATIONS.
4. CONTRACTOR SHALL CORE AND LINK SEAL ALL NEW OPENINGS PER DETAIL 414-TYPE H ON 100-M-01.
5. GROUT ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

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ENGINEERING, INC.

PROCESS PLAN AND SECTIONS
STRUCTURE 10

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.:
MC 198

DRAWING FILE:
10-M

DRAWN BY:
D.D.E.

CHECKED BY:
T.J.S.

DATE:
9-6-23

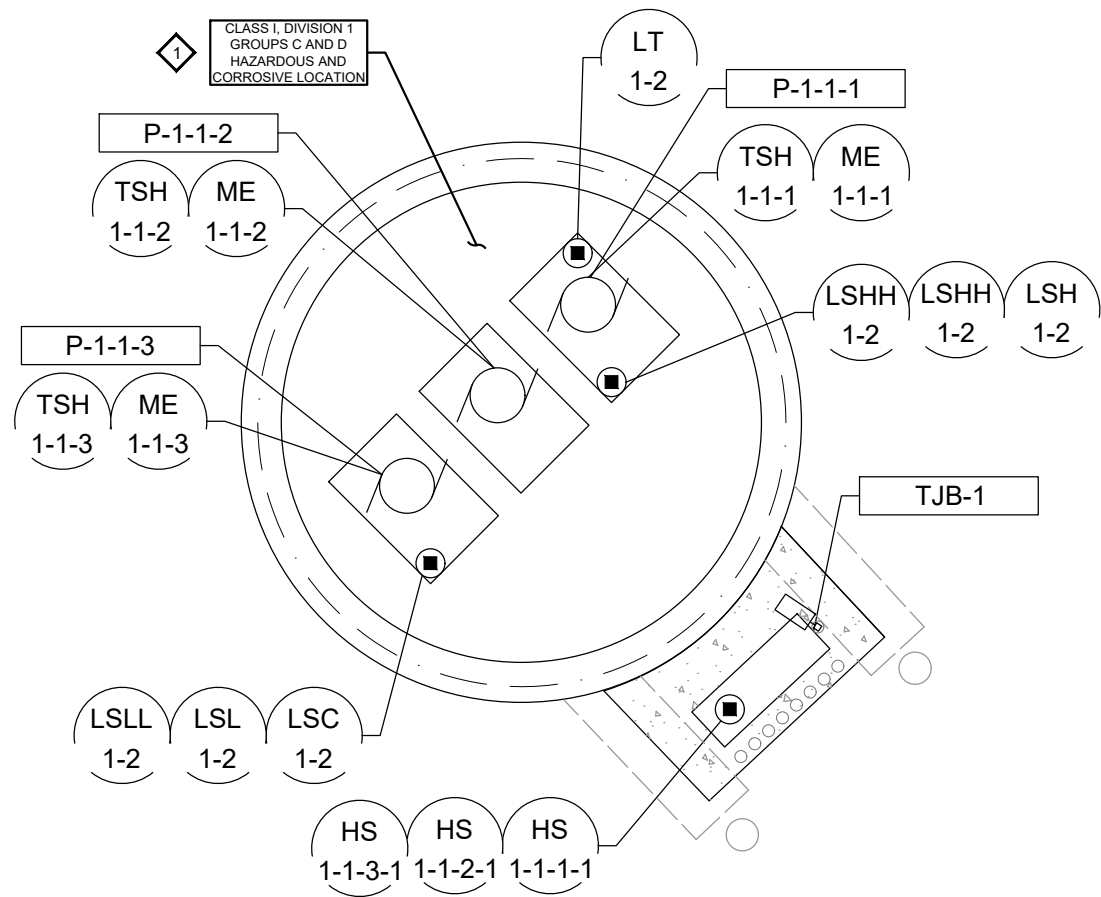
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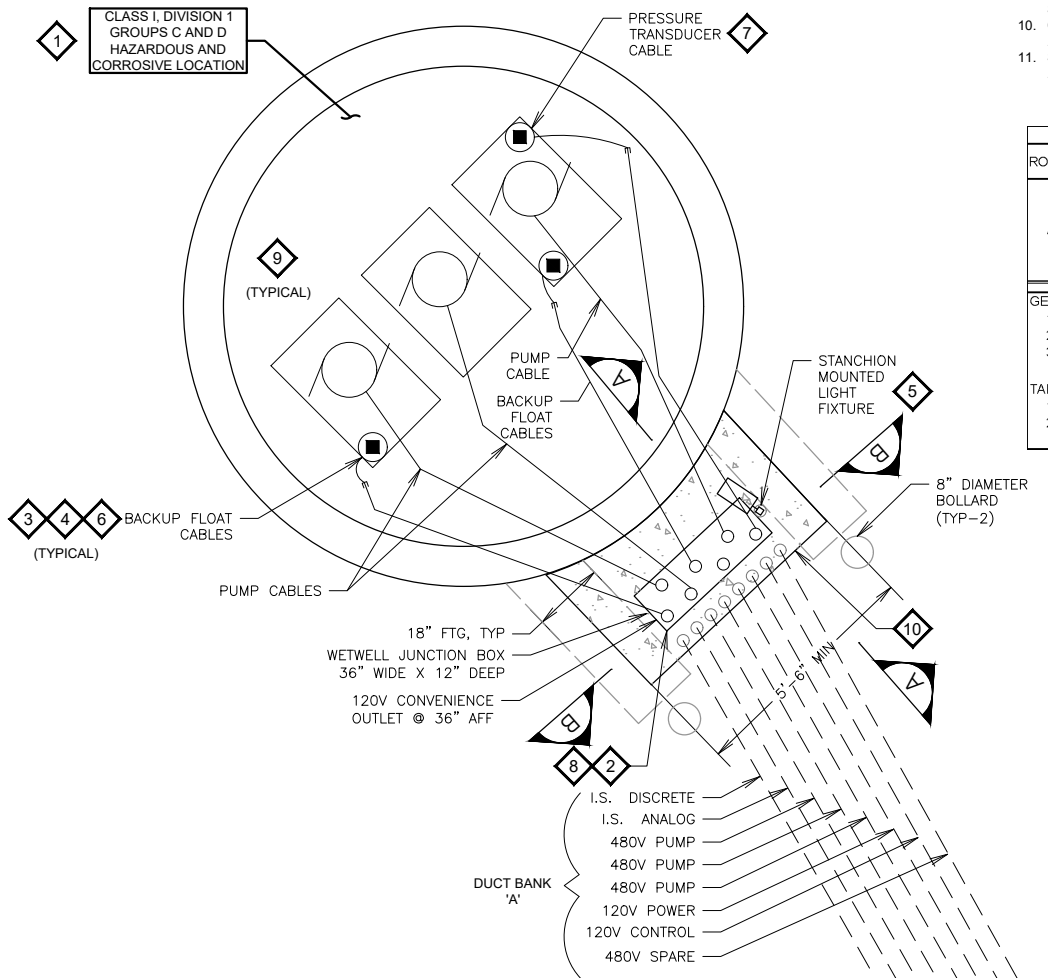
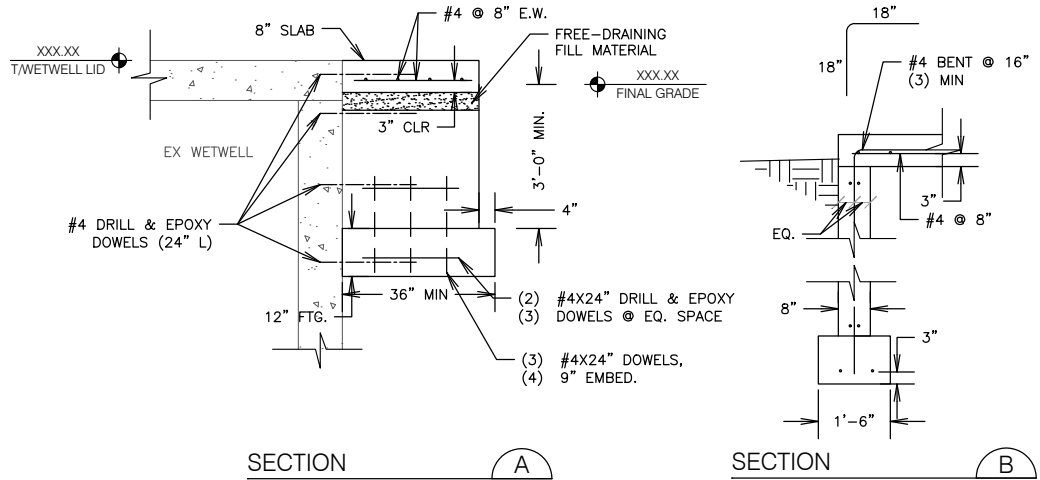
0 1/2 1 2
FEET

SHEET:

10-M-01



POWER AND INSTRUMENTATION PLAN



POWER DISTRIBUTION AND CONDUIT ROUTING PLAN

GENERAL NOTES

- DO NOT SCALE DRAWINGS TO DETERMINE EXACT LOCATION OF ELECTRICAL EQUIPMENT AND CONNECTIONS.
- 120V HOMERUN WIRING SHALL BE A MINIMUM OF (2) #12 & #12G IN 3/4" UNLESS OTHERWISE NOTED. SIZE FOR VOLTAGE DROP.
- SEE ONE-LINE DIAGRAM, PANEL SCHEDULE, AND FIELD DEVICE WIRING SCHEDULE FOR WIRING OF ALL PROCESS AND INSTRUMENTATION.
- PROVIDE RACEWAY FOR ALL HVAC EQUIPMENT. PROVIDE WIRING FOR LINE VOLTAGE AND ABOVE POWER AND CONTROL WIRING.
- INSTALL FIELD INSTRUMENTS PER DETAIL REFERENCED IN FIELD DEVICE WIRING SCHEDULE.
- ALL CONDUIT STUBBED UP THROUGH CONCRETE SHALL BE PVC COATED GRS.
- SEE SCADA OVERVIEW FOR COMMUNICATIONS CABLING REQUIREMENTS.
- TRANSITION FROM PVC TO FMCCS PRIOR TO TRANSITIONING FROM UNDERGROUND TO EXPOSED CONDUIT.
- UNDERGROUND CONDUIT ROUTING IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO DICTATE EXACT ROUTING CONTRACTOR IS TO COORDINATE WITH ENGINEER AND DETERMINE BEST ROUTING BASED ON OTHER UTILITIES AND FIELD CONDITIONS.
- ALL EQUIPMENT SHALL BE LABELED PER CITY'S REQUIREMENT.

KEY NOTES

- WETWELL IS CLASS I DIV 1, GROUPS C AND DE ENVIRONMENT. AREA ABOUT WETWELL VENT IS CLASS I DIV 1 TO A RADIUS OF 3 FEET, AND CLASS I DIV 2 FOR A RADIUS OF 3 TO 5 FEET. AREA ABOUT WETWELL HATCH WHEN OPEN IS CLASS I DIV 2 TO A HEIGHT OF 1.5 FEET AND AN AREA EXTENDING 3 FEET FROM THE HATCH OPENING.
- PROVIDE WETWELL JUNCTION BOX AND CONDUIT ROUTING PER DETAIL E1-18.
- PROVIDE SEPERATE STAINLESS STEEL SUPPORTS IN WETWELL FOR EACH CABLE.
- PROVIDE TWO FLOAT MOUNTING KITS, ONE FOR LSL-1-2 AD LSL-1-2, LSC-1-2 AND THE SECOND FOR LSH-1-2, LSHH-1-2, AND LSHH-1-2.
- INSTALL FIXTURE POLE AND BASE PER DETAIL E3-04. FIXTURE TO BE MOUNTED AT 15' AFG AND CONTROLLED BY ON-OFF-AUTO SWITCH IN STRUCTURE 20.
- FLOAT INSTALLATION PER DETAIL E5-L01.
- TRANSDUCER INSTALLATION PER DETAIL E5-LO3.
- LB ENTERS WETWELL VENTILATED JUNCTION PANEL ON BACK SIDE.
- ALL CONDUIT IN WETWELL SHALL BE SLOPED TO DRAIN BACK TO WETWELL, AND SHALL BE BRACED WITH STAINLESS STEEL SUPPORTS.
- CONTRACTOR SHALL DETERMINE FINAL LENGTH AND WIDTH OF PLATFORM TO ALLOW SPACE FOR LBS. DIMENSIONS SHOWN ARE MINIMUM.
- SEE SECTION 01000 FOR DIVISION OF WORK BETWEEN THE ELECTRIC UTILITY AND THE CONTRACTOR.

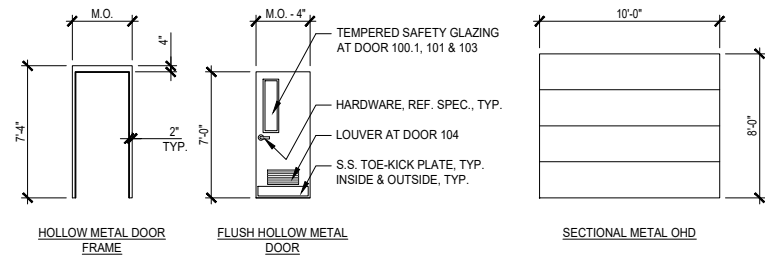
UNDERGROUND CONDUIT SCHEDULE					
ROUTE	CIRCUIT TYPE	CONDUIT QTY	CONDUIT SIZE	CONDUIT TYPE	NOTES
A	480V POWER	3	2"	RNC	
	120V POWER	1	2"	RNC	
	120V DISCRETE SIGNAL	1	2"	RNC	
	I.S. SIGNAL	1	2"	RNC	
	SPARE POWER	1	2"	RNC	
	SPARE SIGNAL	1	2"	RNC	
GENERAL NOTES:					
1. TRANSITION TO PVC COATED GRC PRIOR TO EXITING GROUND.					
2. REFER TO SECTION 26 90 10 FOR ADDITIONAL REQUIREMENTS.					
3. WHERE MORE THAN ONE CONDUIT SIZE IS CALLED OUT IN PLANS, USE LARGEST CONDUIT SIZE SPECIFIED.					
TABLE NOTES:					
1. CONCRETE ENCASED CONDUIT PER DETAIL E2-09					
2. DIRECT-BURIED CONDUIT PER DETAIL E2-10.					

BUILDING CODE SUMMARY	
BUILDING INFORMATION	
PROJECT TYPE	NEW
STRUCTURE PURPOSE	NOTE-3
USE & OCCUPANCY	NOTE-4
NO. STORIES	1
CONSTRUCTION CLASS	IIIB
GROSS AREA NEW CONSTRUCTION	1,600 SF
GROSS AREA EXIST. & NEW	N/A
GROSS ENCLOSED VOLUME	22,000 CF
FIRE SUPPRESSION (Y/N)	N
FIRE ALARM (Y/N)	N
EXIT TRAVEL DIST. (MAX. PER T.1017.2)	NOTE-6
ACCESSIBILITY	NOTE-5
CODE AUTHORITY SUBMITTAL (Y/N)	N

- BUILDING CODE SUMMARY NOTES:**
- PROJECT ADDRESS:
 - COMMERCIAL BUILDINGS DELEGATED AUTHORITY: WISCONSIN DEPARTMENT OF SAFETY & PROFESSIONAL SERVICES (IBC 2015)
 - STRUCTURE PURPOSE:
CONSTRUCT NEW MUNICIPAL SEWAGE LIFT STATION
 - USE & OCCUPANCY:
FACTORY GROUP F-2, NO SEPARATIONS REQUIRED, TABLE 508.4, ALLOWABLE BUILDING AREA:
GROUP F-2 = 19,000 SQ. FT. (NS. MOST RESTRICTIVE), TABLE 506.2
 - ACCESSIBILITY: EXEMPT PER IBC 1103.2.7 AND/OR 1103.2.9
 - ALLOWABLE EXIT TRAVEL DISTANCE: 300' (GROUP F-2)

BASIS OF STRUCTURAL DESIGN	
[1.0] ROOF LIVE LOADS:	
SNOW, GROUND (P _g)/ROOF FLAT (P _f)	30/25 PSF
UNBAL. SNOW LOAD (ASCE-7 FIG. 7-5)	40/25 PSF
IMPORTANCE FACTOR (I _s)	1.0
THERMAL FACTOR (C _t)	1.0
SNOW EXPOSURE FACTOR (C _e)	1.2
[1.1] SUPERIMPOSED ROOF DEAD LOADS (LOADS ON COMPONENTS):	
ROOFING, INSUL., FP, GWB, MISC.	18 PSF
[1.2] FLOOR LIVE LOADS:	
SLAB-ON-GRADE	250 PSF
[2.0] WIND (SIMPLIFIED PROCEDURE LOW-RISE BUILDINGS):	
WIND RISK CATEGORY	II
ENCLOSURE LEVEL	FULL
ULTIMATE DESIGN WIND SPEED (V _{ult})	115 MPH
NOMINAL DESIGN WIND SPEED (V _{asd})	90 MPH
IMPORTANCE FACTOR (I _w)	1.0
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	±0.18
[3.0] SEISMIC (EQUIVALENT LATERAL FORCE PROCEDURE):	
SEISMIC RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR (I _s)	1.00
SITE CLASS	D
SEISMIC DESIGN CATEGORY	A
SEISMIC FORCE-RESISTING SYSTEM	NOTE-2
[4.0] ALLOWABLE SOIL BEARING CAPACITY & SUBGRADE MODULUS:	
FOOTINGS	2,000 PSF
SLAB-ON-GRADE	150 PCI

- BASIS OF STRUCTURAL DESIGN NOTES:**
- PROVIDE FOR ADDITIONAL 5 PSF LL AT ALL ATTIC SPACES.
 - SEISMIC FORCE-RESISTING SYSTEM: A. BEARING WALL SYSTEMS, 9. ORDINARY REINFORCED MASONRY SHEAR WALLS (PER ASCE 7).
 - COMPONENT DELEGATED DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE WISCONSIN DEPARTMENT OF ADMINISTRATIVE CODE, CHAPTER SPS 362 (CURRENT EDITION). COMPONENT SUBMITTAL SHALL INCLUDE: WOOD ROOF TRUSSES.



- DOOR NOTES:**
- REF. SPECIFICATION SECTION 08 71 00 (3.3) FOR DOOR HARDWARE SETS. HARDWARE TYPE & FINISHES AS SPECIFIED. COORDINATE LOCKSET KEYING WITH OWNER.
 - PROVIDE SHAFT-MOUNTED ELECTRIC OPERATOR (SIDE MOUNT), ACCESS KEYPAD, DOOR SENSING EDGE, & (4) REMOTES. TRACKS SHALL BE HIGH-CLEARANCE.
 - EXTERIOR DOORS 100.1 AND 100.2 & 102 SHALL BE INSULATED.
 - INTERIOR DOOR 103 SHALL BE 2-HR RATED, TEMPERED SAFETY GLAZING SHALL BE RATED FOR 1 1/2 HRS.

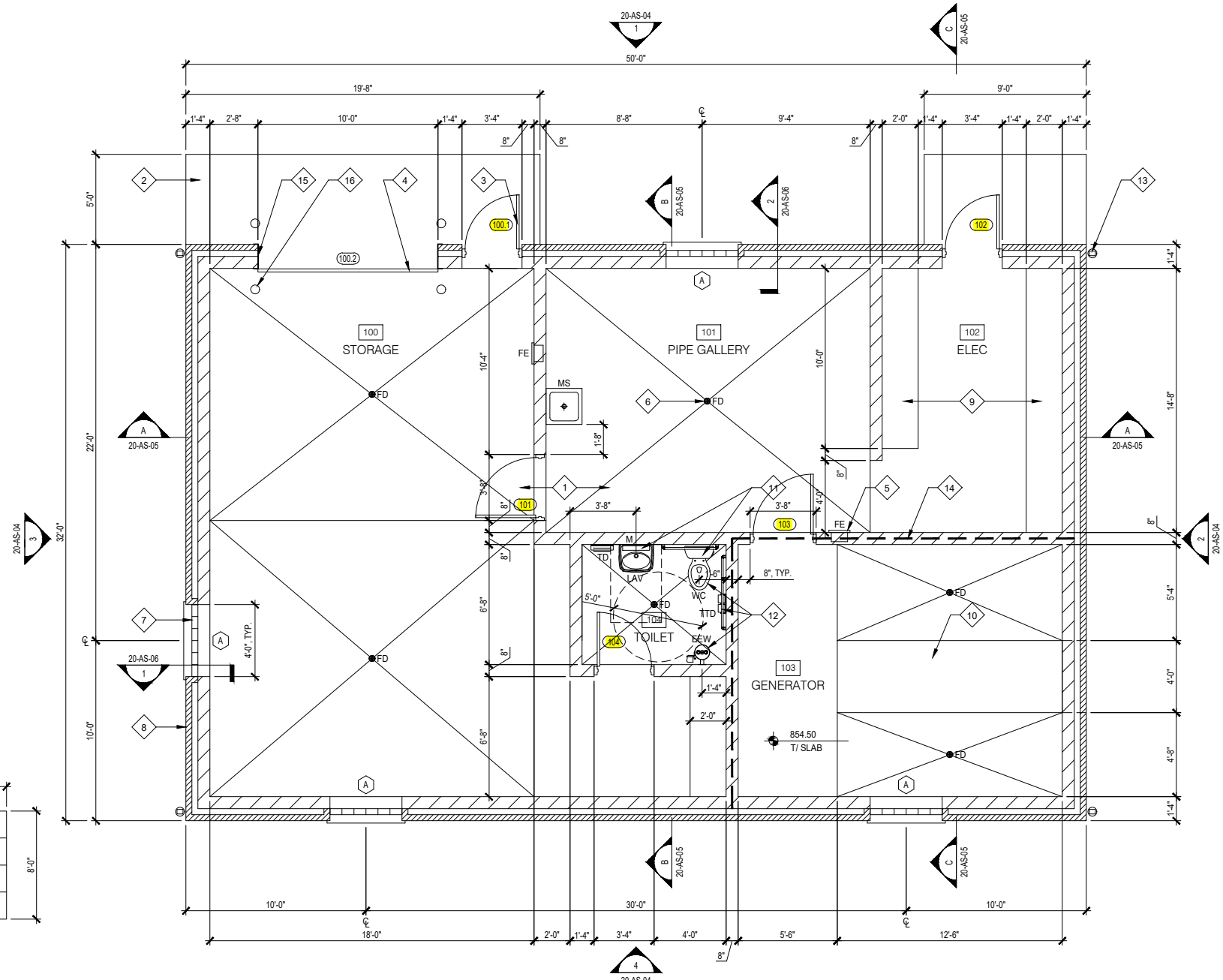
ROOM FINISH SCHEDULE											
BUILDING	ROOM NO.	ROOM NAME	WALLS				FLOOR	BASE	CEILING		REMARKS
			N	E	S	W			MAT'L	HEIGHT	
LIFT STATION NO. 2	100	STORAGE	CMU/PT	CMU/PT	CMU/PT	CMU/PT	SC	N/A	GWB	10'-2"±	NOTE-1, 2
	101	PIPE GALLERY	CMU/PT	CMU/PT	CMU/PT	CMU/PT	SC	N/A	GWB	10'-2"±	NOTE-1, 2
	102	ELECTRICAL	CMU/PT	CMU/PT	CMU/PT	CMU/PT	SC	N/A	GWB	10'-2"±	NOTE-1, 2
	103	EMERGENCY GENERATOR	CMU/PT	CMU/PT	CMU/PT	CMU/PT	SC	N/A	GWB	10'-2"±	NOTE-1, 2, 3
	104	TOILET	CMU/PT	CMU/PT	CMU/PT	CMU/PT	SC	N/A	GWB	10'-2"±	NOTE-1, 2

ROOM FINISH SCHEDULE ABBREVIATIONS:

C - CONCRETE
CMU - CONCRETE MASONRY UNIT
GWB - 5/8" TYPE-X MOISTURE-RESISTANT GYPSUM WALL BOARD, FINISHED, ORANGE-PEEL TEXTURED & PAINTED

PT - PAINTED
SC - SEALED CONCRETE

- ROOM FINISH SCHEDULE NOTES:**
- SEALED CONCRETE FINISH: (2) COATS ARMOR 'AR350' OR EQ., FOLLOW MFR RECOMMENDATIONS FOR SURFACE PREP, MIXING & APPLICATION RATES.
 - GWB 5/8" MOISTURE-RESISTANT, TYPE-X, MAX. INSTALLATION GAP 1/16".
 - 2-HR FIRE SEPARATION AREA: PROVIDE (2) LAYERS 5/8" TYPE-X GWB AT RM 103 CEILING. MUD & TAPE BOTH LAYERS; FINISHED, PAINTED & TEXTURED EXPOSED SURFACE ONLY.



FLOOR PLAN

1
1/4" = 1'-0"

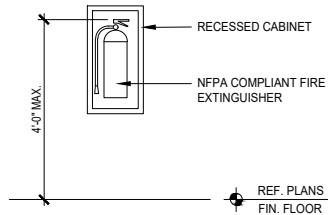
GENERAL NOTES

- KEY NOTES BELOW APPLY TO THIS SHEET ONLY.
- REFERENCE DETAIL 4/100-AS-02 & 5/100-AS-02 FOR APPLICABLE HEAD, JAMB, SILL AND/OR THRESHOLD DETAILS OF CONSTRUCTION.

KEY NOTES

- CONCRETE FLOOR SLAB-ON-GRADE: 4" THICK ROOMS 102 & 104, 6" THICK REMAINING ROOMS
- CONCRETE FROST-PROTECTED STRUCTURAL STOOP
- INSULATED HOLLOW METAL DOOR, FRAME & HARDWARE, REF. DETAIL THIS SHEET AND SPECIFICATIONS 08 11 13 & 08 71 00
- INSULATED METAL SECTIONAL OVERHEAD DOOR, REF. DETAIL THIS SHEET AND SPECIFICATION 08 36 13
- FIRE EXTINGUISHER IN CABINET: INSET-MOUNTED CABINET, REF. FIRE EXTINGUISHER MOUNTING ELEVATION THIS SHEET, TYP.
- FLOOR DRAIN (FD), REF. PLUMBING DRAWINGS & FOUNDATION PLAN FOR ELEVATION(S), TYP.
- GLASS BLOCK WINDOW ASSEMBLY AT LOCATIONS SHOWN AND DENOTED 'A', (4) LOCATIONS, TYP.
- 16" INSULATED MASONRY CAVITY WALL, REF. APPLICABLE DETAILS FOR CONSTRUCTION.
- 4" RAISED CONC. PAD, ALSO REF. ELEC. DWGS
- EMERGENCY GENERATOR RAISED ISOLATED BASE
- TOILET ROOM FIXTURES: WC = WATER CLOSET, LAV = LAVATORY, EEW = EMERGENCY EYE WASH, MS = MOP SINK, REF. PLUMBING DRAWINGS & SPECIFICATIONS, ALSO REF. 1/100-AS-03 & 2/100-AS-03 FOR APPLICABLE MOUNTING INFORMATION
- TOILET ROOM ACCESSORIES: GB = STAINLESS STEEL GRAB BARS, TTD = TOILET TISSUE DISPENSER, TD = TOWEL DISPENSER, M = MIRROR, REF. SPECIFICATION 10 80 00 AND REF. 1/100-AS-03 & 2/100-AS-03 FOR APPLICABLE MOUNTING INFORMATION, MOUNT FIXTURE 'EEW' OUTSIDE 5'-0" CLEARANCE RADIUS SHOWN
- FACTORY-FINISHED ALUM. DOWNSPOUT TO UNDERDRAIN SYSTEM, REF. SITE DWGS, TYP. (4) LOCATIONS SHOWN
- 2-HR RATED WALL AND CEILING SYSTEM REQUIRED BETWEEN GENERATOR ROOM 103 AND ADJACENT STRUCTURE (HEAVY DASHED LINE)
- 1/8" PLATE STEEL PROTECTIVE JAMB COVER, 2" RETURNS, GALVANIZED & PAINTED, (2) REQ'D
- 8" CONCRETE-FILLED STEEL PIPE BOLLARD

FIRE EXTINGUISHER NOTE:
PROVIDE (2) WALL FIRE EXTINGUISHERS (FE), GENERAL LOCATIONS AS SHOWN ON FLOOR PLAN. COORDINATE EXACT PLAN LOCATION TO ACCOMMODATE INSTALLATIONS BY OTHER TRADES.

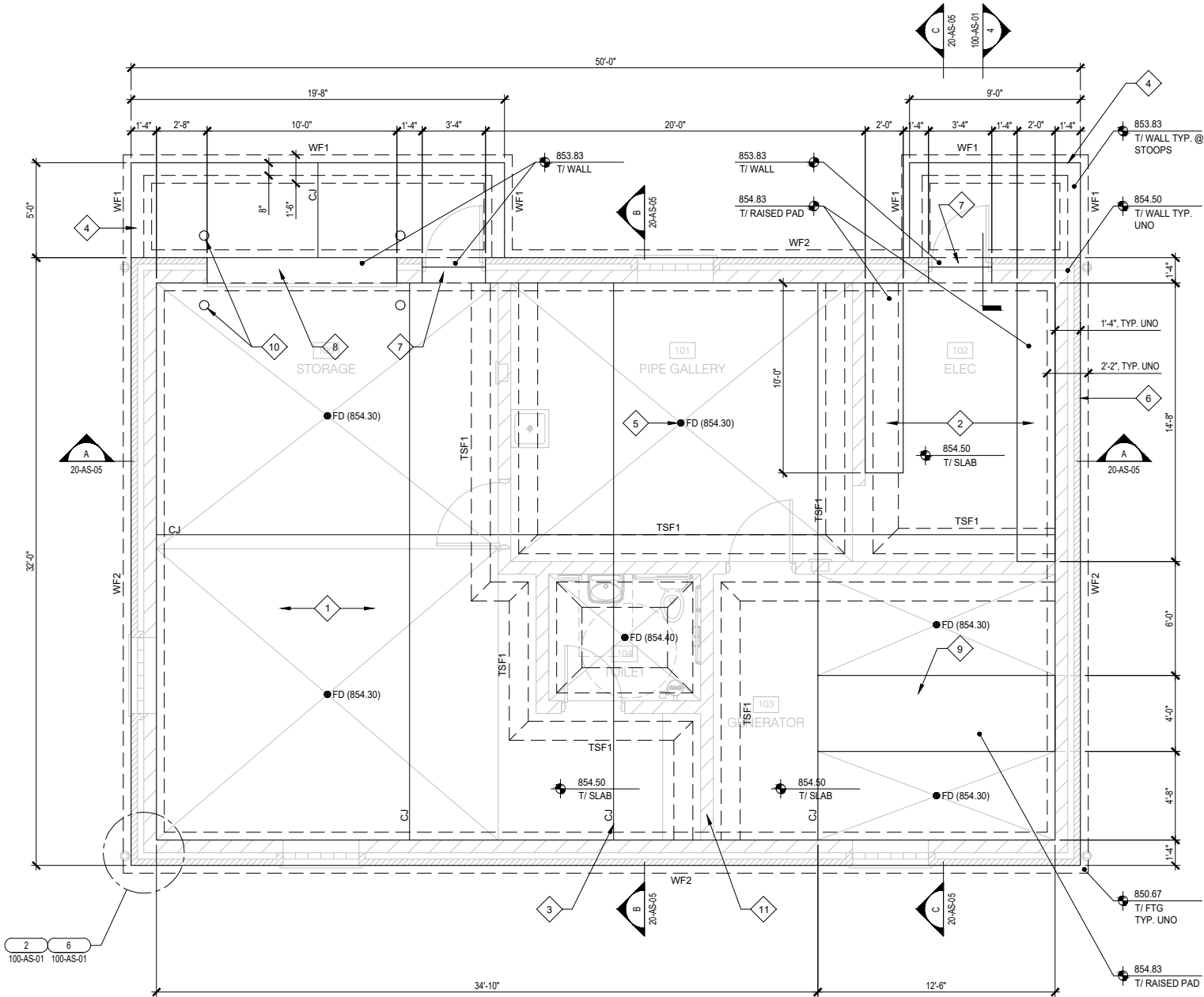


FIRE EXTINGUISHER MOUNTING ELEVATION

NOTE:
ALL FINISH-EXPOSED FORMED CONCRETE SURFACES SHALL RECEIVE A SMOOTH RUBBED FINISH PER SPECIFICATION SECTION 03 30 00 (3.7). CONCRETE SLABS SHALL BE FINISHED TO TOLERANCE $F_2=25$, $F_1=20$, UNO.

WALL FOOTINGS				
MARK	SIZE		REINF.	REMARKS
	W (IN)	T (IN)		
WF1	1'-6"	12"	(2) #4 CONT.	-
WF2	2'-0"	12"	(3) #5 CONT.	-
TSF1	1'-8"	12"	-	REF. 12/100-AS-01

NOTES:
1. FOOTINGS ARE CENTERED BELOW CONCRETE (OR CMU) WALLS TYP. UNO.
2. INSTALL CONC. WALL-TO-FOOTING DOWELS, #4 X 24" STRAIGHT DOWELS @ 48" O.C., 9" EMBED. INTO FOOTING, TYP. UNO.



FOUNDATION PLAN

1

1/4" = 1'-0"

GENERAL NOTES

- KEY NOTES BELOW APPLY TO THIS SHEET ONLY.
- REF. 8/100-AS-01 FOR CONCRETE REINFORCING LAP SPLICE TABLE AND REINFORCING CLEAR COVER REQUIREMENTS.
- REF. 3/100-AS-01 FOR CONCRETE REINFORCING TYPICAL BAR BEND DETAILING.
- SEQUENCED CONCRETE PLACEMENT SHALL UTILIZE LAP SPLICES AS INDICATED IN 8/100-AS-01 EXCEPT WHERE APPROVED BY A/E IN ADVANCE WHERE DETAIL 7/100-AS-01 MAY BE PERMITTED.
- REF. 11/100-AS-01 FOR UTILITY PIPING/CONDUIT CONFLICTS WITH FOUNDATION, TYP.
- A SITE-SPECIFIC GEOTECHNICAL SUBSURFACE INVESTIGATION AND REPORT WAS COMPLETED FOR THE SITE. RECOMMENDATIONS THEREIN SHALL BE INCORPORATED INTO THE PROJECT REQUIREMENTS. IN GENERAL, BIDDER SHALL PROVIDE FOR ENTIRE PROJECT BASE BID TO INCLUDE THE FOLLOWING SOILS WORK:

- PREPARE BUILDING FOOTING BEARING SOILS TO MEET MINIMUM CAPACITY INDICATED IN 'BASIS OF BUILDING STRUCTURAL DESIGN' TABLE ON SHEET 02-AS-01. SUBSTANDARD SOILS THAT MAY BE ENCOUNTERED REQUIRING ADDITIONAL SUB-GRADE REMOVAL & REPLACEMENT WITH ENGINEERED FILL, AS APPROVED IN ADVANCE BY ENGINEER, SHALL BE PROVIDED FOR WITH UNIT COSTS UNDER SUPPLEMENTAL BID ITEM.

- PREPARE CONCRETE FLOOR SLAB-ON-GRADE SUB-GRADE AS DETAILED IN REPORT, OR AS OTHERWISE DETAILED ON DRAWINGS WHICHEVER PROVIDES FOR GREATER SUB-GRADE CAPACITY. MIN. 6" COMPACTED AGGREGATE BASE BELOW FLOOR SLAB-ON-GRADE REQUIRED. ALSO REF. 5/100-AS-01 FOR VAPOR RETARDER REQUIREMENTS.

- FOR DETAILED DESCRIPTION OF SOILS AND FOUNDATION SUB-GRADE PREPARATION, REFER TO:

GEOTECHNICAL EXPLORATION REPORT
CGC, INC.
MAY 26, 2023
CGC REPORT NO.: C23162
CGC CONTACT:
TIM F. GASSENHEIMER, PE, CST
2921 PERRY ST., MADISON, WI 53713
608-288-7887

KEY NOTES

- CONCRETE SLAB-ON-GRADE:
 - ROOMS 102 & 104: 4" THICK, REINF. W/6X6 W1.4 X W1.4 WWF, SLAB PLACED OVER 10 MIL VAPOR RETARDER
 - ELSEWHERE: 6" THICK, REINFORCE W/ (1) MAT #4 BARS @ 16" O.C. E.W. CENTERED IN SLAB, SLAB PLACED OVER 10 MIL VAPOR RETARDER
 - STRUCTURAL STOOPS: REF. 4/100-AS-01
 - WHERE WWF SPECIFIED, FURNISH IN FLAT SHEETS, CENTER IN SLAB, MIN. 6" OVERLAP WWF SHEET EDGES, REF. 6/100-AS-03 FOR SUB-GRADE PREP. & POLY VAPOR RETARDER REQUIREMENTS, SLAB FINISH TOLERANCE F/F = 25, F/L = 20. STEEL TROWEL FINISH INTERIOR SLABS, BROOM FINISH EXT. SLABS, PITCH FLOOR TO FLOOR DRAINS WHERE PRESENT, TYP.
- 4" RAISED EQUIPMENT PAD, ALSO REF. ELEC. DWGS
- CONCRETE SLAB CONTROL JOINT (CJ), SAW-CUT WITHIN 12 HRS CONCRETE PLACEMENT/FINISHING, REF. 5/100-AS-01
- NEW STRUCTURAL CONCRETE STOOP AT EXTERIOR WALK DOORS & OVERHEAD DOOR
- FLOOR DRAIN, FLOOR SLOPE AS SHOWN, T/DRAIN EL. AS SHOWN IN PARENTHESIS, ALSO REF. PLUMBING DWGS
- CONCRETE FROST WALL AND CONT. FTG
- DROP T/WALL ELEVATION DOWN 8" AT WALK DOOR OPENINGS TO ALLOW STOOP SLAB OVER-POUR. LOCATE CONSTRUCTION JOINT BETWEEN INTERIOR SLAB AND EXT. STOOP SLAB BELOW THRESHOLD
- DROP T/WALL ELEVATION DOWN 8" AT OVERHEAD DOOR OPENING TO ALLOW GARAGE FLOOR SLAB OVER-POUR
- ISOLATED RAISED EQUIPMENT BASE, REF. 3/100-AS-03, SIM/TYP.
- 8" CONCRETE-FILLED STEEL PIPE BOLLARD, REF. 8/100-AS-02, TYP.
- THICKENED SLAB FOOTING, REF. SCHEDULE THIS SHEET, TYP.

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TOWN & COUNTRY
ENGINEERING, INC.

FOUNDATION PLAN

2023 LIFT STATION 2 IMPROVEMENTS

Marsh Woods Drive

Village of McFarland, Wisconsin

PROJECT NO.:
MC 198

DRAWING FILE:

DRAWN BY:

WTS

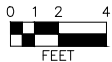
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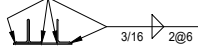
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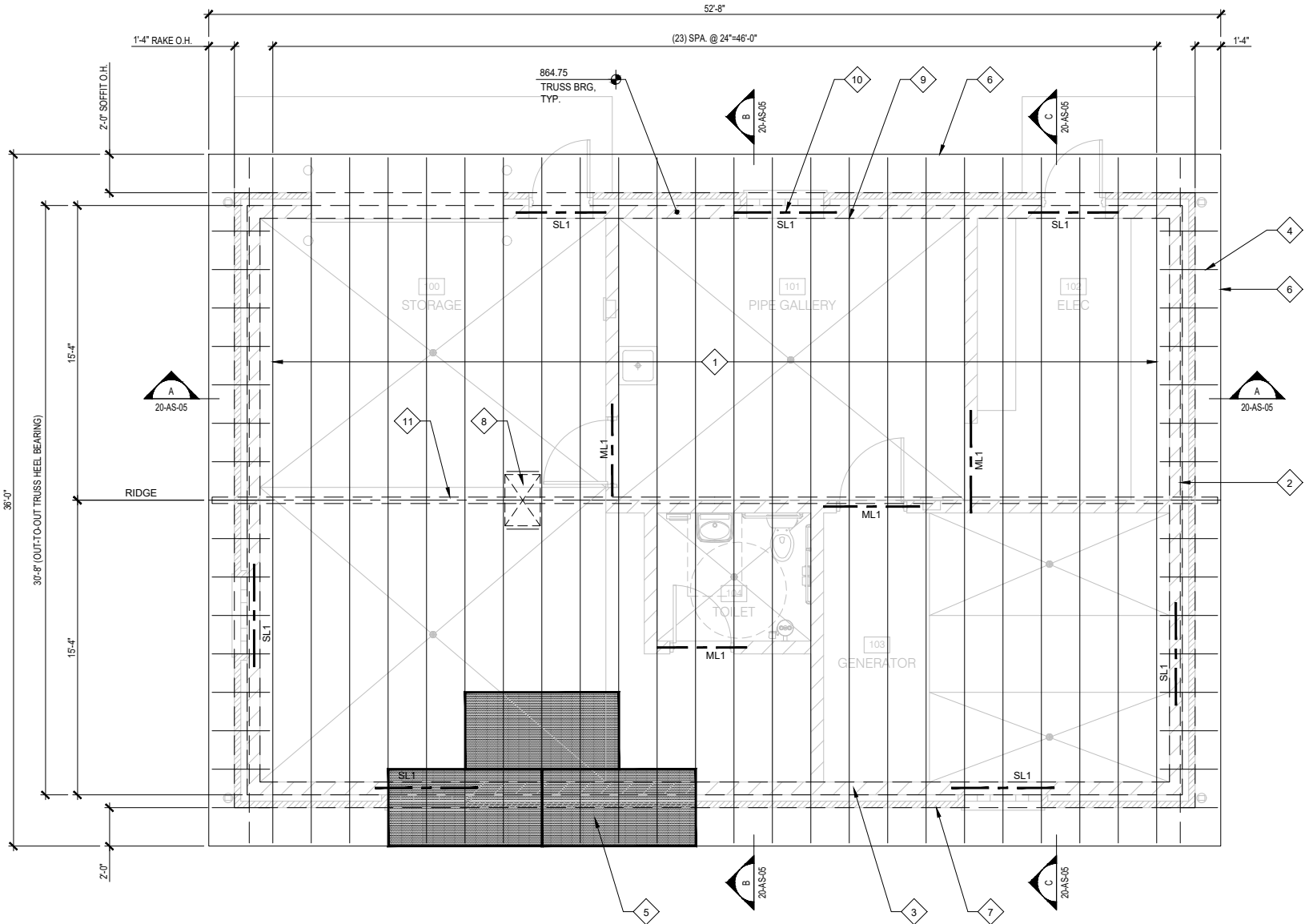


SHEET:

20-AS-02

LINTEL SCHEDULE		
MARK	TYPE	DETAIL/REMARKS
ML1	8"W. BOND BEAM W/2-#5 CONT. (& LOOSE STEEL LINTEL AT MASONRY VENEER LOCATIONS)	 GROUT W/ MIN. 3,000 PSI CONC.
SL1	B/B L6X3 1/2X3/8 (LLV) WITH 3/8" T. BOT. PL., PL. WIDTH = WALL MINUS 1"	 3/16 2@6

- NOTES:
- MINIMUM LINTEL BEARING 8" UNLESS DETAILED OTHERWISE.
 - INSTALL LINTEL TYPE 'ML1' AT MISC. HVAC OPENINGS < 24" WIDE (NOT SHOWN).



ROOF FRAMING PLAN

1

1/4" = 1'-0"



GENERAL NOTES

- KEY NOTES BELOW APPLY TO THIS SHEET ONLY.
- VERIFY SIZE AND LOCATION OF ANY AND ALL ROOF & WALL OPENINGS WITH MECHANICAL, HVAC AND ELECTRICAL CONTRACTORS. OPENINGS LESS THAN 24 INCHES IN DIMENSION ARE GENERALLY NOT SHOWN.
- UNO, WOOD FASTENING SHALL BE COMPLETED IN ACCORDANCE WITH IBC 2015 TABLE 2304.9.1
- TRUSS COMPONENT DELEGATED DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PROVISIONS OF THE WISCONSIN DEPARTMENT OF ADMINISTRATIVE CODE, CHAPTER SPS 362 (CURRENT EDITION).
- G.C. SHALL SUBMIT THE FOLLOWING COMPONENT DESIGNS TO A/E: WOOD ROOF TRUSSES.
- NEW TRUSS WEB GEOMETRY SHALL BE AS DESIGNED BY TRUSS SUPPLIER.
- TRUSS DESIGN SUPERIMPOSED DEAD AND LIVE DESIGN LOADS:
 - DL: 15 PSF TOP CHORD, 5 PSF BOT. CHORD
 - LL: 25 PSF TOP CHORD, 5 PSF BOT. CHORD
- REF. 7/100-AS-02 FOR PERMANENT TRUSS BRACING REQUIREMENTS. BRACING INSTALLATION SHALL BE IN COMPLIANCE WITH 'BUILDING COMPONENT SAFETY INFORMATION' (BCSI) MANUAL JOINTLY PRODUCED BY THE TRUSS PLATE INSTITUTE (TPI) AND STRUCTURAL BUILDING COMPONENTS ASSOCIATION (SBCA), 2013 EDITION., UPDATED MARCH 2015.
- INSTALL PERMANENT TRUSS BRIDGING AS RECOMMENDED BY TRUSS SUPPLIER.
- ALL WOOD IN CONTACT WITH MASONRY SHALL BE PRESSURE-TREATED.

KEY NOTES

- WOOD COMMON TRUSSES AT 24" O.C., TYP.
- STEP-DOWN WOOD END WALL TRUSS, TYP.
- TRUSS BEARING ON 8" CMU STRUCTURAL WYTHE P.T. WOOD NAILER PLATES BELOW
- 2X LOOKOUTS @ 24" O.C.
- 19/32" STRUCTURAL USE OSB SHEATHING, SPAN RATING 32/16, SPAN PERPENDICULAR TO TRUSS, STAGGER JOINTS
- 2X8 FASCIA ALL AROUND
- MASONRY CAVITY WALL BELOW (DASHED LINES)
- 22"x32" ATTIC ACCESS, PROVIDE MITERED 1X4 FINISH WOOD TRIMMED OPENING, REMOVABLE ACCESS PANEL: PLYWOOD & 5/8" TYPE-X GWB FINISH SURFACE, GRAVITY MOUNTED, 3" MIN. POLYSTYRENE ON ATTIC SIDE, EXPOSED WOOD PAINTED
- SIMPSON STRONG-TIE 'H2.5' (OR EQ.) HOLD-DOWN ANCHOR, EA. TRUSS BRG. OPTION: USE (1) MITEK 'TIMBERLOK' THROUGH DOUBLE TOP PLATE INTO BOT. CHORD TRUSS AT EA. TRUSS AND/OR LOOKOUT BEARING (MIN. SERVICE CAPACITY UPLIFT = 420#, SHEAR = 320# EA. ANCHOR), OR APPROVED EQUAL
- STEEL (OR MASONRY) LINTEL OVER OPENING, REF. LINTEL SCHEDULE THIS SHEET, TYP.
- CONT. RIDGE VENT ABOVE (DASHED LINE)

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ROOF FRAMING PLAN

2023 LIFT STATION 2 IMPROVEMENTS

Marsh Woods Drive

Village of McFarland, Wisconsin

PROJECT NO.:
MC 198

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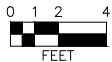
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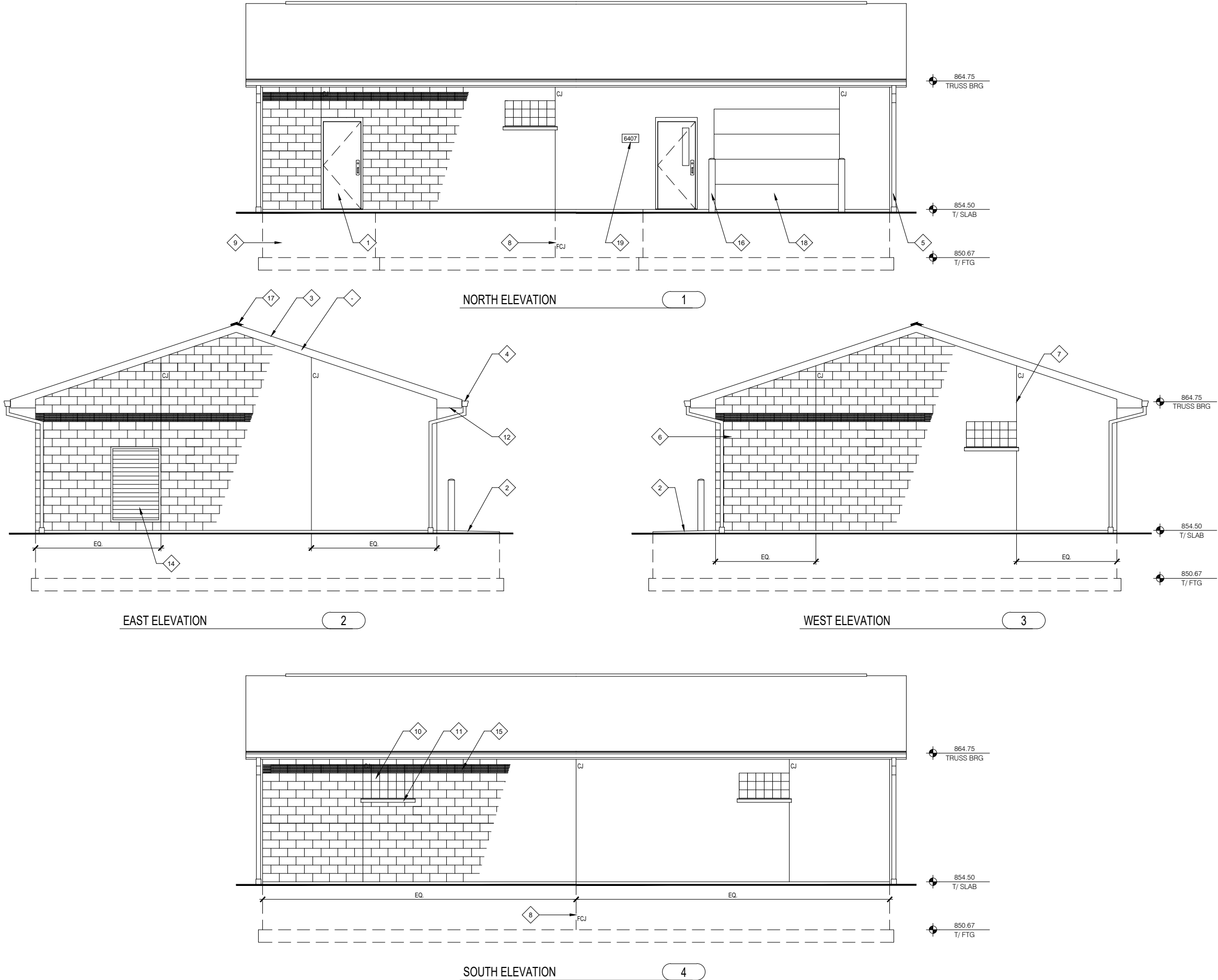
REVISIONS:

SCALE:



SHEET:

20-AS-03



- GENERAL NOTES
1.

KEY NOTES BELOW APPLY TO THIS SHEET ONLY.
2.

EXPOSED CONCRETE SURFACES TO RECEIVE 'GROUT-CLEAN RUBBED FINISH' PER SPECIFICATION SECTION 03 30 00, TYP. AS APPLICABLE.
- X

KEY NOTES
1.

HOLLOW METAL DOOR, FRAME & HARDWARE, AS SCHEDULED
2.

STRUCTURAL CONCRETE STOOP
3.

FIBERGLASS-ASPHALT ROOF SYSTEM. REF. SPECIFICATIONS & APPLICABLE DETAILS FOR UNDERLAYMENT, DRIP EDGE, FLASHING, AND ICE & WATER SHIELD REQUIREMENTS
4.

FACTORY-FINISHED SEAMLESS TYPE-K COMMERCIAL ALUMINUM 6"W. GUTTER
5.

FACTORY-FINISHED 3" X 4" DOWNSPOUT SYSTEM, DISCHARGE INTO BELOW-GRADE STORM WATER CONVEYANCE SYSTEM, TYP. AT (4) LOCATIONS SHOWN
6.

INSULATED CAVITY-WALL MASONRY STRUCTURE, SPLIT-FACED CMU VENEER, RUNNING BOND
7.

MASONRY CONTROL JOINT (CJ) AT LOCATIONS SHOWN. REF. 3/100-AS-02, TYP.
8.

FOUNDATION CONTROL JOINT (FCJ), ONLY AT (2) LOCATIONS SHOWN, ALIGN WITH MASONRY CONTROL JOINT, REF. 1/100-AS-01
9.

CAST-IN-PLACE CONCRETE FOUNDATION
10.

GLASS BLOCK WINDOW SYSTEM, TYP.
11.

PRECAST CONCRETE SILL WITH DRIP, TYP.
12.

FACTORY-FINISHED VENTED ALUMINUM SOFFIT, TYP. AT EAVE AND RAKE
13.

FACTORY-FINISHED ALUMINUM CLAD FASCIA SYSTEM, TYP.
14.

LOUVER, REF. HVAC DWGS
15.

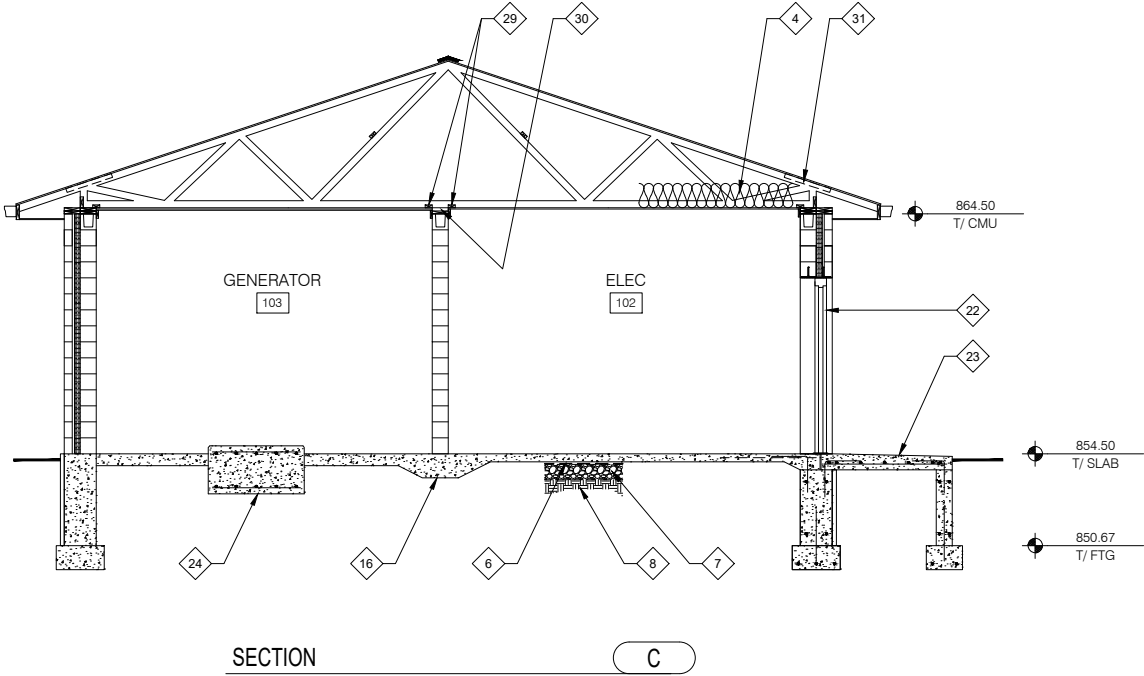
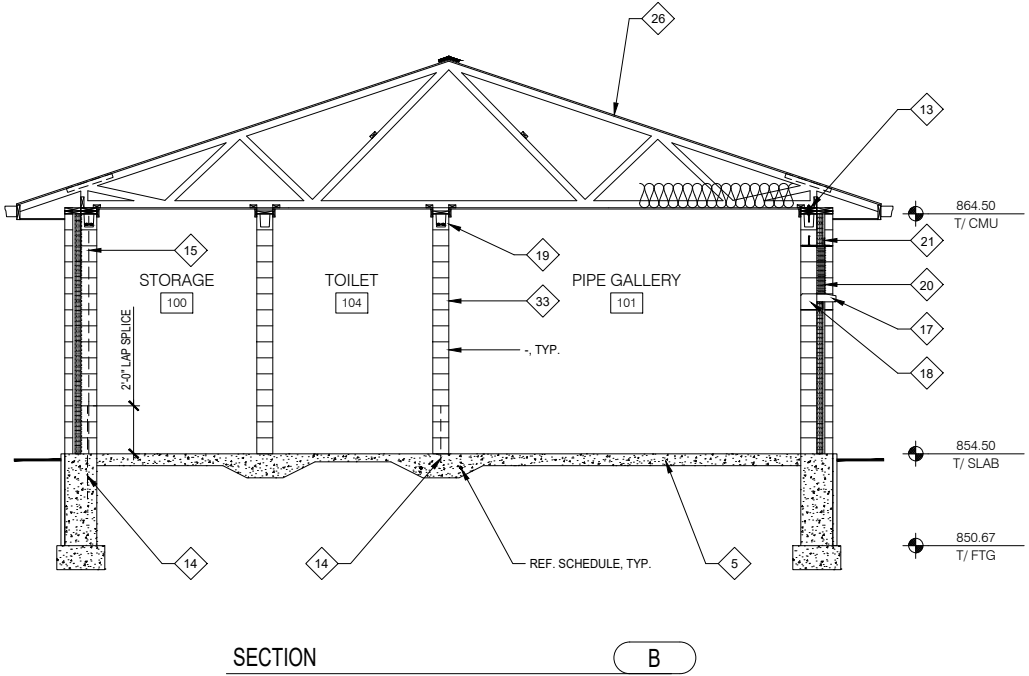
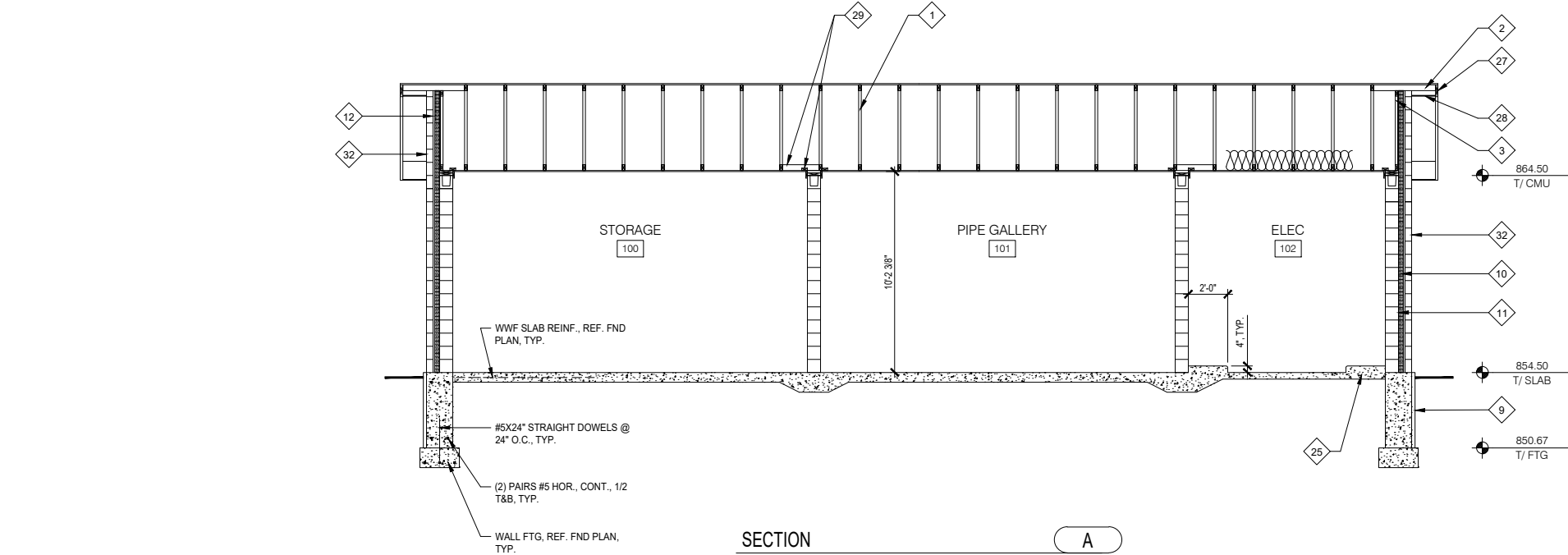
CMU VENEER ACCENT COURSE, RUNNING BOND
16.

8" CONCRETE-FILLED PIPE BOLLARD, (2) LOC. SHOWN, REF. 8/100-AS-02
17.

CONT. RIDGE VENT SYSTEM, ASPHALT SHINGLE EXPOSED SURFACE TO MATCH ROOF SHINGLE SYSTEM
18.

INSULATED METAL SECTIONAL OVERHEAD DOOR
19.

ADDRESS INSERT BLOCK, COORDINATE MATERIAL, STYLE AND '6407' FONT WITH OWNER

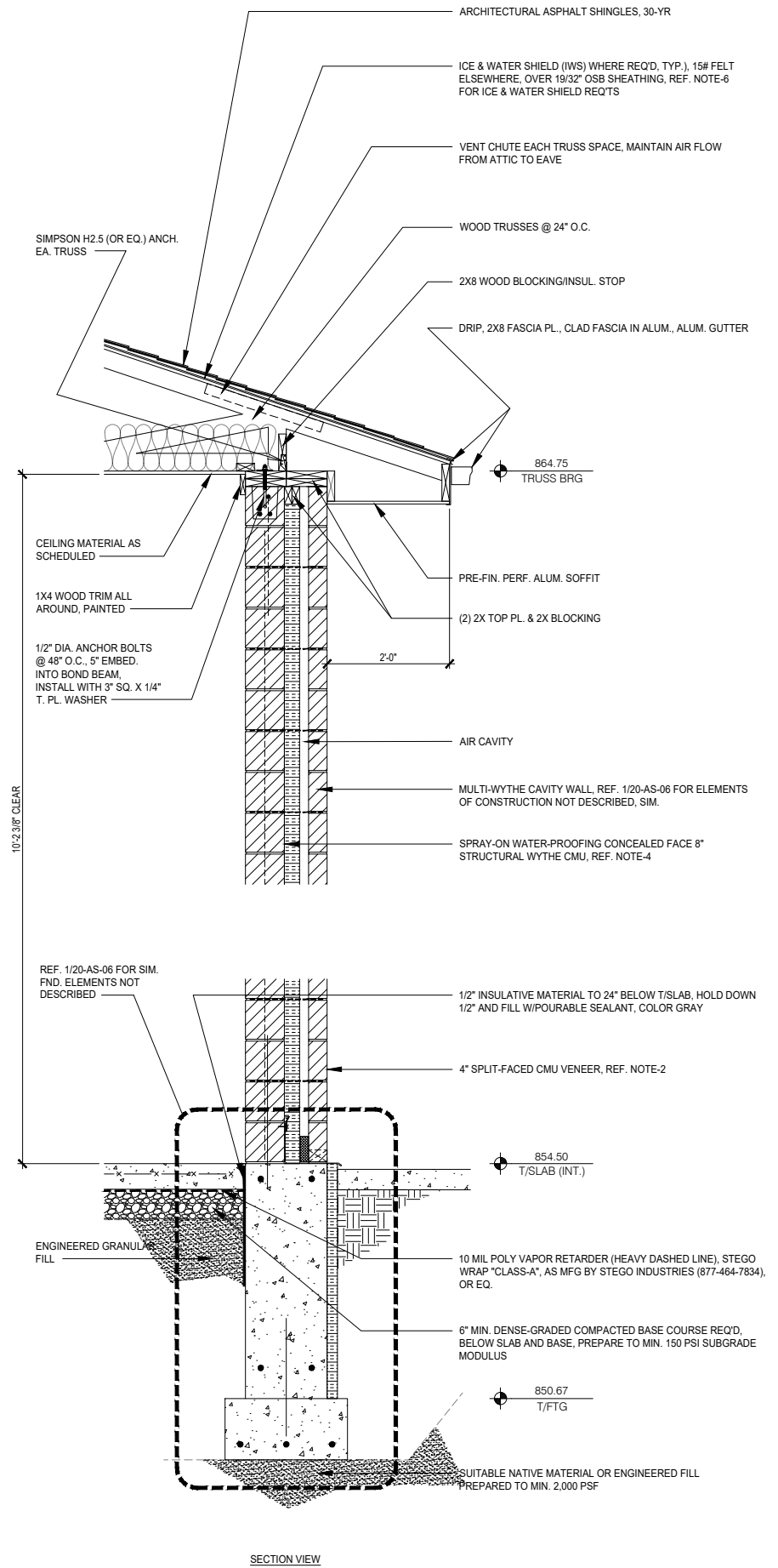
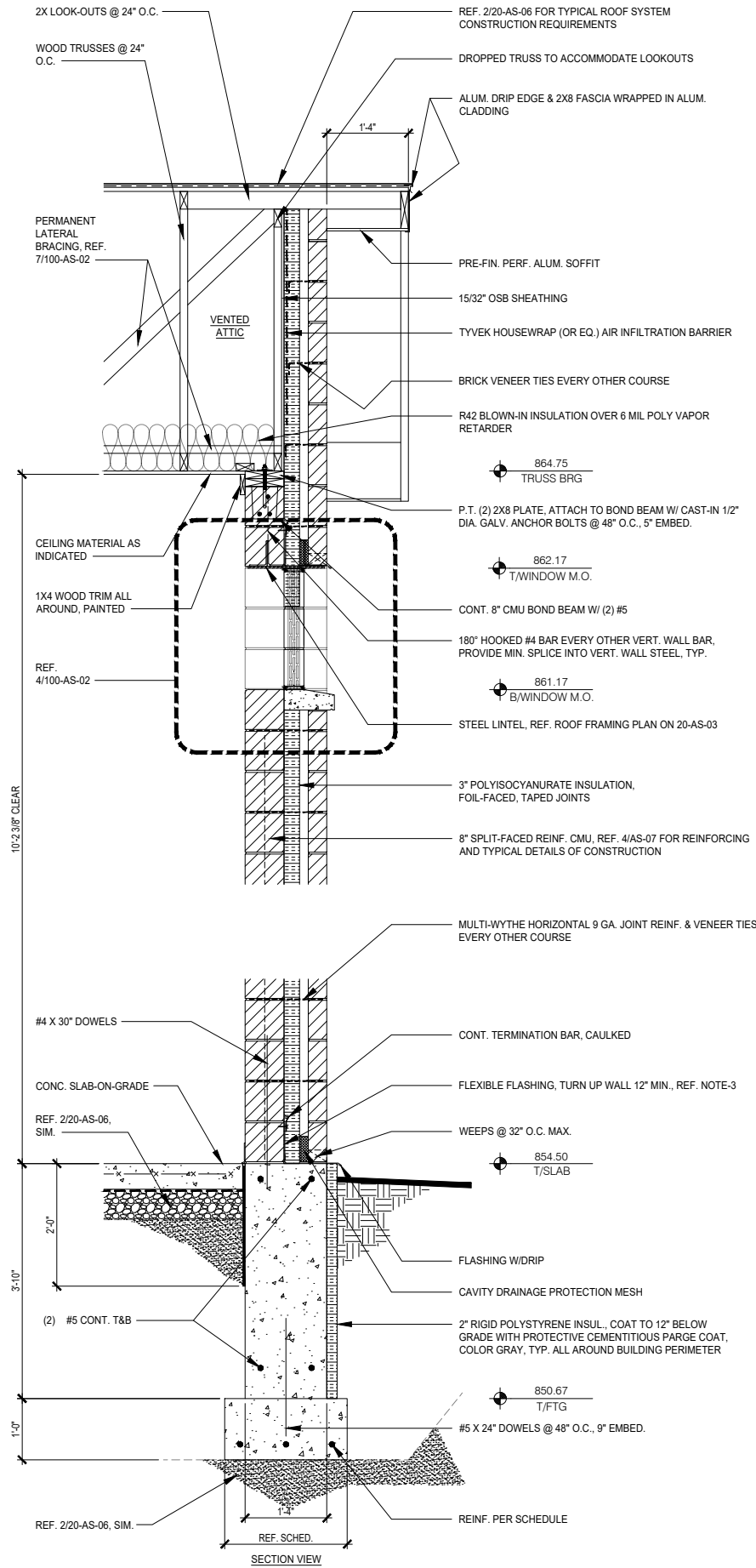


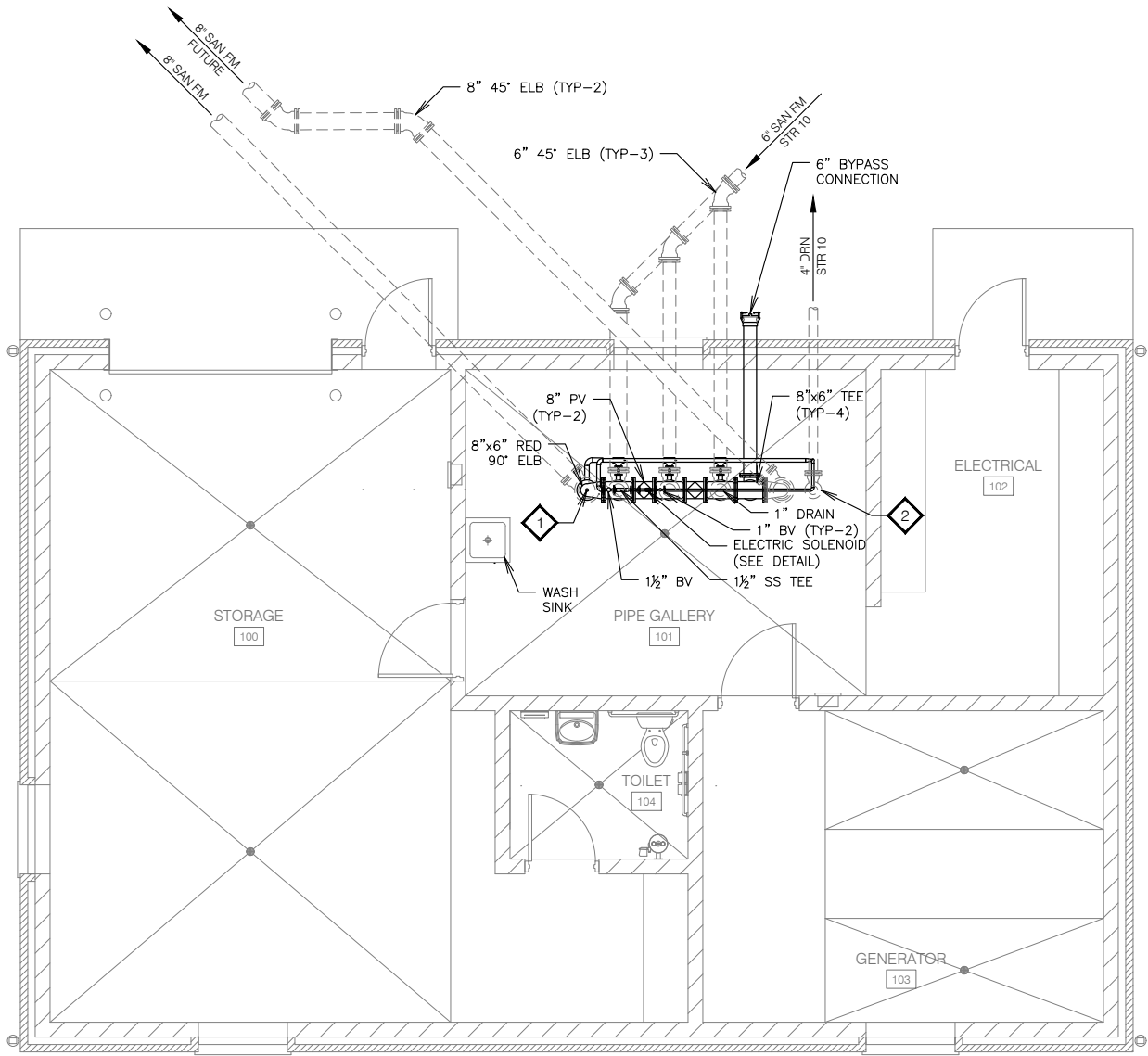
- ### GENERAL NOTES
1. KEY NOTES BELOW APPLY TO THIS SHEET ONLY.
- ### KEY NOTES
- WOOD ROOF TRUSSES @ 24" O.C.
 - 2X LOOK-OUTS AT 24" O.C.
 - DROPPED ENDWALL TRUSS TO ACCEPT LOOK-OUTS, TYP.
 - R42 BLOWN-IN INSULATION OVER 6 MIL POLY VAPOR RETARDER, TYP.
 - CONCRETE SLAB-ON-GRADE, REF. 20-AS-02 FOR REINF.
 - 10 MIL POLY VAPOR RETARDER, TYP. IMMEDIATELY BELOW ALL INTERIOR SLAB-ON-GRADE FLOORS, TYP.
 - MIN. 6" COMPACTED CRUSHED AGGREGATE SUB-BASE BELOW SLABS-ON-GRADE, TYP.
 - REF. GENERAL NOTES ON SHEET 20-AS-02 FOR SUB-GRADE PREP. REQUIREMENTS AT SLAB-ON-GRADE, THICKENED SLABS AND CONTINUOUS WALL FOOTINGS
 - 2" POLYSTYRENE INSULATION TO MIN. 48" BELOW GRADE, TYP. AT PERIM. WALLS, FIRST COAT EXT. BUILDING WALLS BELOW GRADE W/ ASPHALTIC COATING, SPRAY-APPLIED, COAT EXPOSED FACE INSULATION TO 12" BELOW GRADE WITH PROTECTIVE CEMENTITIOUS COATING, COLOR GRAY, TYP.
 - 3" POLYISOCYANURATE INSULATION, FOIL-FACED & TAPED, TYP.
 - SPRAY-ON MOISTURE BARRIER CONCEALED FACE 8" STRUCTURAL WYTHE, TYP.
 - 15/32" OSB WALL SHEATHING AT GABLE END WALL TRUSSES, INSTALL AIR-INFILTRATION BARRIER OVER OSB PRIOR TO VENEER TIE ATTACHMENT, TYP.
 - 1/2" DIA. EXPANSION ANCHORS @ MAX. 48" O.C. THRU DOUBLE P.T. BEARING PLATE, INSTALL W/ 3" SQ. X 1/4" PL. WASHER AT EA. ANCHOR, TYP.
 - MASONRY DOWELS, REF. 1/100-AS-02, TYP.
 - REINFORCED STRUCTURAL MASONRY WYTHE, REF. 1/100-AS-02, TYP.
 - THICKENED SLAB FOOTING, REF. FND PLAN FOR REINF.
 - PRECAST CONC. SILL WITH DRIP, TYP.
 - SOLID BULLNOSE CMU AT INT. WINDOW SILL, TYP.
 - CONT. BOND BEAM UNIT, REINF. W/ (2) #5 CONT., TYP.
 - GLASS BLOCK WINDOW ASSEMBLY, REF. SCHED., TYP.
 - STEEL LINTEL, REF. ROOF FRAMING PLAN & SCHEDULE
 - HOLLOW METAL DOOR & FRAME
 - REINFORCED CONCRETE STRUCTURAL STOOP, REF. 4/100-AS-01, TYP.
 - RAISED EQUIP. BASE, ISOLATED, REF. 3/100-AS-03 FOR REINF., REF. 'H' DWGS & CONFIRM T/ BASE EL. BASED ON EQUIP. FINAL SELECTION PRIOR TO CONSTRUCTION
 - 4" RAISED EQUIPMENT PAD, REF. 9/100-AS-01, ALSO REF. 'E' DWGS
 - 19/32" OSB ROOF SHEATHING
 - FACTORY-FINISHED ALUM. CLADDING OVER 2X8 FASCIA, TYP.
 - FACTORY-FINISHED VENTED ALUM. SOFFIT, TYP.
 - WOOD BLOCKING FOR TOP OF WALL BRACING & TRIM ATTACHMENT, TYP.
 - INTERIOR PARTITION WALLS RECEIVE ONLY (1) P.T. TOP PLATE, AT WALLS SEPARATING RM 103 PACK SPACE BETWEEN TOP PLATE & TRUSS BOTTOM CHORD WITH FIRE SAFINGS TO 2-HR PROTECTION LIMIT, TYP.
 - VENT CHUTE EA. TRUSS SPACE
 - SPLIT-FACED CMU VENEER, RUNNING BOND
 - INTERIOR CMU PARTITION WALLS ARE VERTICALLY UNREINFORCED EXCEPT FOR DOWELS INDICATED, REF. 1/100-AS-02 FOR REQUIRED HORIZONTAL JOINT AND BOND BEAM REINFORCING, TYP.

NOTE:
REINFORCING NOT SHOWN ALL LOCATIONS, WHERE TYPICAL REF.
CONSTRUCTION NOTES ELSEWHERE THIS SHEET FOR SIMILAR
REINFORCING REQUIREMENTS.

DETAIL 1 & 2/20-AS-06 NOTES:

- NOTES APPLY COLLECTIVELY TO SIMILAR DETAILING SHOWN IN DETAILS THIS SHEET.
- CMU VENEER TO BE COUNTY MATERIALS SPLIT-FACED CMU VENEER, OR EQ., SIZE: 8"H.X16"L.X4"T. (NOMINAL).
- CONT. FLEXIBLE FLASHING, GCP 'PERM-A-BARRIER', OR EQ., RETURN UP FACE OF CONCRETE WALL MIN. 12" AND FASTEN WITH CONT. TERMINATION BAR & CAULK.
- SPRAY-APPLY FLUID MOISTURE PROTECTION BARRIER TO CONCEALED FACE CMU WALL WITHIN CAVITY SPACE PRIOR TO FLEXIBLE FLASHING AND INSULATION INSTALLATION.
- HOLD-DOWN ANCHOR EA. TRUSS
- INSTALL ICE & WATER SHIELD CONT. BARRIER 5'-0" INWARD FROM ROOF EDGES AND RIDGE.





GENERAL NOTES

1. ALL PIPING SHALL BE EPOXY PAINTED DUCTILE IRON, CLASS 53, UNLESS NOTED.

KEY NOTES

1. 1/2\"/>



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PROCESS PLAN
STRUCTURE 20

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

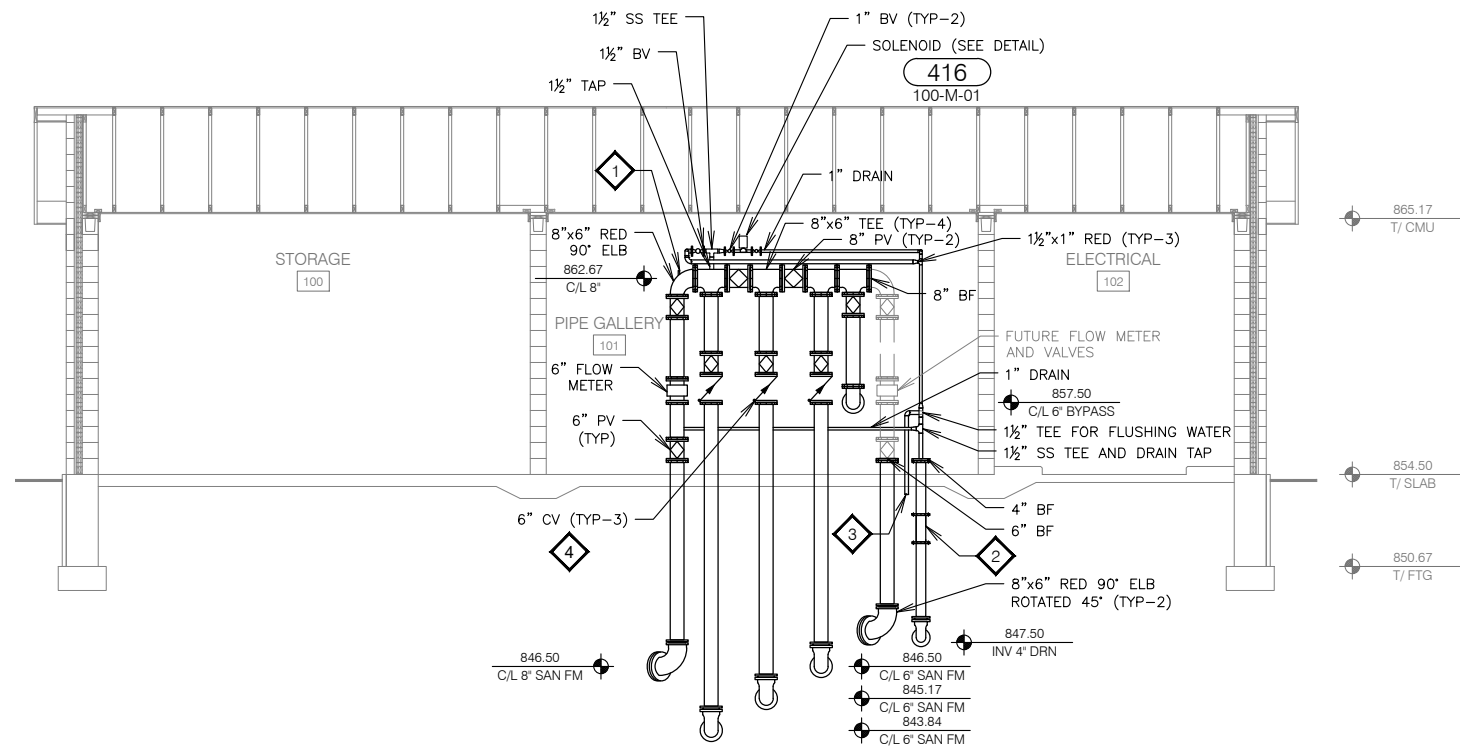
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D.D.E.
CHECKED BY:
T.J.S.

DATE:
9-6-23
REVISIONS:

SCALE:
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SHEET:

20-M-01



SECTION A

GENERAL NOTES

1. ALL PIPING SHALL BE EPOXY PAINTED DUCTILE IRON, CLASS 53, UNLESS NOTED.

KEY NOTES

1. 1/2" TAP WITH BALL VALVE AND PRESSURE GAUGE.
2. PROVIDE WYE FOR SANITARY DRAIN CONNECTION. ELEVATION DETERMINED BY PLUMBING PLANS.
3. 1-1/2" FLUSHING WATER LINE.
4. PUMP CHECK VALVES SHALL BE APCO MODEL 6000 BE DEZURIK OR GA INDUSTRIES 250-D.

PROCESS SECTION STRUCTURE 20

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.:
MC 198
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20-M
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SCALE:



SHEET:

20-M-02

DIFFUSERS AND GRILLES								
TYPE	MANUFACTURER	MODEL	TYPE	SERVICE	MATERIAL	MOUNTING	FINISH	REMARKS
A	CONTR. FABRICATED	-	-	EXHAUST	STAINLESS STEEL	DUCT	MILL	1
1. 1" x 1" STAINLESS STEEL SCREENING WITH STAINLESS STEEL FRAMED BORDER.								

ELECTRIC BASEBOARD						
MARK	MANUFACTURER	MODEL	LENGTH	ELECTRICAL		REMARKS
				WATTS	VOLTS / PH	
20-EBB-01	Q-MARK	QMKC25126	30"	500	120 / 1Ø	1, 2
1. PROVIDE FACTORY MOUNTED AND WIRED INTEGRAL THERMOSTAT. 2. PROVIDE FACTORY MOUNTED AND WIRED INTEGRAL DISCONNECT.						

LOUVERS													
MARK	MANUFACTURER	MODEL	SERVICE	CFM	CONSTRUCTION		SIZE			MAX FREE AREA VELOCITY (FPM)	MAX PRESSURE DROP (IN WC)	FINISH	REMARKS
					TYPE	MATERIAL	WIDTH	HEIGHT	DEPTH				
20-L-01	GREENHECK	ESK-402	STORAGE	450	INTAKE	ALUMINUM	16"	24"	4"	689	0.08	70% KYNAR	1, 2
20-L-02	GREENHECK	ESK-402	GENERATOR	7,700	EXHAUST	ALUMINUM	72"	72"	4"	689	0.08	70% KYNAR	1, 2
20-L-03	GREENHECK	ESK-402	GENERATOR	8,063	INTAKE	ALUMINUM	56"	64"	4"	689	0.08	70% KYNAR	1, 2
1. COLOR SELECTION BY ARCHITECT. 2. PROVIDE WITH BIRD SCREEN													

ELECTRIC CONTROL DAMPERS							
MARK	MANUFACTURER	MODEL	BLADE CONFIGURATION	SIZE	LOCATION	VOLTS/ PHASE	REMARKS
20-D-01	TAMCO	SERIES 9000	PARALLEL	16" x 24"	20-L-01	115V / 1Ø	1
20-D-02	TAMCO	SERIES 9000	PARALLEL	72" x 72"	20-L-02	115V / 1Ø	1
20-D-03	TAMCO	SERIES 9000	PARALLEL	56" x 64"	20-L-03	115V / 1Ø	1
1. PROVIDE WITH BELIMO ACTUATOR. VERIFY NUMBER OF ACTUATORS REQUIRED AND COORDINATE WITH ELECTRICAL CONTRACTOR.							

DUCTLESS SPLIT SYSTEMS																	
MARK	MANUFACTURER	MODEL		TYPE	LOCATION	COOLING CAPACITY (BUTH)	HEATING CAPACITY (BTUH)	AIRFLOW (CFM)	ELECTRICAL UNIT				PHYSICAL DATA				REMARKS
		INDOOR UNIT	OUTDOOR UNIT						AMPS	MCA	MOCP	VOLTS / PH	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LBS)	
20-DSS-01	LG	#1 - LSN120HSV5	-	HIGH WALL	PIPE GALLERY	12,000	13,600	459 / 338 / 317	0.4	-	-	208-230V / 1Ø	33	8	12	20	1, 2, 3
		#2 - LMN249HVT	-	HIGH WALL	ELEC	24,000	25,600	597 / 452 / 367	0.4	-	-	208-230V / 1Ø	40	9	14	30	1, 2, 3
		-	LMU363HV	MULTI-ZONE	OUTSIDE	36,000	36,000	2,119	15	18.4	25	208-230V / 1Ø	38	16	33	140	1, 4, 5
1. PROVIDE DISCONNECT. 2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT. 3. PROVIDE WALL MOUNTED WIRED THERMOSTAT. 4. PROVIDE LOW AMBIENT WIND BAFFLE TO PERMIT OPERATION DOWN TO 0°F. 5. PROVIDE WALL MOUNTING BRACKETS FOR OUTDOOR UNIT.																	

FANS																
MARK	MANUFACTURER	MODEL	SERVICE	LOCATION	CONSTRUCTION			AIR			ELECTRICAL			WEIGHT (LBS)	SONES	REMARKS
					TYPE	FAN MATERIAL	DRIVE	CFM	ESP (IN WC)	RPM	HP	BHP	VOLTS / PH			
20-EF-01	GREENHECK	CUE-095-VG	STORAGE	EXTERIOR WALL	SIDEWALL	ALUMINUM	DIRECT	450	0.25	1,327	1/6	0.07	115 / 1Ø	50	6.6	1, 2, 3, 4
20-EF-02	GREENHECK	SP-A200	TOILET	TOILET	CEILING	ALUMINUM	DIRECT	75	0.50	776	29 WATTS	-	115 / 1Ø	20	2.5	1, 2, 5, 6, 7
1. PROVIDE GRAVITY BACKDRAFT DAMPER. 2. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT SWITCH. 3. PROVIDE VARI-GREEN EC MOTOR WITH DIAL SPEED CONTROL MOUNTED ON MOTOR FOR BALANCING PURPOSES. 4. PROVIDE KYNAR FINSH. COLOR SELECTION BY ARCHITECT. 5. PROVIDE WHITE ALUMINUM GRILLE AND SPEED CONTROL MOUNTED ON FAN FOR BALANCING PURPOSES. 6. PROVIDE NEOPRENE VIBRATION ISOLATION HANGERS. 7. PROVIDE ALUMINUM WALL CAP EQUAL TO GREENHECK MODEL WC-6.																

ELECTRIC UNIT HEATERS										
MARK	MANUFACTURER	MODEL	KW	CFM	MOTOR		UNIT ELECTRICAL		OPERATING WEIGHT	REMARKS
					HP	RPM	AMPS	VOLTS / PH		
20-EUH-01	Q-MARK	MUH07-41	7.5	650	1/30	1,600	9.0	480 / 3Ø	38 LBS	1, 2, 3
20-EUH-02	Q-MARK	MUH07-41	7.5	650	1/30	1,600	9.0	480 / 3Ø	38 LBS	1, 2, 3
20-EUH-03	Q-MARK	MUH03-41	3	350	1/100	1,600	3.6	480 / 3Ø	27 LBS	1, 2, 3
20-EUH-04	Q-MARK	MUH03-41	3	350	1/100	1,600	3.6	480 / 3Ø	27 LBS	1, 2, 3
20-EUH-05	Q-MARK	MUH05-41	5	350	1/100	1,600	6.0	480 / 3Ø	27 LBS	1, 2, 3
1. PROVIDE FACTORY MOUNTED AND WIRED INTEGRAL DISCONNECT SWITCH. 2. PROVIDE REMOTE WALL MOUNTED THERMOSTAT. 3. MOUNT HEATER SUCH THAT THE BOTTOM OF THE UNIT IS AT A HEIGHT OF 8'-0" AFF.										

HVAC GENERAL NOTES

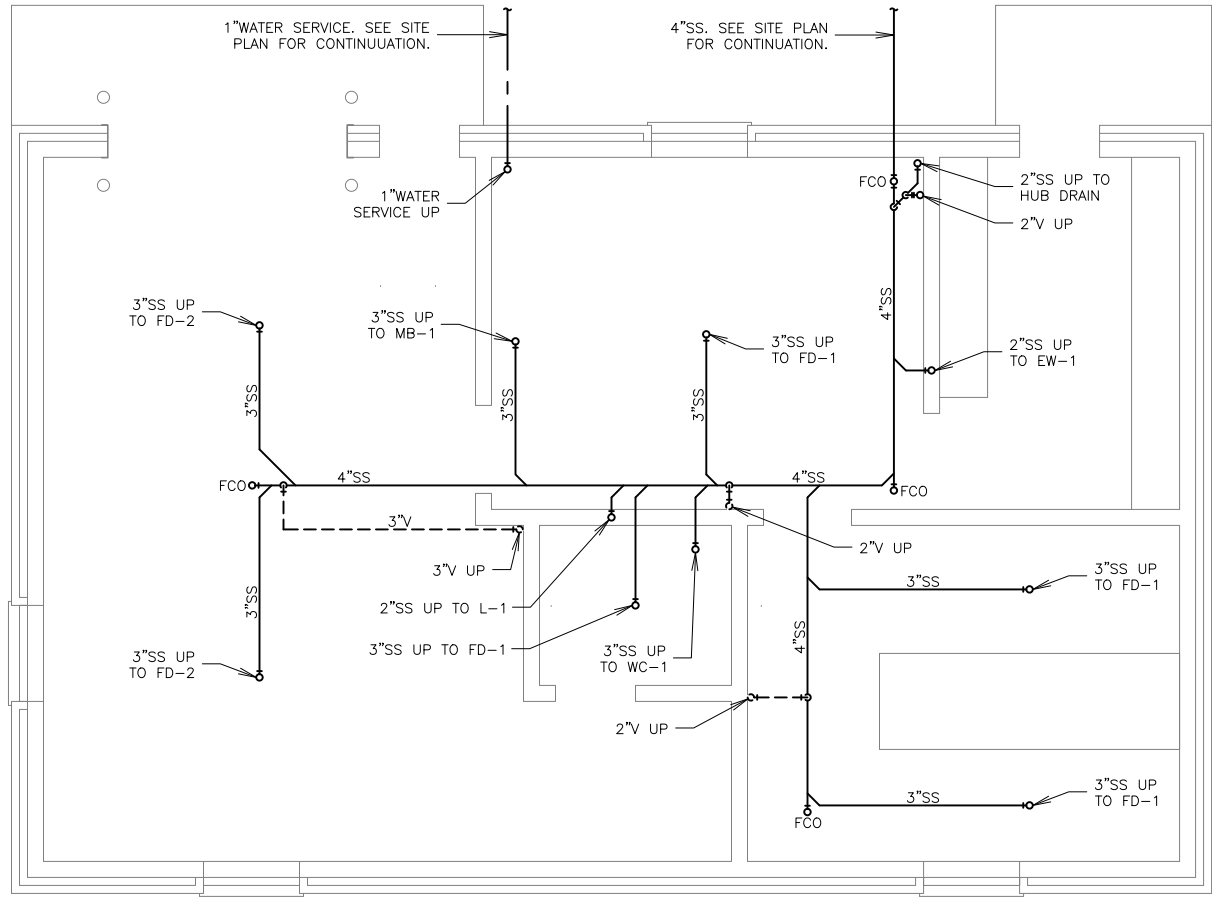
1. THESE DRAWINGS DO NOT ATTEMPT TO SHOW THE COMPLETE DETAILS OF BUILDING CONSTRUCTION, WHICH AFFECT THE MECHANICAL INSTALLATION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REFER TO THE ARCHITECTURAL, CIVIL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS WHICH AFFECT THE PROPER INSTALLATION OF THIS WORK. NO EXTRA PAYMENT WILL BE ALLOWED FOR THE FAILURE TO OBTAIN THIS INFORMATION.
2. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES. RESOLVE ALL CONFLICTS AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT.
3. THESE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF WORK TO BE ACCOMPLISHED AND AS SUCH DO NOT SHOW ALL REQUIRED OFFSETS OF DUCTWORK AND PIPING. MECHANICAL CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT AS TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND MAINTAIN HEADROOM AND PASSAGEWAY.
4. KEY NOTES PERTAIN ONLY TO THE DRAWING THEY ARE LOCATED ON.
5. DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
6. ALL BRANCH DUCTS SHALL MATCH DIFFUSER NECK SIZES UNLESS OTHERWISE NOTED.
7. ALL CONTROL WIRING SHALL BE RUN IN CONDUIT.
8. MAINTAIN 10’ MINIMUM DISTANCE FROM OUTSIDE AIR INTAKES TO ANY EXHAUST OR TOILET VENTS.

HVAC ABBREVIATIONS

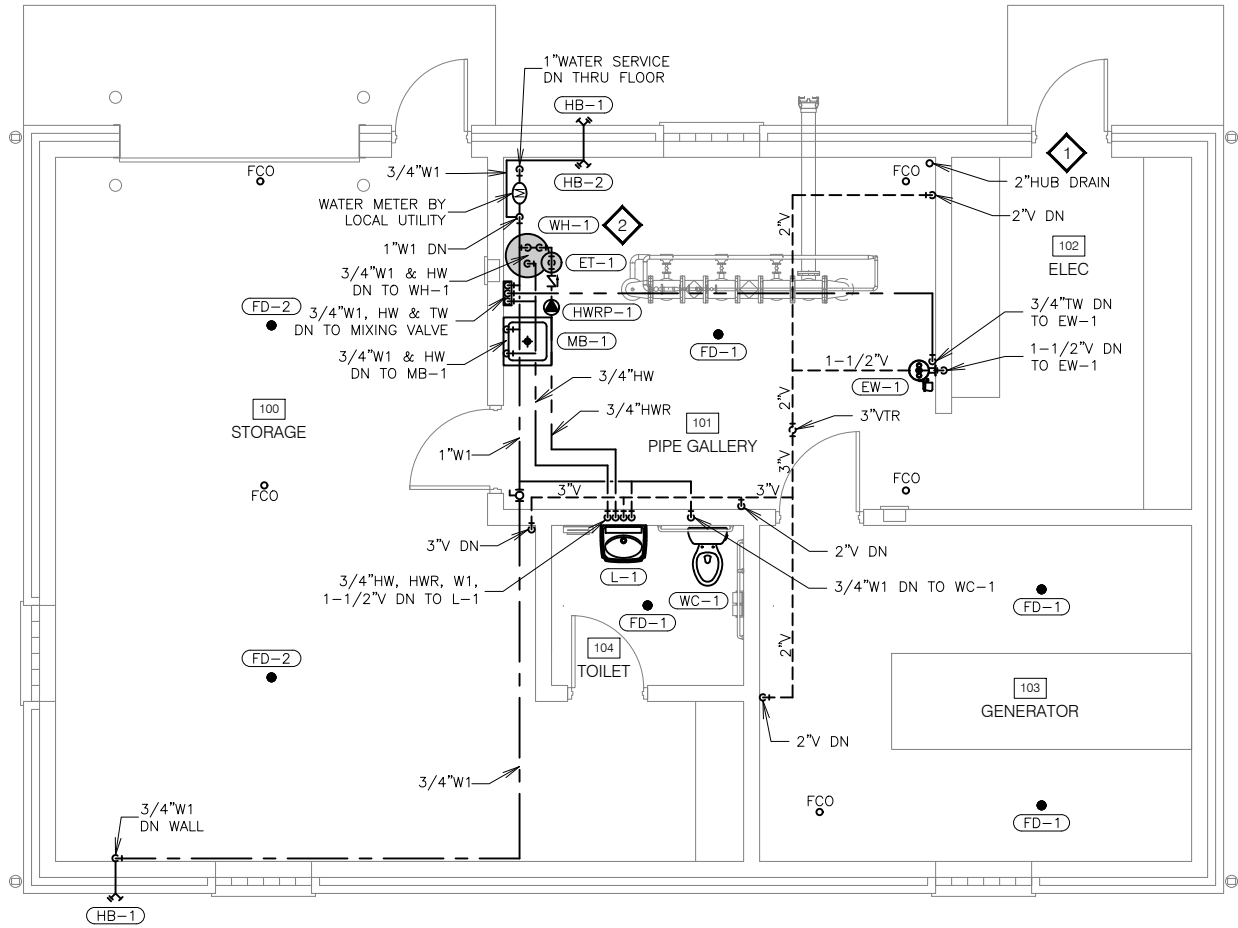
- AFF
- ABOVE FINISHED FLOOR
- AP
- ACCESS PANEL
- BD
- BALANCING DAMPER
- BOD
- BOTTOM OF DUCT
- CAI
- COMBUSTION AIR INTAKE
- CD
- CONDENSATE DRAIN
- CFM
- CUBIC FEET PER MINUTE
- DIA
- DIAMETER
- DN
- DOWN
- EA
- EXHAUST AIR
- EF
- EXHAUST FAN
- MIN
- MINIMUM
- MAX
- MAXIMUM
- OA
- OUTSIDE AIR
- RA
- RETURN AIR
- SA
- SUPPLY AIR
- UG
- UNDERGROUND

HVAC LEGEND

- HVAC EQUIPMENT
- DUCTWORK
- INSULATED DUCTWORK
- THERMOSTAT
- REVERSE-ACTING THERMOSTAT
- DUCT UP
- DUCT DOWN
- FLEX DUCT
- MOTORIZED DAMPER
- BALANCING DAMPER
- ELBOW WITH TURNING VANES
- AIR FLOW INDICATOR
- DOOR UNDER CUT
- BALL VALVE
- PIPE ELBOW/TEE DOWN
- PIPE ELBOW/TEE UP
- CAPPED PIPE END



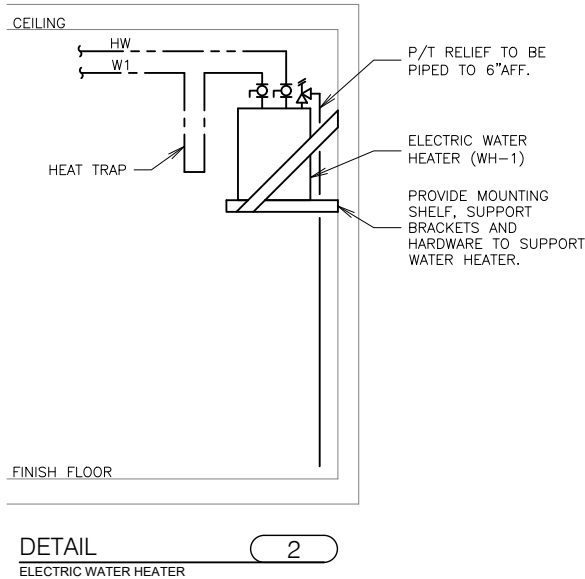
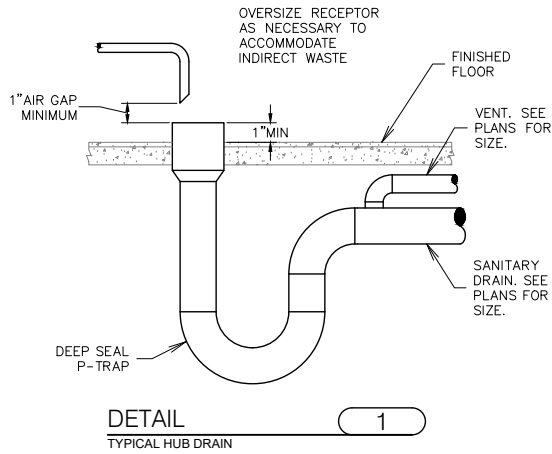
UNDERFLOOR PLUMBING PLAN



PLUMBING PLAN



- KEY NOTES**
- HUB DRAIN FOR AIR CONDITIONER CONDENSATE. COORDINATE EXACT LOCATION WITH HVAC CONTRACTOR. SEE THE TYPICAL HUB DRAIN DETAIL.
 - MOUNT ELECTRIC WATER HEATER HIGH ON WALL. FIELD VERIFY EXACT LOCATION. SEE THE ELECTRIC WATER HEATER DETAIL.



PLUMBING FIXTURE SCHEDULE							
MARK	MANUFACTURER	MODEL	DESCRIPTION	WSFU			DFU
				HW	CW	TOTAL	VALUE
EW-1	GUARDIAN	G1750	WALL MOUNTED EYE/FACE WASH WITH STAINLESS STEEL BOWL, TWO ABS PLASTIC GENTLE SPRAY EYE/FACE WASH HEADS WITH INTERNAL FLOW CONTROL, FILTERS, AND FLIP TOP DUST COVERS, A 1/2" CHROME PLATED BRASS STAY OPEN BALL VALVE ACTIVATED BY A POWDER COATED CAST ALUMINUM FLAG HANDLE AND CAST ALUMINUM WALL BRACKET WITH POWDER COATED FINISH. PROVIDE WITH 1-1/2"CHROME PLATED BRASS TAILPIECE AND P-TRAP WITH CLEANOUT PLUG. MIXING VALVE: GUARDIAN MODEL G6020 THERMOSTATIC MIXING VALVE WITH INTEGRAL STRAINER CHECKSTOPS ON INLETS, ADJUSTABLE SET POINT AND DIAL THERMOMETER IN SURFACE MOUNTED STAINLESS STEEL CABINET.	NA	NA	NA	NA
FD-1	SIOUX CHIEF	863-43NR	ADJUSTABLE 3" FLOOR DRAIN, PVC ADAPTER BODY, ABS TOP HOUSING AND FLASHING COLLAR WITH ROUND NICKEL-BRONZE RING AND STRAINER, PROVIDE 3"SCHEDULE 40 HUB ADAPTER.	N/A	N/A	N/A	3.0
FD-2	JR SMITH	2142	4"FLOOR DRAIN, DUCO CAST IRON BODY AND FLASHING COLLAR WITH 12" ROUND HEAVY DUTY DUCTILE IRON TRACTOR GRATE AND REMOVEABLE SOLID FREE STANDING SEDIMENT BUCKET.	NA	NA	NA	4.0
HB-1	WOODFORD	19	FREEZELESS WALL FAUCET WITH ANTI-SIPHON AND NON-RUPTURE PROTECTION, AUTOMATIC DRAINING, 3/4" MALE HOSE THREAD NOZZLE, BRASS VALVE BODY, ONE PIECE VALVE PLUNGER TO CONTROL BOTH FLOW AND DRAINAGE, HARDENED STAINLESS STEEL OPERATING STEM AND OVAL POWDER COATED DIE CAST ALUMINUM HANDLE.	NA	4.0	4.0	NA
HB-2	WOODFORD	24	NON-FREEZE AREA, ANTI-SIPHON VACUUM BREAKER PROTECTED WALL FAUCET, 3/4"MALE HOSE THREAD NOZZLE, BRASS VALVE BODY, ONE PIECE VALVE PLUNGER, HARDENED STAINLESS STEEL OPERATING STEM AND POLYCARBONATE WHEEL HANDLE. PROVIDE WITH POLISHED CHROME FINISH.	NA	4.0	4.0	NA
L-1	KOHLER	K-2005 KINGSTON	WALL MOUNT VITREOUS CHINA LAVATORY DRILLED FOR CONCEALED ARM CARRIER. FAUCET OPENINGS 4" ON CENTER WITH OVERFLOW. COORDINATE COLOR WITH ARCHITECT. FAUCET: CHICAGO FAUCET 2200-4E2805ABCP, 4" CENTERS, SINGLE METAL LEVER HANDLE, 0.5 GPM. DRAIN: KOHLER K-7131-A-CP, 1-1/4" OFFSET DRAIN WITH GRID STRAINER AND KOHLER K-8999 1-1/4"x1-1/2" CAST BRASS ADJUSTABLE "P" TRAP WITH C.O. PLUG. SUPPLIES AND STOPS: CHICAGO FAUCET 1006 ANGLE VALVE WITH LOOSE KEY HANDLE, 1/2" FEMALE INLET, 1/2"OD x 12" RISER (QUANTITY OF 2). PROVIDE "HANDY-SHIELD MAXX" PIPE INSULATION ON P-TRAP, WATER VALVES AND EXPOSED SUPPLY PIPING.	0.5	0.5	1.0	1.0
MB-1	FIAT	TSB3000	24"x24"x12" PRECAST TERRAZZO MOP BASIN WITH 6"DROP FRONT, STAINLESS STEEL CAPS ON ALL CURBS AND STAINLESS STEEL CAST-IN DRAIN BODY FOR 3"PIPE. FAUCET: CHICAGO FAUCET 835-369CP, VACUUM BREAKER SPOUT, 3/4" MALE HOSE THREAD OUTLET, WALL BRACE AND PAIL HOOK. PROVIDE WATTS 8B VACUUM BREAKER ON FAUCET. HOSE & WALL HOOK: FIAT #832-AA, 30"LONG FLEXIBLE HEAVY DUTY 5/8" RUBBER HOSE WITH 3/4" COUPLUNG ON ONE END AND STAINLESS STEEL WALL BRACKET.	2.0	2.0	3.0	3.0
WC-1	KOHLER	K-3493 HIGHLINE	ADA COMPLIANT, FLOOR MOUNT, VITREOUS CHINA, PRESSURE ASSISTED TANK WATER CLOSET WITH ELONGATED BOWL, 17-1/8" RIM HEIGHT AND 1.6 GALLON FLUSH. COORDINATE COLOR WITH ARCHITECT. SEAT: KOHLER K-4650 SOLID PLASTIC, OPEN FRONT WITH COVER. SUPPLIES AND STOPS: CHICAGO FAUCET 1006 ANGLE VALVE WITH LOOSE KEY HANDLE, 1/2" FEMALE INLET, 1/2"OD x 12" RISER.	N/A	3.0	3.0	6.0
WH-1	AO SMITH	DEL-20	ELECTRIC WATER HEATER WITH 20 GALLON GLASS LINED STORAGE TANK, A SINGLE 2,500 WATT, 208V/1Ø HEATING ELEMENT CONTROLLED BY AN INTEGRALLY MOUNTED THERMOSTAT WITH HIGH TEMPERATURE CUT-OFF SWITCH, TEMPERATURE/PRESSURE RELIEF VALVE AND DRAIN VALVE.	N/A	N/A	N/A	N/A

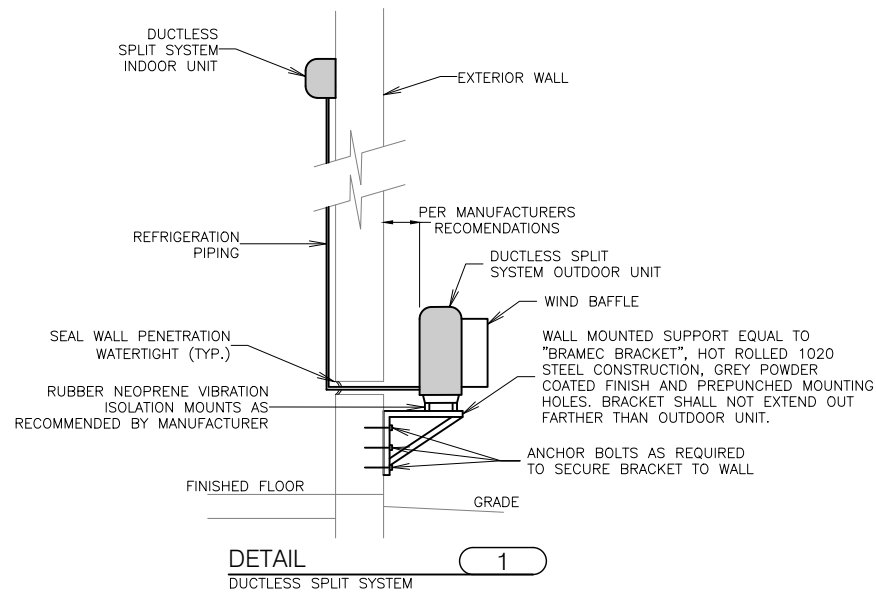
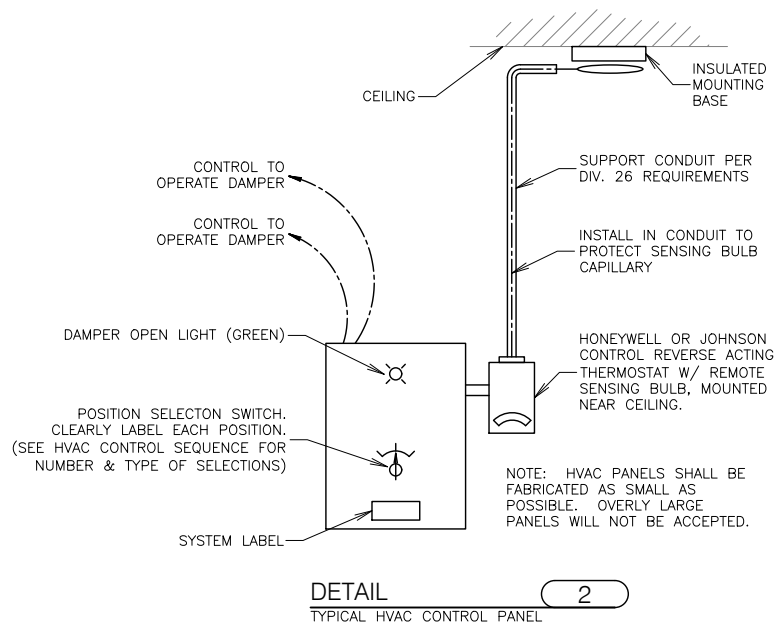
PUMPS											
MARK	MANUFACTURER	MODEL	PUMP TYPE	MATERIAL	GPM	HEAD (FT WC)	MOTOR				REMARKS
							WATTS	RPM	VOLTS	PHASE	
HWRP-1	BELL & GOSSETT	NBF-25	INLINE	BRONZE	2	10	125	2,950	115	1	1, 2
1. PROVIDE WITH PLUG IN POWER CORD. 2. PROVIDE AQUASTAT AND TIMER.											

POTABLE WATER EXPANSION TANK									
MARK	MANUFACTURER	MODEL	CAPACITY		SYSTEM CONNECTION (INCHES)	MAXIMUM OPERATING PRESSURE (PSI)	DIMENSIONS		REMARKS
			TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)			DIAMETER (INCHES)	HEIGHT (INCHES)	
ET-1	BELL & GOSSETT	PTA-12	5	3.3	3/4"	150	12"	14"	1
1. TANK SHALL BE ASME RATED.									

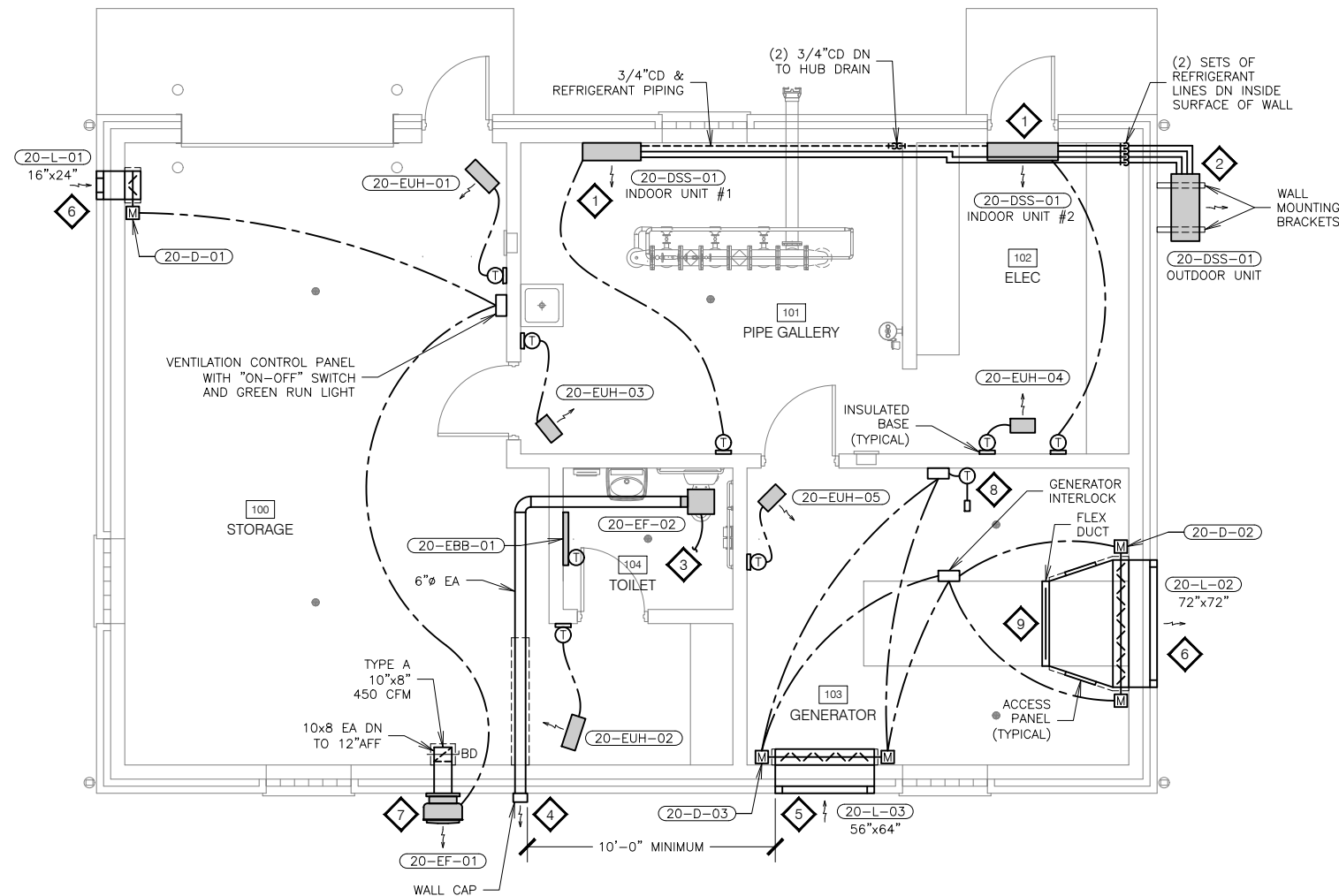
- PLUMBING GENERAL NOTES**
- THESE DRAWINGS DO NOT ATTEMPT TO SHOW THE COMPLETE DETAILS OF BUILDING CONSTRUCTION, WHICH AFFECT THE PLUMBING INSTALLATION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REFER TO THE ARCHITECTURAL, CIVIL, STRUCTURAL, HVAC AND ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS WHICH AFFECT THE PROPER INSTALLATION OF THIS WORK. NO EXTRA PAYMENT WILL BE ALLOWED FOR THE FAILURE TO OBTAIN THIS INFORMATION.
 - CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES. RESOLVE ALL CONFLICTS AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT.
 - THESE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION OF WORK TO BE ACCOMPLISHED AND AS SUCH DO NOT SHOW ALL REQUIRED OFFSETS OF PIPING. PLUMBING CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT AS TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND MAINTAIN HEADROOM AND PASSAGEWAY.
 - ALL NON-POTABLE WATER PIPING AND FIXTURES SHALL CLEARLY BE LABELED AS SUCH.

PLUMBING ABBREVIATIONS	
BFP	BACKFLOW PREVENTER
CO	CLEANOUT
DN	DOWN
ES	EMERGENCY SHOWER
EW	EYE WASH
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
HB	HOSE BIB
HD	HUB DRAIN
LAV	LAVATORY
RD	ROOF DRAIN
SH	SHOWER
SPD	SUMP PUMP DISCHARGE
UG	UNDERGROUND
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
VTR	VENT THRU ROOF

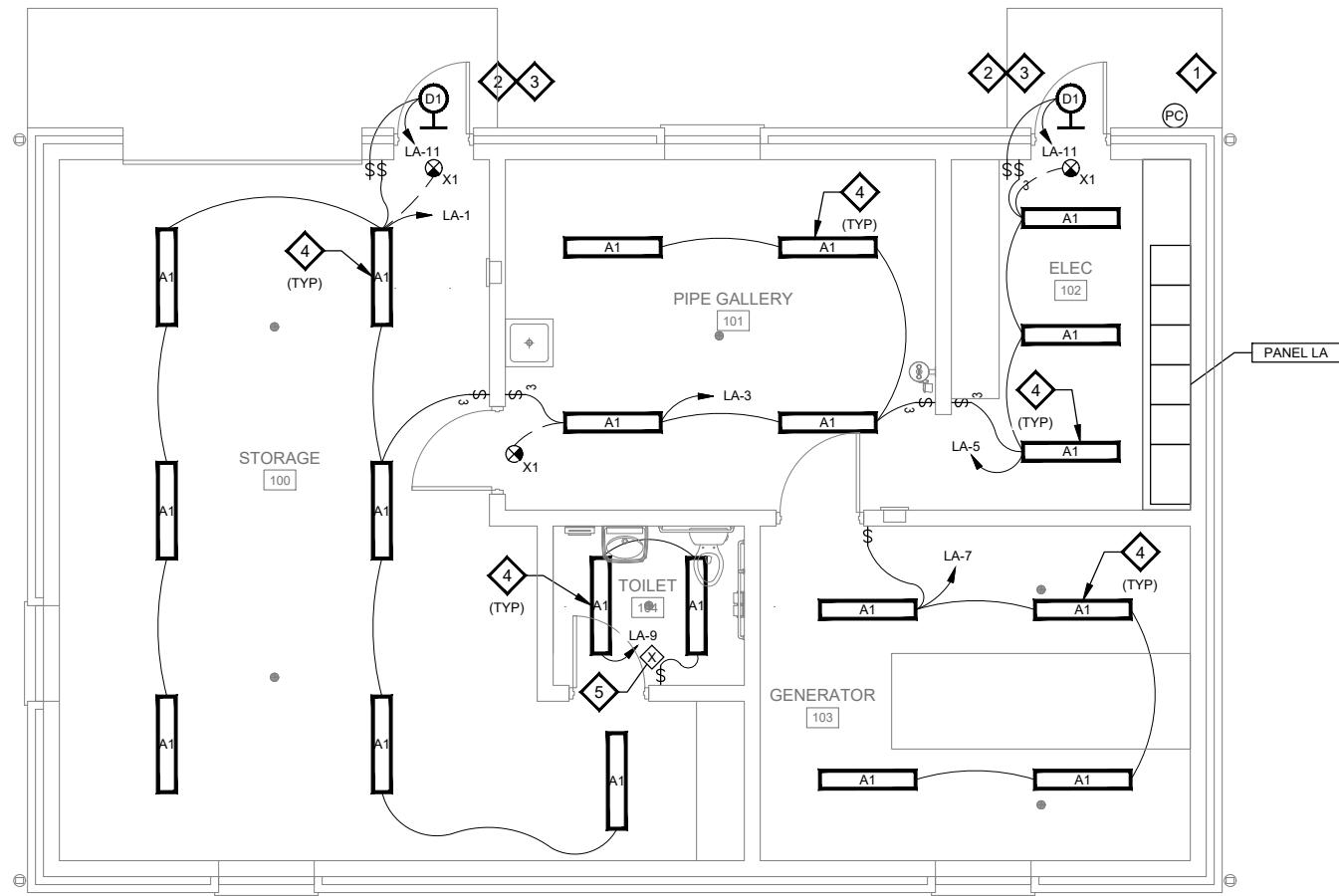
PLUMBING LEGEND	
— — — — —	DOMESTIC COLD WATER (W1)
— · — · — · —	DOMESTIC HOT WATER (HW)
— · — — — · —	DOMESTIC TEMPERED WATER (TW)
— · — — — · —	DOMESTIC HOT WATER RETURN (HWR)
— · — — —	NON-POTABLE WATER (W2)
— — — — —	SANITARY SEWER (SS)
— — — — —	STORM PIPING (ST)
— · — — — · —	VENT (V)
	BALL VALVE
	GATE VALVE
	CHECK VALVE
	CONTROL VALVE
	PRESSURE REGULATOR
	STRAINER
	HOSE BIB
	PIPE ELBOW/TEE DOWN
	PIPE ELBOW/TEE UP
	CAPPED PIPE END



- KEY NOTES**
1. MOUNT 20-DSS-01 (INDOOR UNIT) HIGH ON WALL PER MANUFACTURERS RECOMMENDATIONS. FIELD VERIFY EXACT LOCATION. REFRIGERANT PIPING SHALL DROP VERTICALLY ALONG THE INSIDE SURFACE OF THE WALL AND PENETRATE THE WALL AT THE ELEVATION OF THE OUTDOOR CONDENSING UNIT. DO NOT RUN PIPING DOWN THE OUTSIDE SURFACE OF THE WALL. SEE THE DUCTLESS SPLIT SYSTEM DETAIL ON THIS SHEET.
 2. MOUNT 20-DSS-01 (OUTDOOR UNIT) TO WALL WITH WALL MOUNTING BRACKETS. BOTTOM OF UNIT SHALL BE AT A HEIGHT OF 2'-0" ABOVE GRADE. FIELD VERIFY EXACT LOCATION. SIZE AND INSTALL REFRIGERANT PIPING PER MANUFACTURES RECOMMENDATIONS. SEE THE DUCTLESS SPLIT SYSTEM DETAIL ON THIS SHEET. ALL EXTERIOR REFRIGERANT PIPING SHALL BE PAINTED WITH UV RESISTANT PAINT TO MATCH BUILDING COLOR.
 3. INTERLOCK OPERATION OF TOILET ROOM EXHAUST FAN WITH ROOM LIGHT SWITCH.
 4. INSTALL WALL CAP FOR TOILET EXHAUST AT A MINIMUM HEIGHT OF 8'-0" AFF. FIELD VERIFY EXACT LOCATION.
 5. TOP OF LOUVER SHALL BE AT A HEIGHT OF 8'-0" AFF.
 6. TOP OF LOUVER SHALL BE AT A HEIGHT OF 9'-4" AFF.
 7. TOP OF WALL OPENING SHALL BE AT A HEIGHT OF 8'-8" AFF.
 8. HVAC CONTROL PANEL WITH "ON-OFF-AUTO" SWITCH AND REVERSE-ACTING THERMOSTAT WITH SENSING BULB NEAR THE CEILING FOR ELECTRIC CONTROL DAMPERS. FIELD VERIFY FINAL LOCATION. SEE THE TYPICAL HVAC CONTROL PANEL DETAIL ON THIS SHEET.
 9. PROVIDE DUCTED CONNECTION FROM GENERATOR RADIATOR TO LOUVER (20-L-02). COORDINATE RADIATOR CONNECTION SIZE WITH GENERATOR MANUFACTURER. PROVIDE ACCESS PANELS IN DUCTWORK.



HVAC PLAN



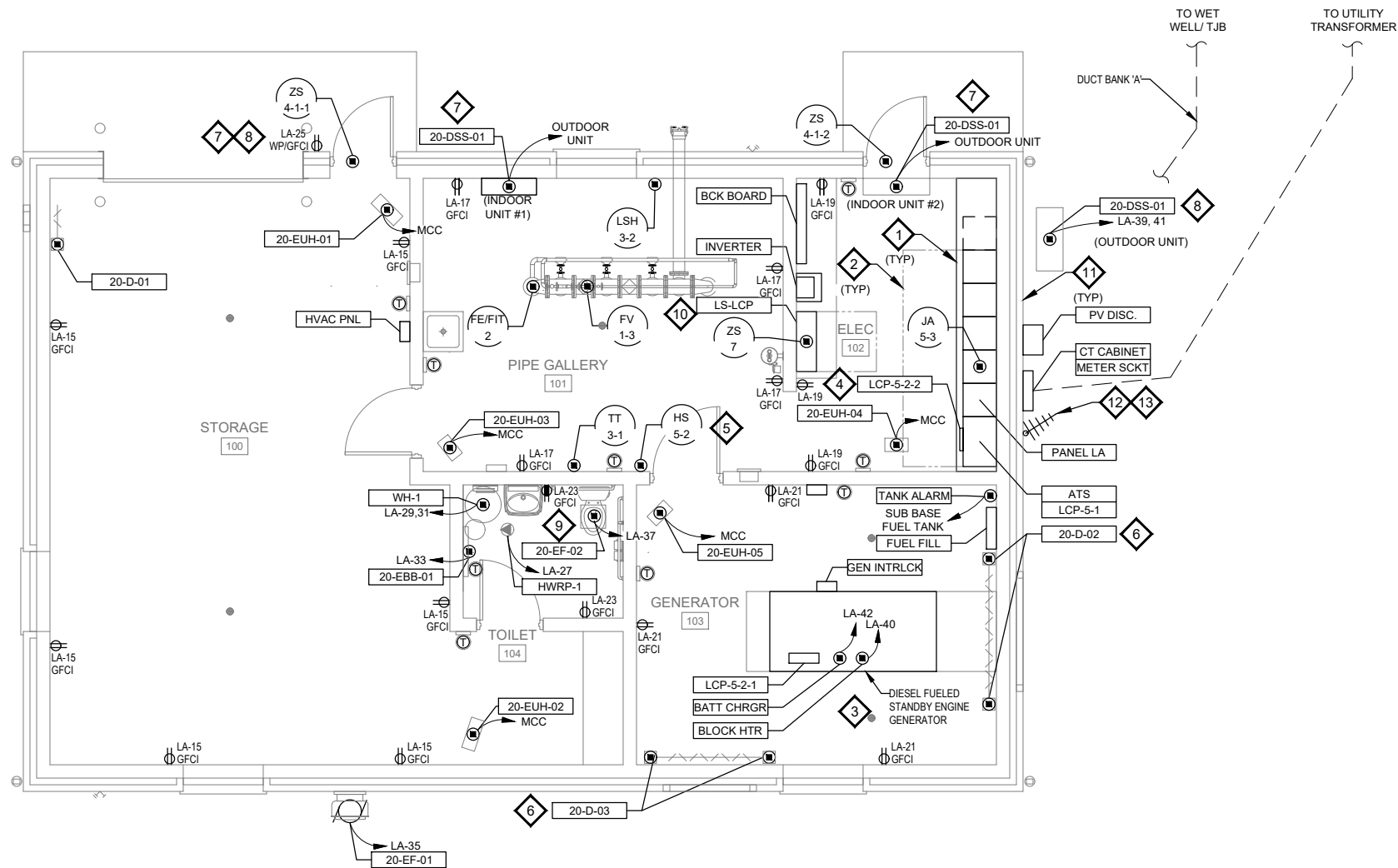
ELECTRICAL LIGHTING PLAN

GENERAL NOTES

1. DO NOT SCALE DRAWINGS TO DETERMINE EXACT LOCATION OF ELECTRICAL EQUIPMENT AND CONNECTIONS.
2. 120V HOMERUN WIRING SHALL BE A MINIMUM OF (2) #12 & #12G IN 3/4" UNLESS OTHERWISE NOTED. SIZE FOR VOLTAGE DROP.
3. SEE ONE-LINE DIAGRAM, PANEL SCHEDULE, AND FIELD DEVICE WIRING SCHEDULE FOR WIRING OF ALL PROCESS AND INSTRUMENTATION.
4. PROVIDE RACEWAY FOR ALL HVAC EQUIPMENT. PROVIDE WIRING FOR LINE VOLTAGE AND ABOVE POWER AND CONTROL WIRING.
5. INSTALL FIELD INSTRUMENTS PER DETAIL REFERENCED IN FIELD DEVICE WIRING SCHEDULE.
6. ALL CONDUIT STUBBED UP THROUGH CONCRETE SHALL BE PVC COATED GRS.
7. SEE SCADA OVERVIEW FOR COMMUNICATIONS CABLING REQUIREMENTS.

KEY NOTES

1. PROVIDE PHOTOCELL, TORK MODEL #2001, OR EQUAL, TO CONTROL EXTERIOR WALL PACK FIXTURES.
2. WIRE EXTERIOR TYPE "D1" FIXTURES TO BE CONTROLLED FROM PHOTOCELL AND INTERNAL MOTION SENSOR WHEN SWITCH IS IN THE ON POSITION. CIRCUIT AS INDICATED.
3. MOUNT TYPE "D1" FIXTURES 12" ABOVE HEIGHT OF DOOR OPENING.
4. MOUNT TYPE "A1" FIXTURES TIGHT TO CEILING AT LOCATIONS SHOWN.
5. PROVIDE VACANCY SENSOR.



ELECTRICAL POWER AND INSTRUMENTATION PLAN

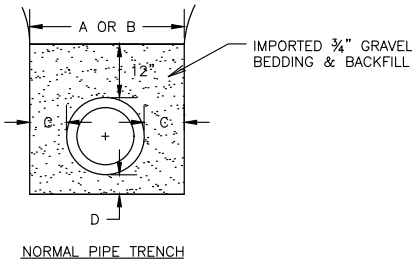
GENERAL NOTES

1. DO NOT SCALE DRAWINGS TO DETERMINE EXACT LOCATION OF ELECTRICAL EQUIPMENT AND CONNECTIONS.
2. 120V HOMERUN WIRING SHALL BE A MINIMUM OF (2) #12 & #12G IN 3/4" UNLESS OTHERWISE NOTED. SIZE FOR VOLTAGE DROP.
3. SEE ONE-LINE DIAGRAM, PANEL SCHEDULE, AND FIELD DEVICE WIRING SCHEDULE FOR WIRING OF ALL PROCESS AND INSTRUMENTATION.
4. PROVIDE RACEWAY FOR ALL HVAC EQUIPMENT. PROVIDE WIRING FOR LINE VOLTAGE AND ABOVE POWER AND CONTROL WIRING.
5. INSTALL FIELD INSTRUMENTS PER DETAIL REFERENCED IN FIELD DEVICE WIRING SCHEDULE.
6. ALL CONDUIT STUBBED UP THROUGH CONCRETE SHALL BE PVC COATED GRS.
7. SEE SCADA OVERVIEW FOR COMMUNICATIONS CABLING REQUIREMENTS.

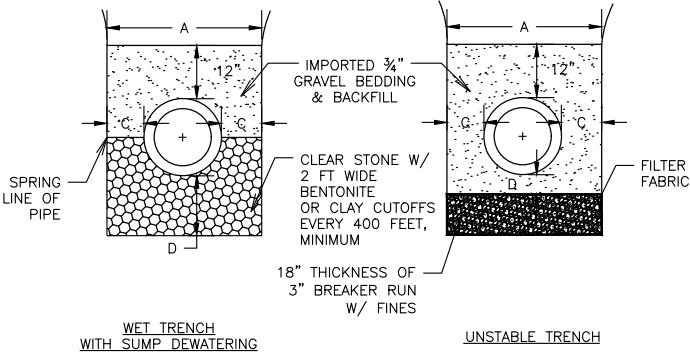
KEY NOTES

1. PROVIDE 4" CONCRETE HOUSEKEEPING PAD FOR MCC. SEE ARCHITECTURAL/STRUCTURAL DETAILS FOR REQUIREMENTS. PAD TO EXTEND 4" IN FRONT OF AND 2" TO THE SIDES OF EQUIPMENT. COORDINATE SIZE WITH EQUIPMENT TO BE SUPPLIED.
2. NEC REQUIRED MINIMUM WORKING SPACE (TYP.)
3. INSTALL GENERATOR PER DETAIL E4-03 ON SHEET 100-E-04 AND PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CONCRETE HOUSEKEEPING PAD PER ARCHITECTURAL/STRUCTURAL REQUIREMENTS.
4. INSTALL GENERATOR REMOTE ANNUNCIATOR ON THE DOOR OF THE AUTOMATIC TRANSFER SWITCH.
5. INSTALL GENERATOR E-STOP SWITCH ON WALL.
6. INTERLOCK DAMPERS WITH GENERATOR OPERATION AND THERMOSTAT CONTROL. REFER TO HVAC PLANS AND ELECTRICAL CONTROLS DESCRIPTIONS.
7. INDOOR UNIT POWERED BY OUTDOOR UNIT.
8. PROVIDE 2-#10 AND 1-#10 GROUND PER MANUFACTURER'S RECOMMENDATIONS FOR POWER CONDUCTORS TO DSS.
9. INTERLOCK OPERATION OF TOILET ROOM EXHAUST FAN WITH ROOM LIGHT SWITCH.
10. MOUNT INTERIOR CONTROL PANEL PER DETAIL E2-01.
11. PROVIDE CONDUIT ENTRANCE PER E2-14.
12. PROVIDE ANTENNA AND INSTALL PER DETAILS E6-02 AND E6-03 IN LOCATION AND AT HEIGHT AS DIRECTED BY SYSTEM INTEGRATOR.
13. MOUNT TELEMETRY RADIO ANTENNAS PER DETAIL E6-02 AND E6-03 AT HEIGHT AS DETERMINED BY SYSTEM INTEGRATOR. PROVIDE 1-1/2" FOR ANTENNA CABLE TO RADIO LOCATION IN LCP.
14. PROVIDE GFCI RECEPTACLES WITH METALLIC WEATHERPROOF WHEN IN USE COVERPLATES.
15. PROVIDE STAINLESS STEEL, WEATHERPROOF-WHEN-IN-USE-PAD-LOCKABLE RECEPTACLE COVER, CALBRITE S6000FVCD OR EQUAL.
16. PROVIDE 2" CONDUIT PENETRATION FROM ROOF MOUNTED PHOTOVOLTAIC SYSTEM TO INVERTER.
17. PROVIDE 2" CONDUIT PENETRATION TO BUILDING EXTERIOR FOR FUTURE PHOTOVOLTAIC SYSTEM.
9. SEE SECTION 01000 FOR DIVISION OF WORK BETWEEN THE ELECTRIC UTILITY AND THE CONTRACTOR.

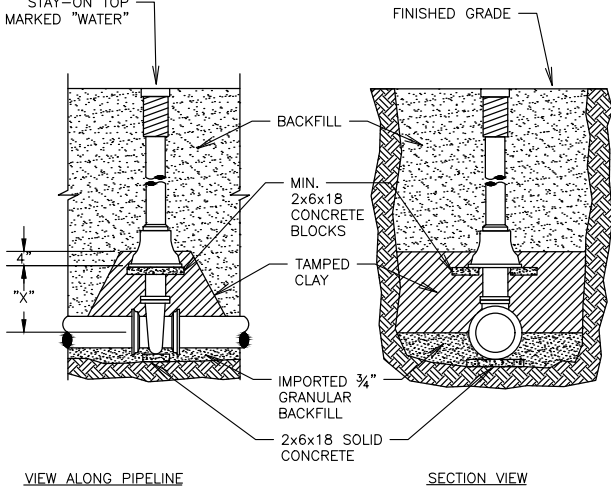
DIMENSIONS:
A: OUTSIDE DIAMETER OF PIPE PLUS 24" MAXIMUM, EXCEPT NEED NOT BE LESS THAN 36". TRENCH SHIELDS NARROWER THAN 4 FEET INSIDE WIDTH WILL NOT BE REQUIRED UNLESS SPECIFICALLY REQUIRED IN THE PROJECT SPECIFICATIONS.
B: FOR ROCK, OUTSIDE DIAMETER OF PIPE PLUS 18" MAXIMUM, EXCEPT NEED NOT BE LESS THAN 36".
C: MINIMUM - 6"
D: MINIMUM 4" BELOW BARREL AND 3" BELOW BELL.



NORMAL PIPE TRENCH



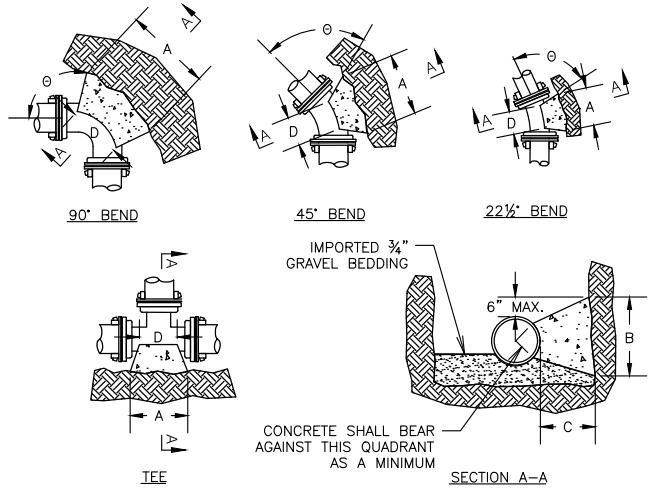
DETAIL 100
TRENCH WIDTH AND BEDDING



PIPE DIA., INCHES	6	8	10	12	14	16
"x" DIMENSION, INCHES	12	13	17	21	25	30

NOTES:
- SOLID CONCRETE BLOCKS MUST BE USED.
- VALVES SHALL BE SECURED WITH RODDING OR MEGALUGS TO THE NEAREST "TEE" FITTING OR TO THE FIRST JOINT CONNECTING A FULL SECTION OF WATER MAIN PIPE. SEE RODDING DETAIL "OFFSET AND RODDING".

DETAIL 101
VALVE BOX SETTING



WOOD BLOCKING MAY NOT BE USED. ONLY SOLID CONCRETE BLOCKS ARE ALLOWED.
DIMENSION "D" SHALL BE AS LARGE AS POSSIBLE, BUT THE CONCRETE SHALL NOT INTERFERE WITH THE MECHANICAL JOINTS.
DIMENSION "C" SHALL BE AT LEAST 6 INCHES, AND LARGE ENOUGH TO MAKE THE "theta" ANGLE EQUAL TO OR GREATER THAN 45 DEGREES WITH THE DIMENSION "A" AS SHOWN ON THE TABLE, OR GREATER, AND WITH DIMENSION "D" AS LARGE AS POSSIBLE.

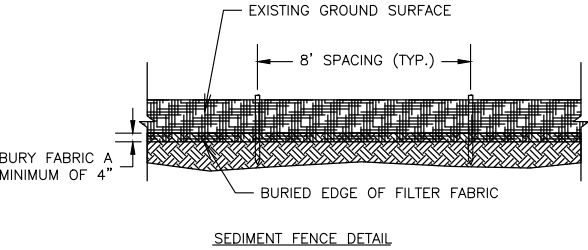
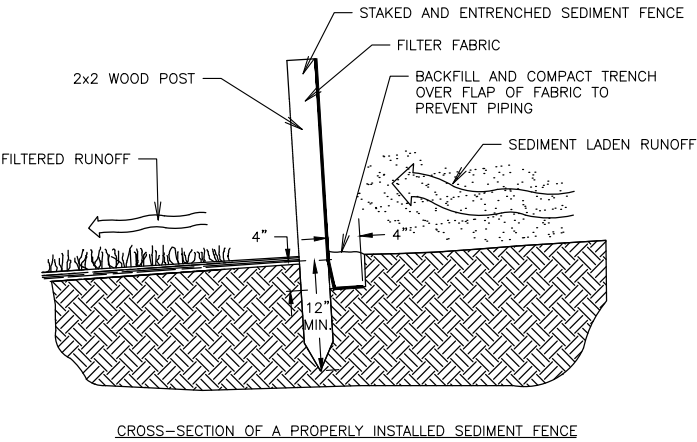
CONCRETE SHALL BE CLASS "CC". SEE SECTION 03301.

PIPE SIZE	BUTTRESS DIMENSIONS							
	TEES		22.5° BEND		45° BEND		90° BEND	
	A	B	A	B	A	B	A	B
6	1'-3"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-2"
8	1'-6"	1'-4"	1'-0"	1'-4"	1'-4"	1'-2"	1'-10"	1'-6"
10/12	2'-3"	2'-0"	1'-4"	1'-8"	1'-10"	1'-10"	2'-8"	2'-3"
14/18	3'-2"	2'-6"	1'-10"	1'-8"	2'-6"	2'-4"	3'-10"	2'-10"
18/24	4'-0"	3'-0"	2'-4"	2'-0"	3'-3"	2'-10"	5'-0"	3'-4"
22/24	5'-3"	3'-4"	2'-10"	2'-4"	4'-0"	3'-3"	6'-4"	3'-10"
30	6'-3"	4'-3"	3'-6"	3'-0"	5'-4"	3'-10"	8'-0"	4'-8"

* = FOR TEE THIS WILL BE THE BRANCH PIPE

DIMENSIONS IN THE TABLE ARE BASED ON A WATER PRESSURE OF 150 PSI AND SOIL RESISTANCE OF 200 LBS/SQ.FT.

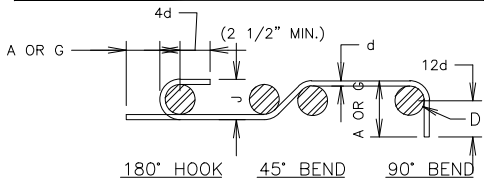
DETAIL 102
BUTTRESS



DETAIL 103
SEDIMENT FENCE

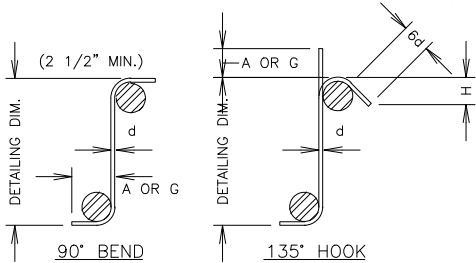
BAR SIZE	D	180°		90°
		A OR G	J	A OR G
#3	2 1/4"	6d	5"	3"
#4	3"		6"	4"
#5	3 3/4"		7"	5"
#6	4 1/2"		8"	6"
#7	5 1/4"		10"	7"
#8	6"	8d	11"	8"
#9	9 1/2"		15"	11 3/4"
			16"	

NOTE: "D" DENOTES FINISHED BAR BEND DIAMETER.

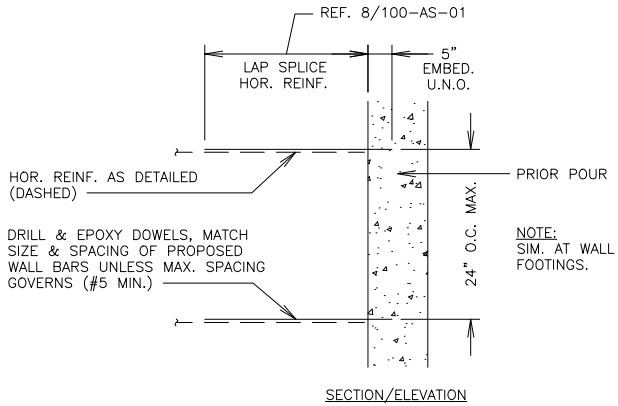


BAR SIZE	D	90° HOOK		135° HOOK
		A OR G	A OR G	H
#3	1 1/2"	4"	4 1/4"	3"
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"

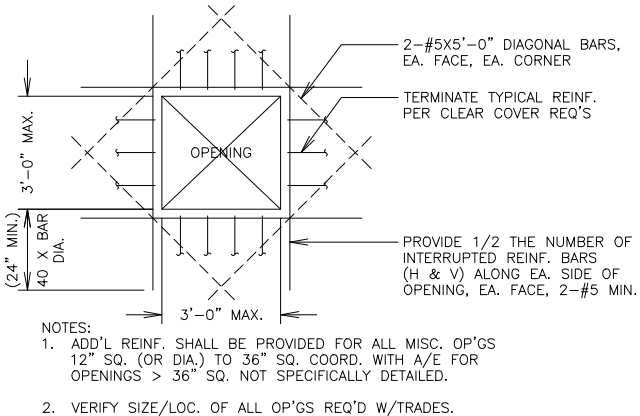
NOTE: "D" DENOTES FINISHED BAR BEND DIAMETER.



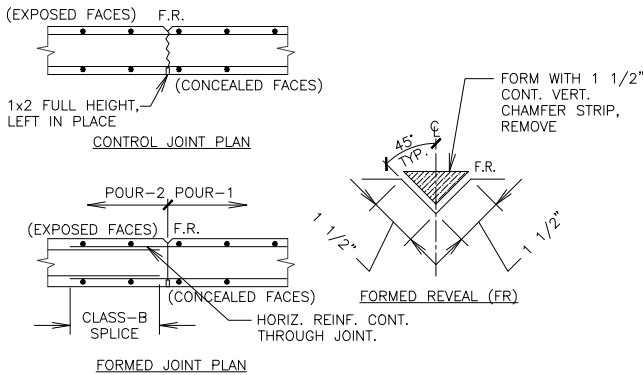
DETAIL 3 NTS
MILD REINFORCING BENDS



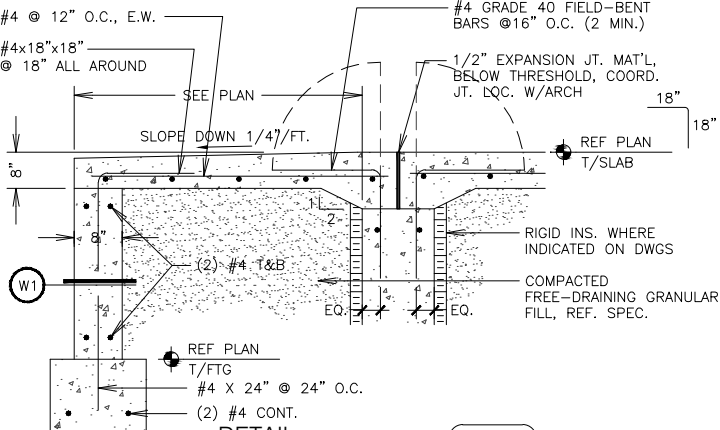
DETAIL 7 NTS
SEQUENCED CONCRETE PLACEMENT



DETAIL 10 NTS
ADD'L REINF. AT CONC. WALL OPENINGS



DETAIL 1 NTS
FOUNDATION WALL CONTROL JOINT



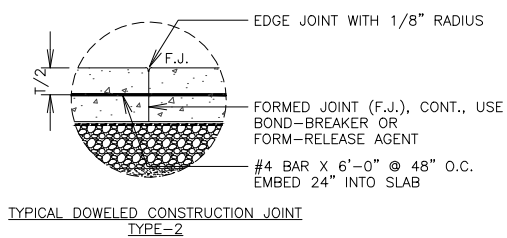
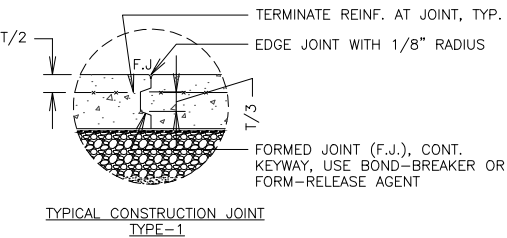
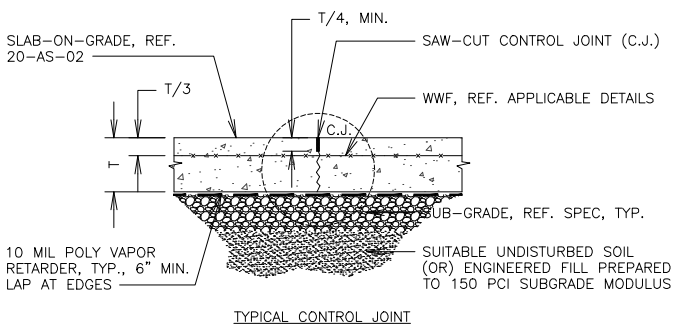
DETAIL 4 NTS
STRUCTURAL CONCRETE STOOP

CLASS-B TENSION LAP SPLICE SCHEDULE

CLASS BAR SIZE	COL. (N/A)		FOUNDATIONS						SLABS					
			f'c = 4 KSI			f'c = 5 KSI			f'c = 4 KSI			f'c = 5 KSI		
	f'c = 4 KSI	f'c = 5 KSI	BOT. BARS	TOP BARS	*BARS	BOT. BARS	TOP BARS	*BARS	BOT. BARS	TOP BARS	*BARS	BOT. BARS	TOP BARS	*BARS
#3	16	16	16	18	24	16	16	21	16	18	24	16	16	21
#4	19	17	19	24	32	17	22	28	19	24	32	17	22	28
#5	23	21	23	30	40	21	27	35	23	30	40	21	27	35
#6	28	25	28	36	47	25	33	42	28	36	47	25	33	42
#7	33	29	33	42	55	29	38	50	33	43	57	30	39	51
#8	39	35	39	51	67	35	46	60	44	57	75	39	51	67
#9	50	44	50	64	84	44	58	75	56	72	94	50	65	84
#10	88	79	63	82	107	56	73	96	70	92	120	63	82	107
#11	108	97	77	100	131	69	90	117	86	112	147	77	101	131

NOTES:

1. * DENOTES EPOXY-COATED REINFORCING, AS APPLICABLE WHERE INDICATED ON DWGS ONLY.

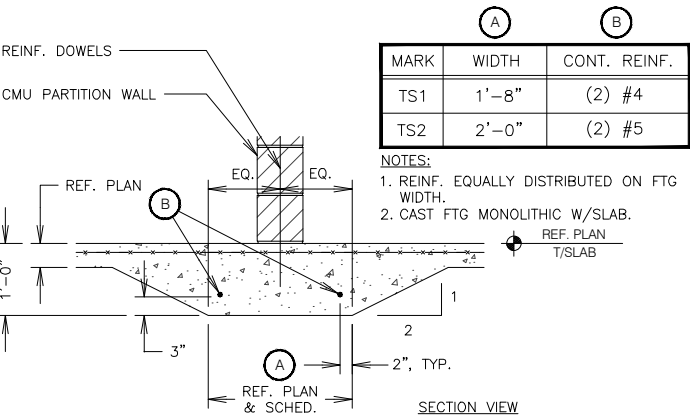


DETAIL 5 NTS
SLAB-ON-GRADE JOINTS

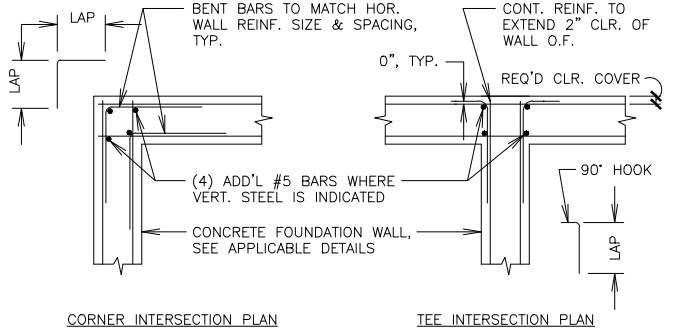
CONCRETE REINFORCING SHALL HAVE THE FOLLOWING MINIMUM COVER, TYPICAL UNLESS DETAILED OTHERWISE:

- CONCRETE IN CONTACT AND/OR PLACED AGAINST EARTH (3")
- CONCRETE EXPOSED TO WEATHER: #5 & SMALLER (2")
- CONCRETE WITH INTERIOR EXPOSURE (1 1/2")

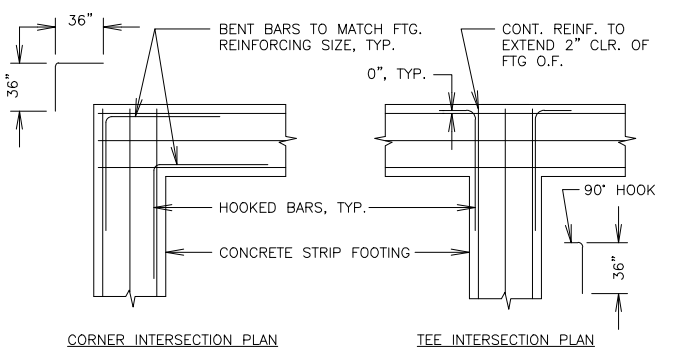
DETAIL 8 NTS
REINF. LAP SPLICE & PROTECTIVE COVER



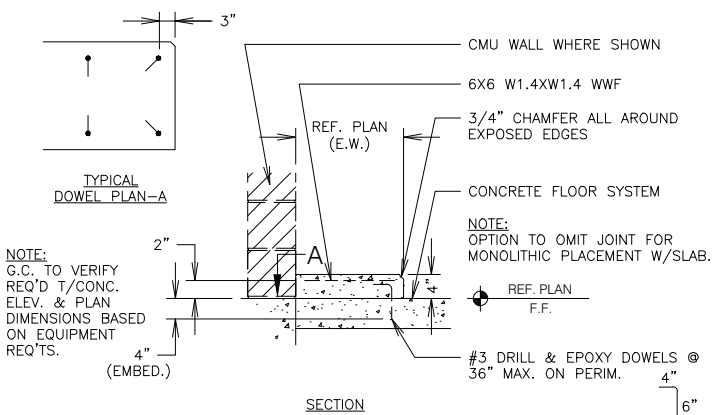
DETAIL 12 NTS
THICKENED SLAB FOOTING



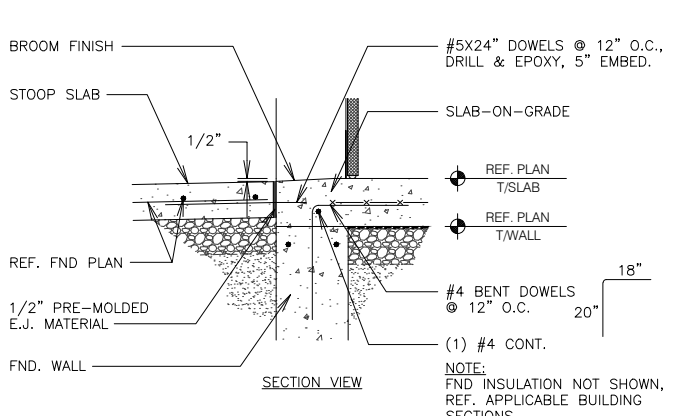
DETAIL 2 NTS
CONC. WALL INTERSECTION REINFORCING (TYP. UNLESS NOTED OTHERWISE)



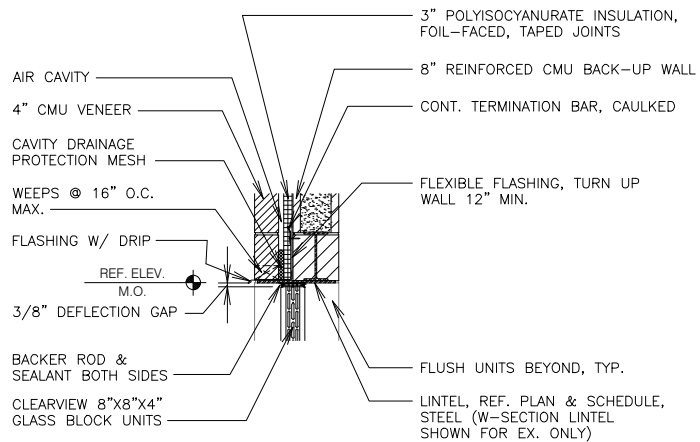
DETAIL 6 NTS
FOOTING INTERSECTION REINFORCING



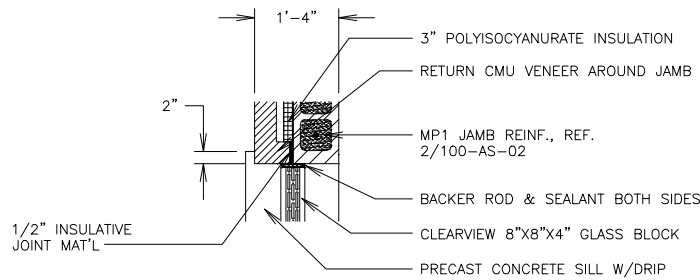
DETAIL 9 NTS
NON-ISOLATED EQUIPMENT PAD



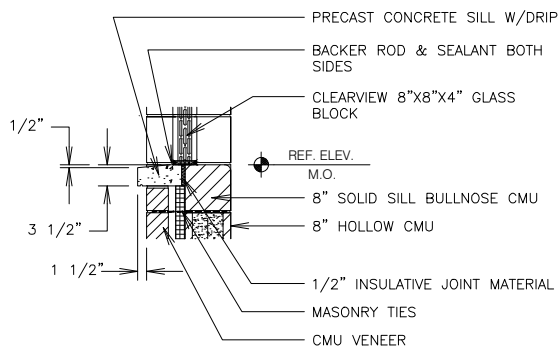
DETAIL 13 NTS
THRESHOLD AT OVERHEAD DOOR



WINDOW HEAD

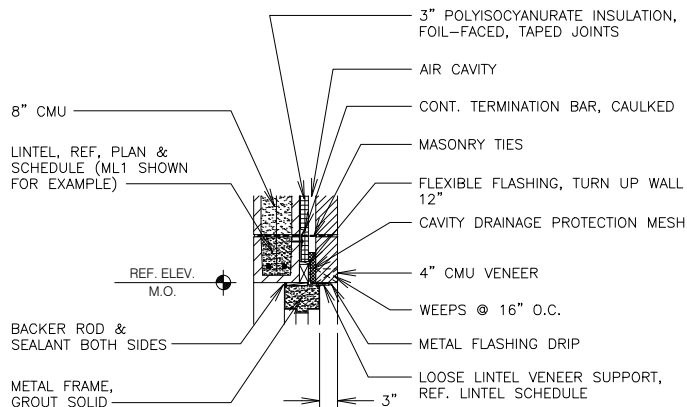


WINDOW JAMB

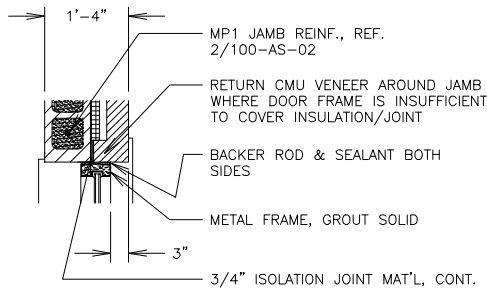


WINDOW SILL

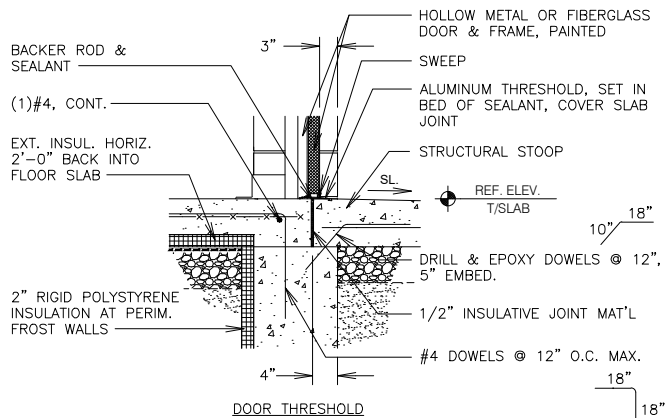
DETAIL 4 NTS
WINDOW HEAD, JAMB, & SILL



DOOR HEAD

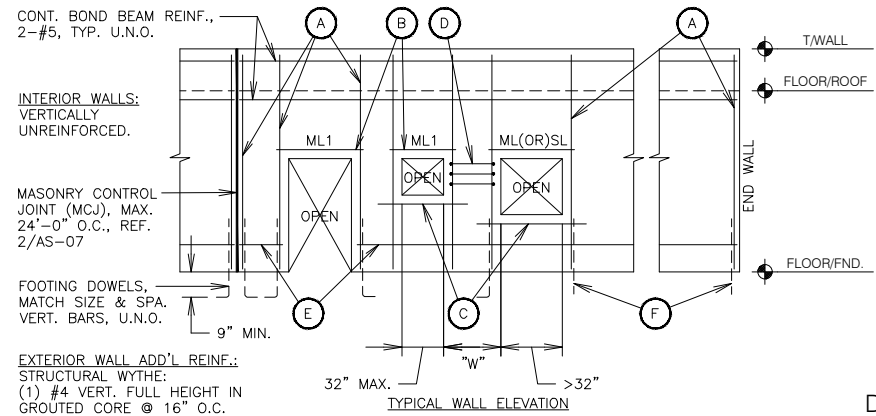


DOOR JAMB



DOOR THRESHOLD

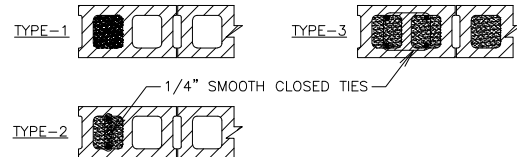
DETAIL 5 NTS
DOOR HEAD, JAMB, & THRESHOLD



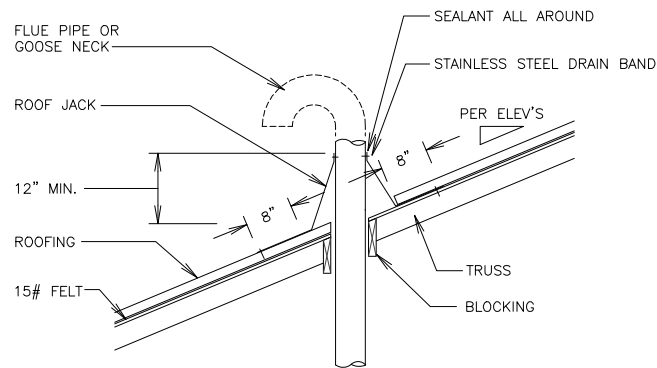
DETAIL 1 NTS
TYPICAL CMU WALL REINFORCING

MASONRY PIER SCHEDULE					
MARK	TYPE	VERT. REINF.	HORIZ. TIES	REMARKS	
MP1	1	1-#5	N/A	-	
MP2	2	2-#5	8" O.C.	-	
MP3	3	4-#5	8" O.C.	-	
-	-	-	-	-	

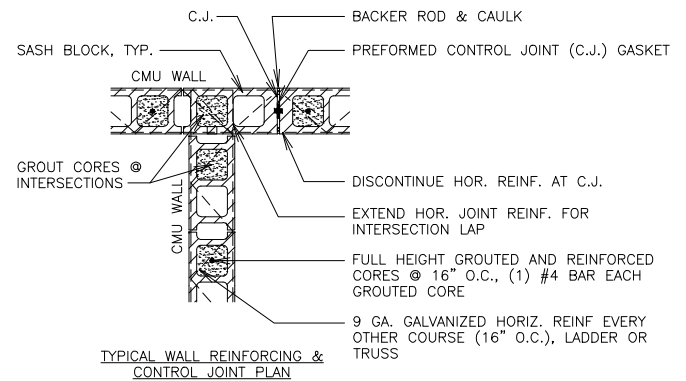
NOTES:
1. GROUT REINFORCED CORES SOLID, FOUNDATION DOWELS REQ'D AT EA. VERTICAL BAR.



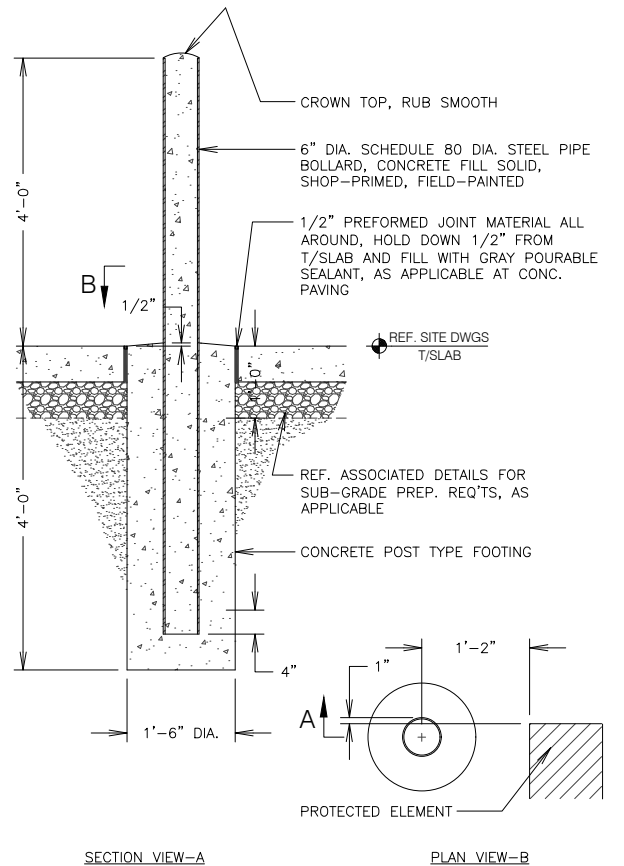
DETAIL 2 NTS
CMU PIER SCHEDULE



DETAIL 6 NTS
VENT ROOF PENETRATION

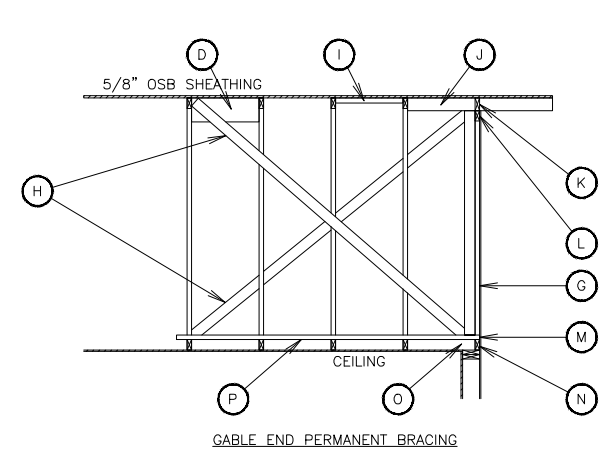


DETAIL 3 NTS
CMU WALL DETAILS

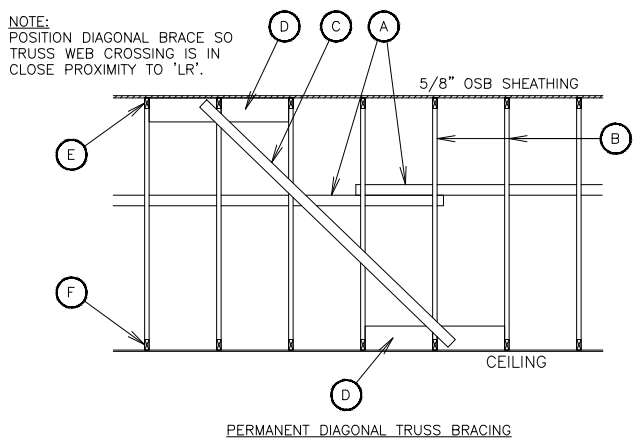


SECTION VIEW-A
PLAN VIEW-B

DETAIL 8 NTS
PIPE BOLLARD



GABLE END PERMANENT BRACING

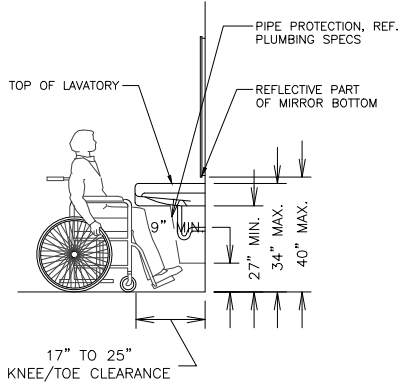
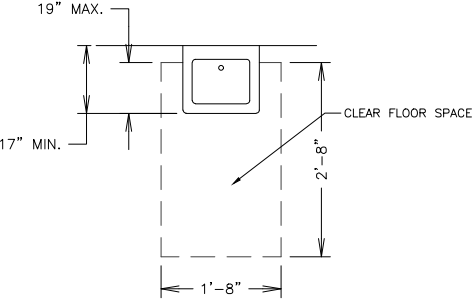
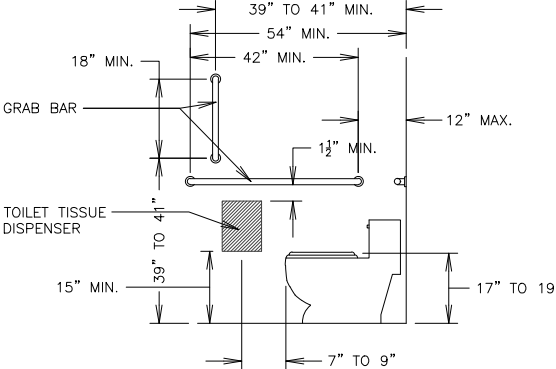
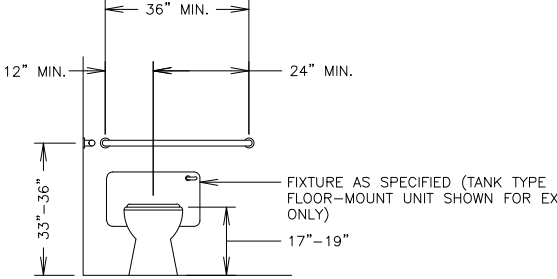
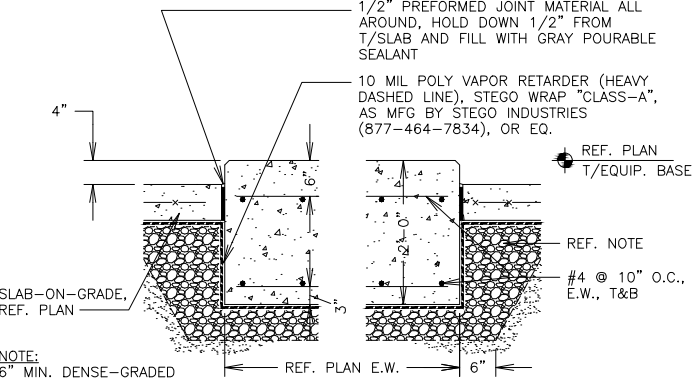


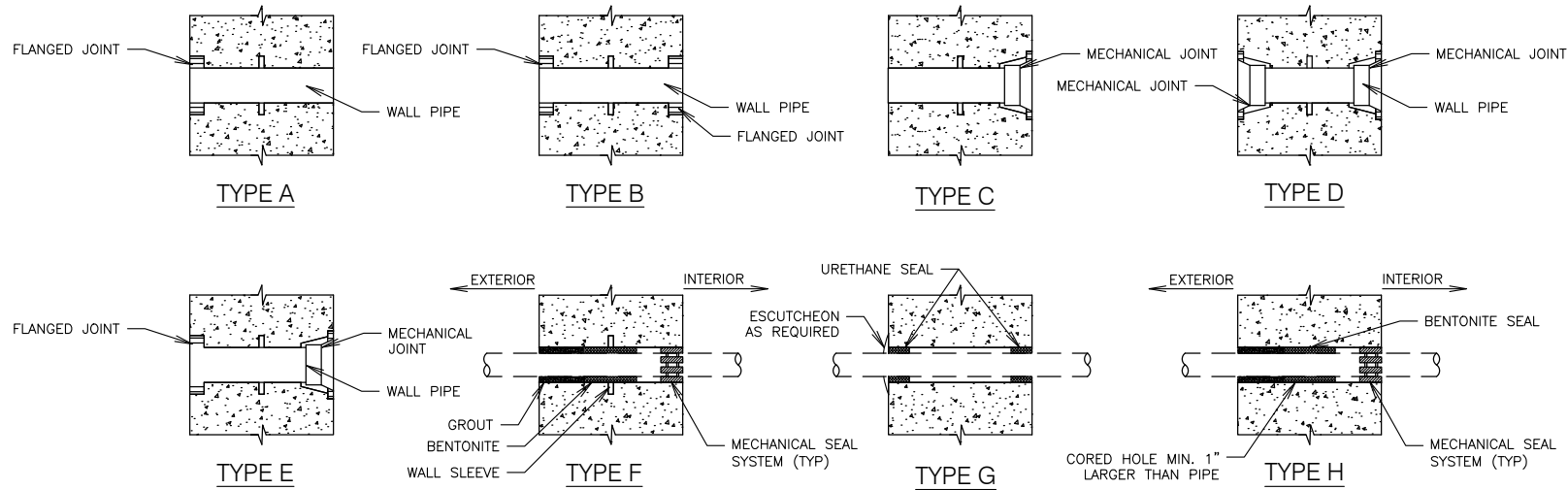
PERMANENT DIAGONAL TRUSS BRACING

KEY NOTES

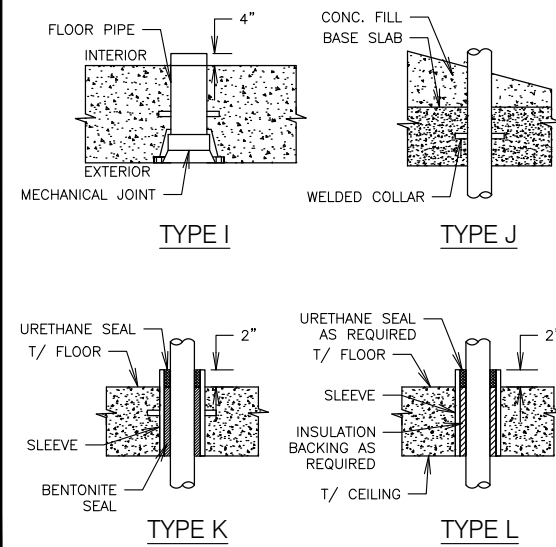
- 2X4 MIN. STRESS-GRADED LUMBER CONT. LATERAL RESTRAINT (LR), MIN. (1) TRUSS OVERLAP, ATTACH TO EA. TRUSS W/(2) 10d NAILS
- 2X WOOD TRUSSES @ 24" O.C.
- 2X4 MIN. STRESS-GRADED LUMBER DIAGONAL BRACE @ 16'-0" O.C., ATTACH TO EACH TRUSS W/(2) 10d NAILS
- BLOCKING EITHER SIDE DIAGONAL LOCATION
- TRUSS TOP CHORD
- TRUSS BOTTOM CHORD
- GABLE END TRUSS
- 2X4 NO.2 SPF X-BRACING AT MIDSPAN AND AT 48" O.C., EXTEND BACK 8'-0" FROM GABLE, ATTACH TO GABLE AND TRUSS VERTICALS W/(3) 16d NAILS
- 2X4 SPF OUTRIGGER AT 24" O.C., CLIP TO GABLE TOP CHORD W/SIMPSON HB, (2) 8d NAILS
- BLOCK BETWEEN OUTLOOKERS, FASTEN TO GABLE TOP CHORD W/10d TOENAILS AT 8" O.C.
- DROPPED GABLE END TRUSS TOP CHORD
- CLIP END OF LATERAL RESTRAINT TO GABLE BOTTOM CHORD W/SIMPSON H2.5 W/(8) 8d
- GABLE BOTTOM CHORD, FASTEN TO TOP PLATE W/10d TOENAILS AT 8" O.C.
- STRAP GABLE TRUSS TO STUD WALL W/SIMPSON MSTA12 W/(8) 10d, SPACING 48" O.C., AS APPLICABLE
- 2X4X8' SPF LATERAL RESTRAINT AT 48" O.C., FASTEN TO EACH TRUSS W/(2) 16d COMMON NAILS

DETAIL 7 NTS
WOOD TRUSS PERMANENT BRACING

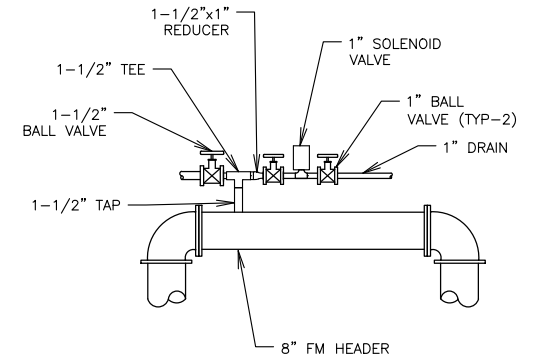
 <u>SIDE ELEVATION VIEW</u>	 <u>PLAN VIEW</u> DETAIL 1 NTS ACCESSIBILITY AT LAVATORY	 <u>SIDE ELEVATION VIEW</u>	 <u>FRONT ELEVATION VIEW</u> DETAIL 2 NTS ACCESSIBILITY AT WATER CLOSET	STANDARD DETAILS
 <u>SECTION VIEW</u> DETAIL 3 NTS ISOLATED EQUIPMENT BASE				



DETAIL 414
WALL PIPING PENETRATION (SEE SPECS FOR USE)



DETAIL 415
BASE/FLOOR PIPING PENETRATION (SEE SPECS FOR USE)



DETAIL 416
AIRE RELEASE SOLENOID VALVE

FANS														
MARK	MANUFACTURER	MODEL	SERVICE	LOCATION	CONSTRUCTION			AIR			ELECTRICAL			REMARKS
					TYPE	FAN MATERIAL	DRIVE	CFM	ESP (IN WC)	RPM	HP	BHP	VOLTS / PH	
20-EF-01	GREENHECK	CUE-100-VG	EXHAUST	STORAGE	UPBLAST	ALUMINUM	DIRECT	450	0.25	849	1/4	.03	120 / 1Ø	1.1
20-EF-02	GREENHECK	SP-A50-90-VG	EXHAUST	TOILET	CEILING	ALUMINUM	DIRECT	75	0.25	887	6 W	-	120 / 1Ø	1.2
1. PROVIDE DIAL ON FAN. 2. PROVIDE GRAVITY BACKDRAFT DAMPER.														

DUCTLESS SPLIT SYSTEMS																		
MARK	MANUFACTURER	MODEL		TYPE	LOCATION		COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	AIRFLOW (CFM)	ELECTRICAL UNIT				PHYSICAL DATA				REMARKS
		INDOOR UNIT	OUTDOOR UNIT		NAME	NO.				AMPS	MCA	MOPP	VOLT /PH	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LBS)	
20-DSS-01	LG	LSN120HSV5	-	HIGH WALL	PIPE	101	12,000	13,600	230	0.4	-	-	208	33	8	12	20	
		LMN249HVT	-	HIGH WALL	ELEC	102	24,000	25,600	450	0.6	-	-	208	40	9	14	30	
		-	LMU363HV	MULTI-ZONE	OUTSIDE	-	36,000	39,200	-	19	18.4	25	208	38	16	33	140	

LOUVER (L)													
MARK	MANUFACTURER	MODEL	SERVICE	CFM	CONSTRUCTION		SIZE			MAX FREE AREA VELOCITY (FPM)	MAX PRESSURE DROP (IN WC)	FINISH	REMARKS
					TYPE	MATERIAL	WIDTH	HEIGHT	DEPTH				
20-L-01	GREENHECK	ESK-402	20-EF-01	450	0.03	405	16	24	4	675	0.08	70% KYNAR	1.2
20-L-02	GREENHECK	ESK-402	GENERATOR	8100	0.01	210	72	136	4	675	0.08	70% KYNAR	1.2
20-L-03	GREENHECK	ESK-402	GENERATOR	8100	0.06	615	56	64	4	675	0.08	70% KYNAR	1.2
1. BAKED ENAMEL FINISH 2. PROVIDE INSECT SCREEN													

ELECTRIC UNIT HEATERS										
MARK	MANUFACTURER	MODEL	MOUNTING	HEATING CAPACITY (MBH)	CFM	MOTOR		UNIT ELECTRICAL		REMARKS
						HP	RPM	AMPS	VOLTS / PH	
20-EUH-01	QMARK	MUH-07-4	HORIZONTAL	7.5	650	1/30	1,600	9.0	480 / 3Ø	1.2
20-EUH-02	QMARK	MUH-07-4	HORIZONTAL	7.5	650	1/30	1,600	9.0	480 / 3Ø	1.2
20-EUH-03	QMARK	MUH-03-41	HORIZONTAL	3	350	1/100	1,600	3.6	480 / 3Ø	1.2
20-EUH-04	QMARK	MUH-03-41	HORIZONTAL	3	350	1/100	1,600	3.6	480 / 3Ø	1.2
20-EUH-05	QMARK	MUH-05-41	HORIZONTAL	5	350	1/100	1,600	6.0	480 / 3Ø	1.2
1. PROVIDE OSHA FAN GUARD 2. PROVIDE REMOTE THERMOSTAT										

ELECTRIC BASEBOARD							
MARK	MANUFACTURER	MODEL	KW	ELECTRICAL		WEIGHT	REMARKS
				AMPS	VOLTS / PH		
20-EBB-01	QMARK	QMKC25126	0.5	4.2	120 / 1Ø	8	

2023 LIFT STATION 2 IMPROVEMENTS

HVAC SCHEDULES

Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.:
MC 198

DRAWING FILE:
100-H-01

DRAWN BY:
B.M.C.

CHECKED BY:
M.R.R.

DATE:
08-25-23

REVISIONS:

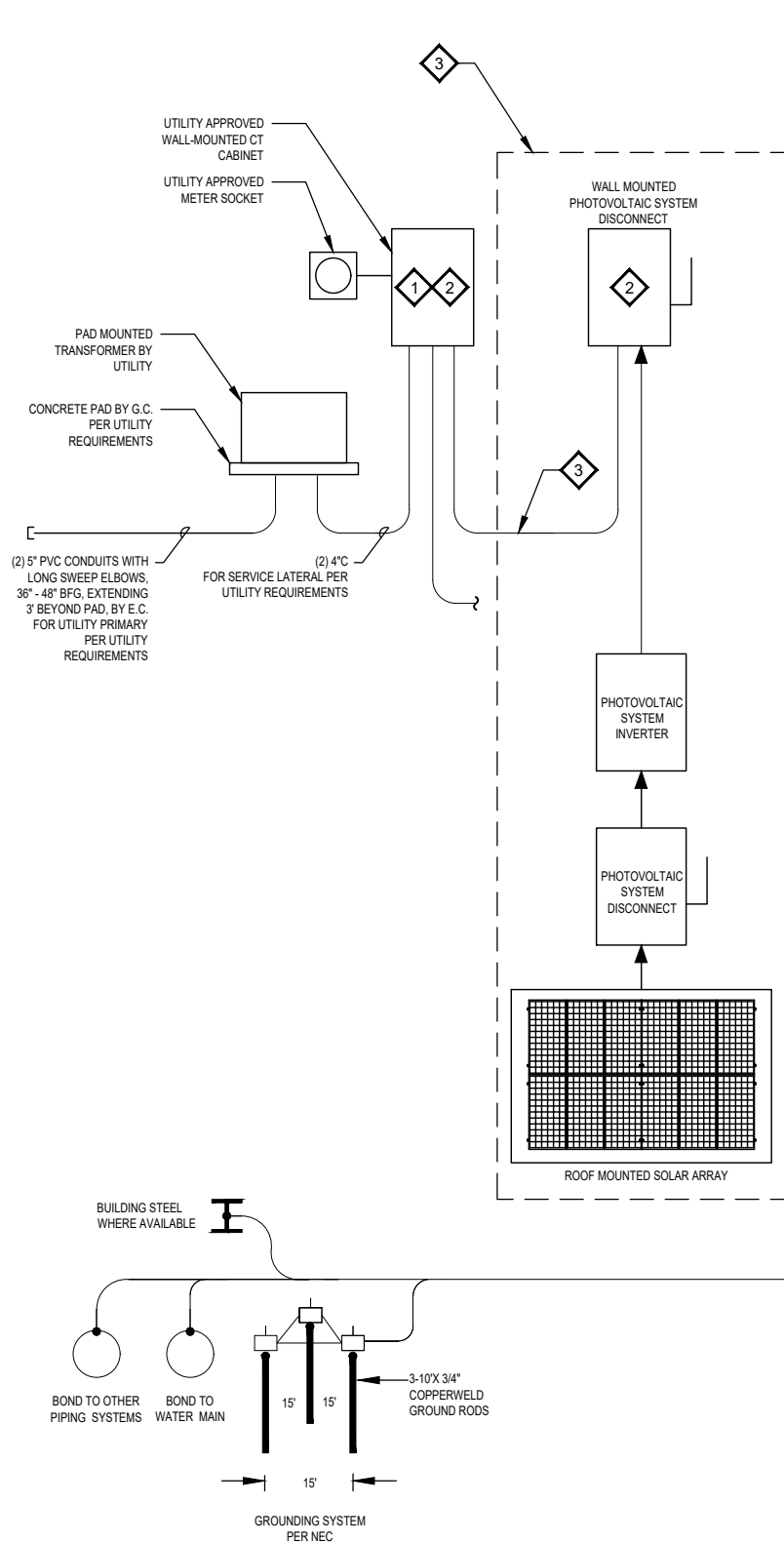
SCALE:

0124

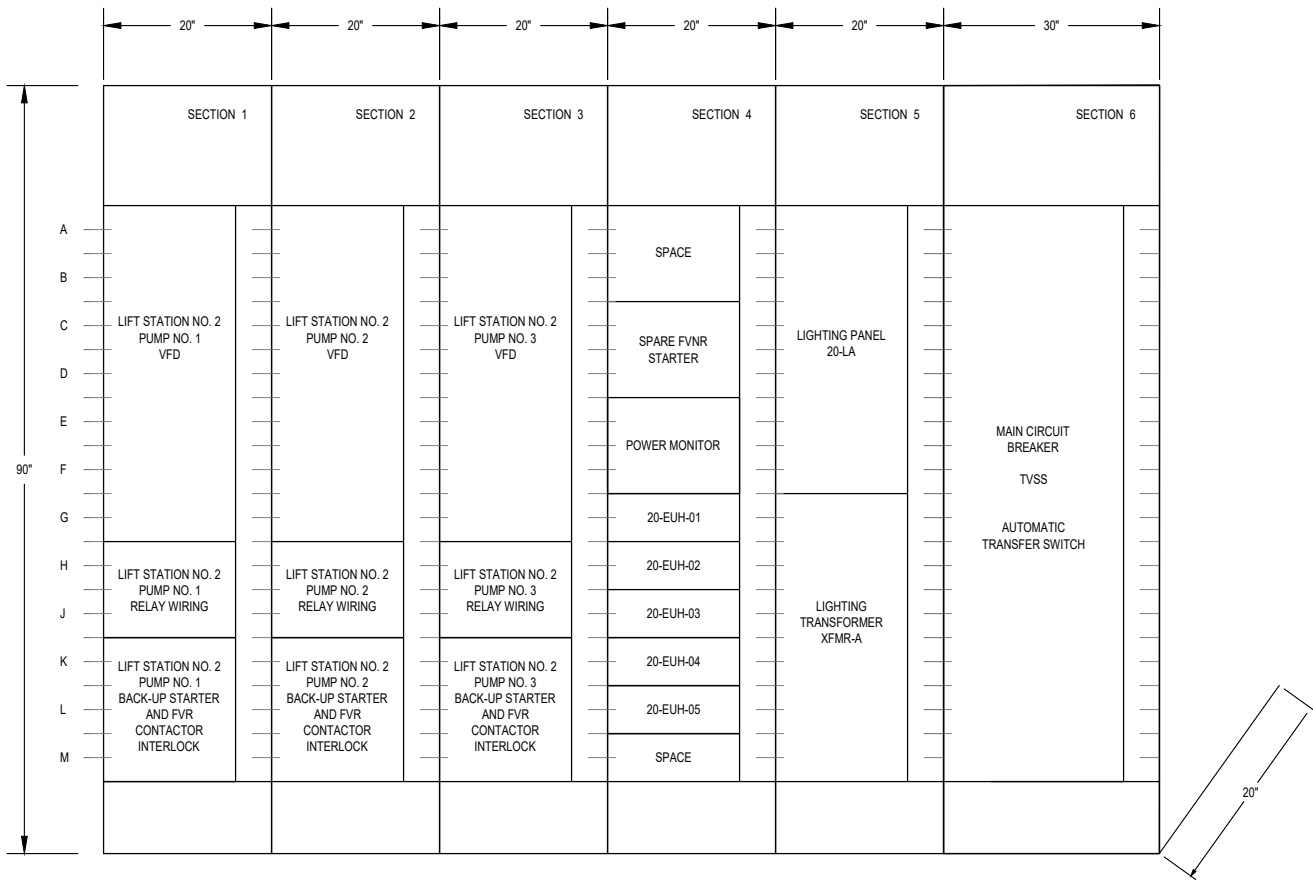
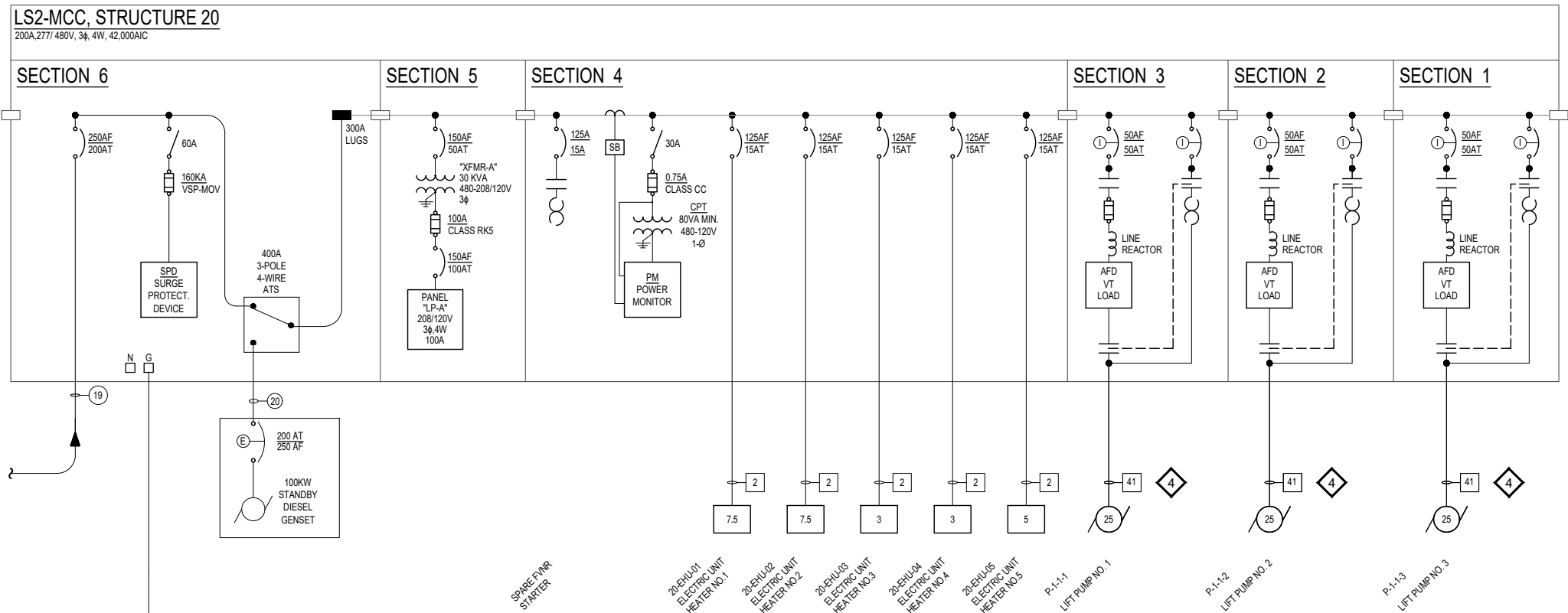
FEET

SHEET:

100-H-01



- KEY NOTES**
1. PROVIDE CT CABINET AS SPECIFIED AND PER UTILITY REQUIREMENTS. INSTALL CTS PROVIDED BY UTILITY. PROVIDE LOAD SIDE LUGS SUFFICIENT TO ACCOMMODATE FUTURE PHOTOVOLTAIC FEEDER IN ADDITION TO UTILITY FEEDER.
 2. PROVIDE PLACARDING TO INDICATE THAT EQUIPMENT IS FED BY TWO POWER SOURCES, AND THE LOCATIONS OF THE DISCONNECTS.
 3. PHOTOVOLTAIC SYSTEM FURNISHED AND INSTALLED BY PHOTOVOLTAIC SYSTEM SUPPLIER.
 4. PROVIDE CONDUIT SIZED FOR FEEDER CIRCUIT "42," MINIMUM 1-1/4", TO ACCOMMODATE LARGER PUMP SIZE IN FUTURE.



LS2-MCC
MOTOR CONTROL CENTER FRONT ELEVATION
NTS

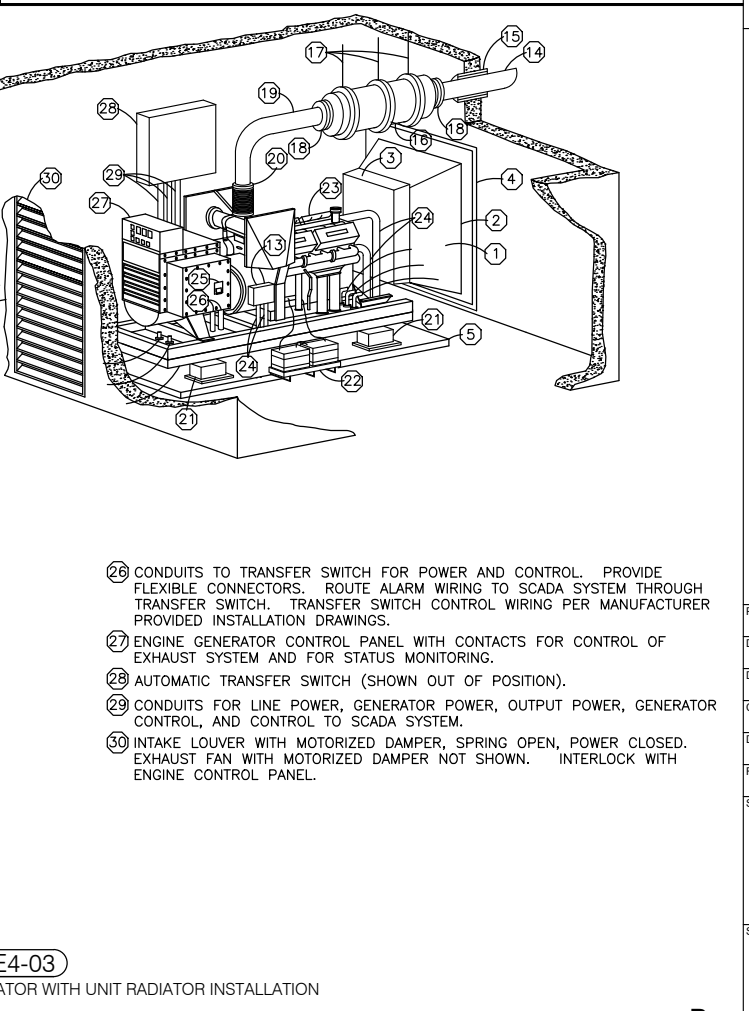
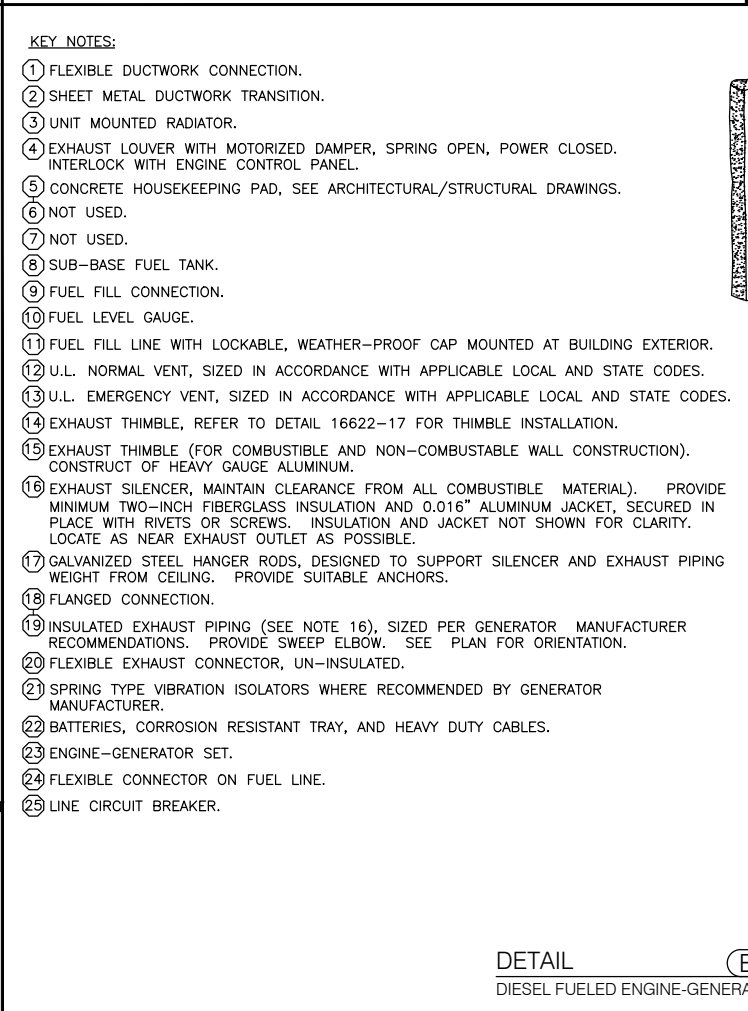
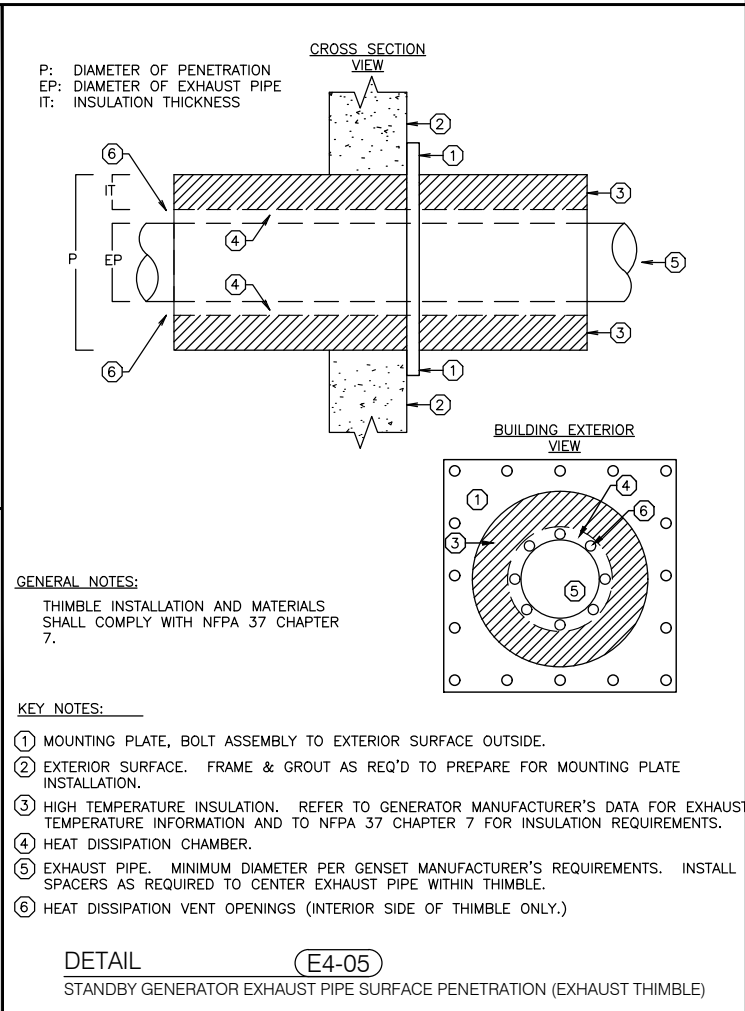
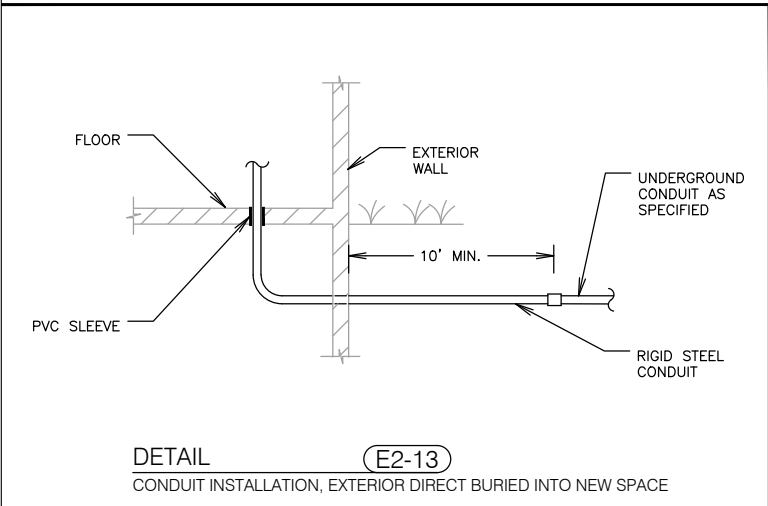
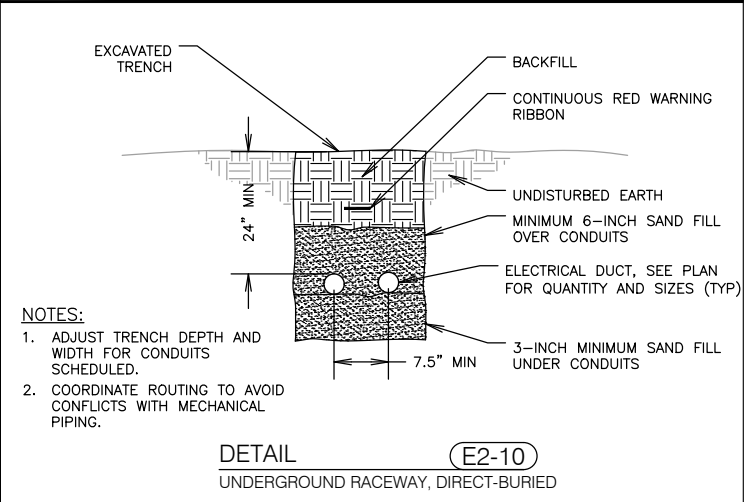
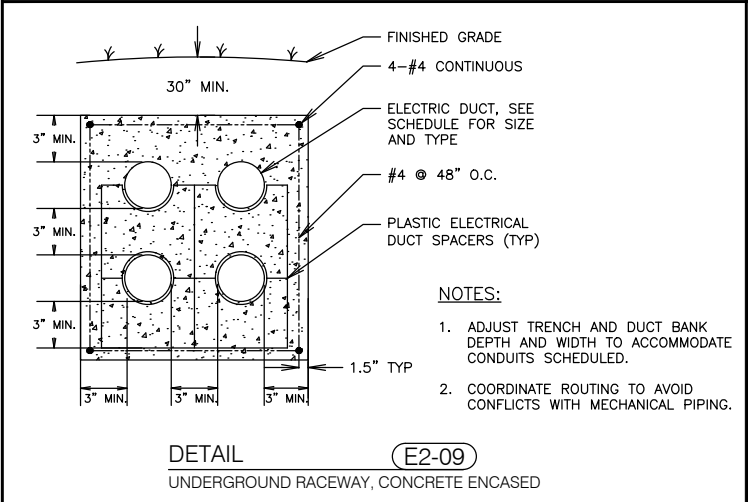
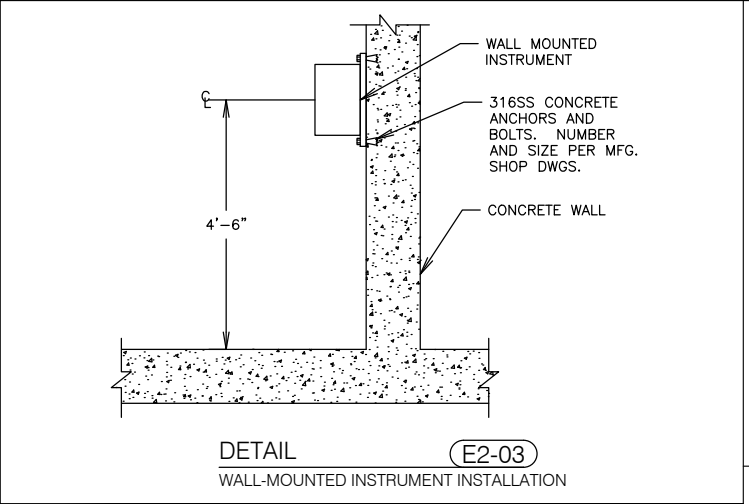
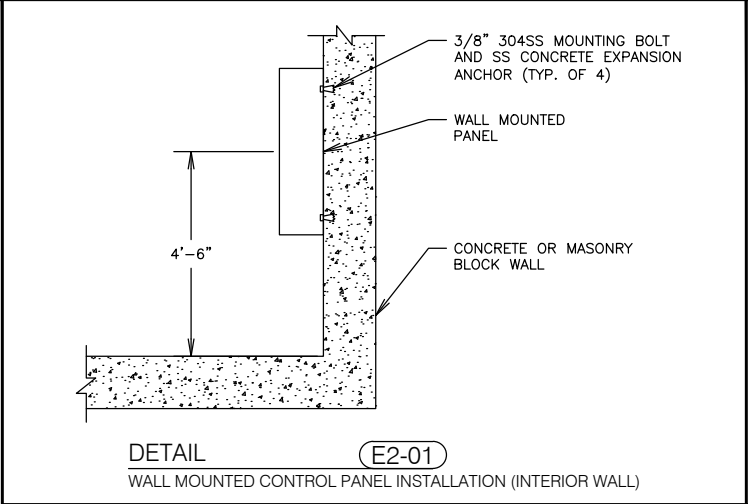
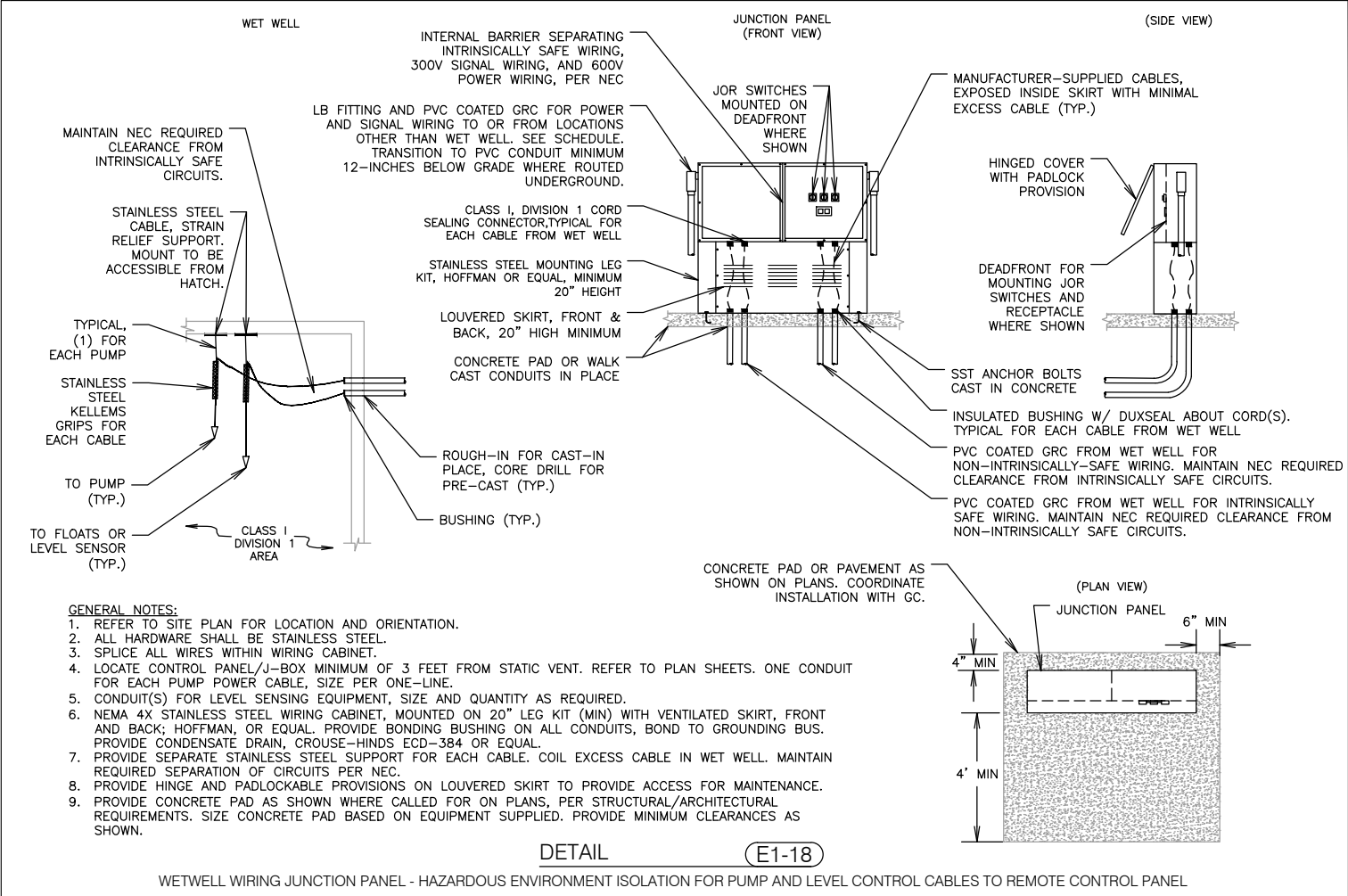
THREE PHASE PANEL SCHEDULE										20-LA									
TYPE: LIGHTING & APPLIANCE					VOLTAGE: 208 /120 - 3P4W					MOUNT: SURFACE					SINGLE TUB				
					BUS CONSTRUCTION: CU					GROUND BUS: YES					ISOLATED GROUND BUS: NO				
										BUS AMPACITY: 225A					MAIN CIRCUIT BREAKER: 175A				
										SUB-FEED LUGS: NONE					INTERRUPTING CAPACITY: 10 KAIC				
	DESCRIPTION	LOAD	BKR	A	B	C	BKR	LOAD	DESCRIPTION										
1	LIGHTS, STORAGE RM 100	3.25	20/1	4.3	***	***	20/1	1.00	LOCAL CONTROL PANEL										
3	LIGHTS, PIPE GALLERY RM 101	1.75	20/1	***	2.3	***	20/1	0.50	FIT										
5	LIGHTS, ELEC RM 102	1.50	20/1	***	***	1.5	20/1		SPARE										
7	LIGHTS, GENERATOR RM 103	1.75	20/1	1.8	***	***	20/1		SPARE										
9	LIGHTS, TOILET RM 104, 20-EF-02	1.50	20/1	***	***	***	20/1		SPARE										
11	LIGHTS, EXTERIOR	0.50	20/1	***	***	0.5	20/1		SPARE										
13	SPARE		20/1	0.0	***	***	20/1		SPARE										
15	RECEPT., STORAGE RM 100	9.00	20/1	***	9.0	***	20/1		SPARE										
17	RECEPT., PIPE GALLERY RM 101	4.50	20/1	***	***	4.5	20/1		SPARE										
19	RECEPT., ELEC RM 102	4.50	20/1	4.5	***	***	20/1		SPARE										
21	RECEPT., GENERATOR RM 103	4.50	20/1	***	4.5	***	20/1		SPARE										
23	RECEPT., TOILET RM 104	3.00	20/1	***	***	3.0	20/1		SPARE										
25	RECEPT., EXTERIOR	1.50	20/1	1.5	***	***			SPACE										
27	HWRP-1	1.00	20/1	***	1.0	***			SPACE										
29		21.00		***	***	21.0			SPACE										
31	WH-1	21.00	30/2	21.0	***	***			SPACE										
33	20-EBB-01	4.50	20/1	***	4.5	***			SPACE										
35	20-EF-01	6.00	20/1	***	***	6.0			SPACE										
37	20-D-02, 20-D-03	1.00	20/1	1.0	***	***			SPACE										
39	20-DSS-01	18.40		***	18.4	***	20/1		GENERATOR BLOCK HEATER										
41		18.40	30/2	***	***	18.4	20/1		GENERATOR BATT. CHARGER										
TOTAL AMPS / PHASE: 34.0 41.2 54.9																			
KVA / PHASE: 4.1 4.9 6.6										TOTAL CONNECTED KVA: 15.6									

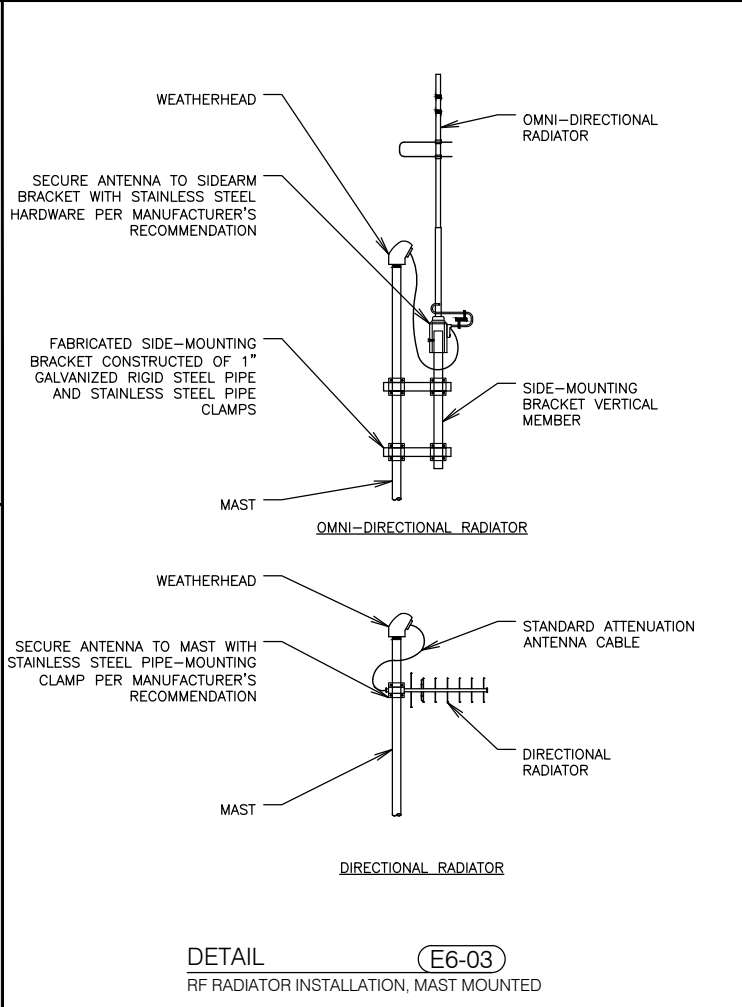
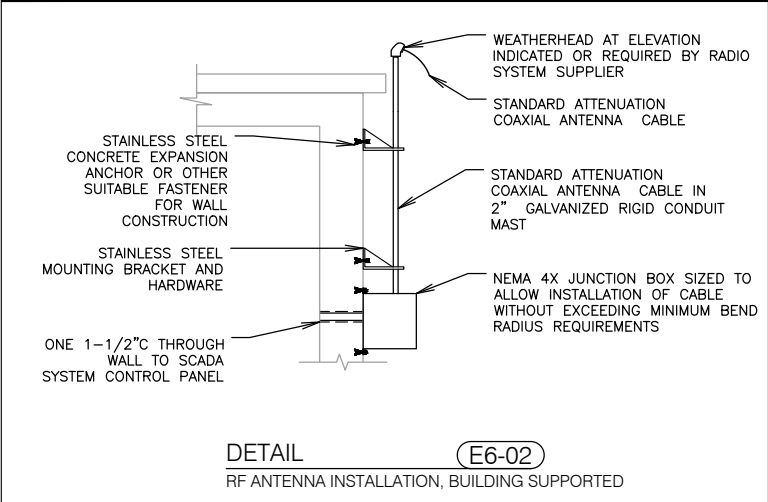
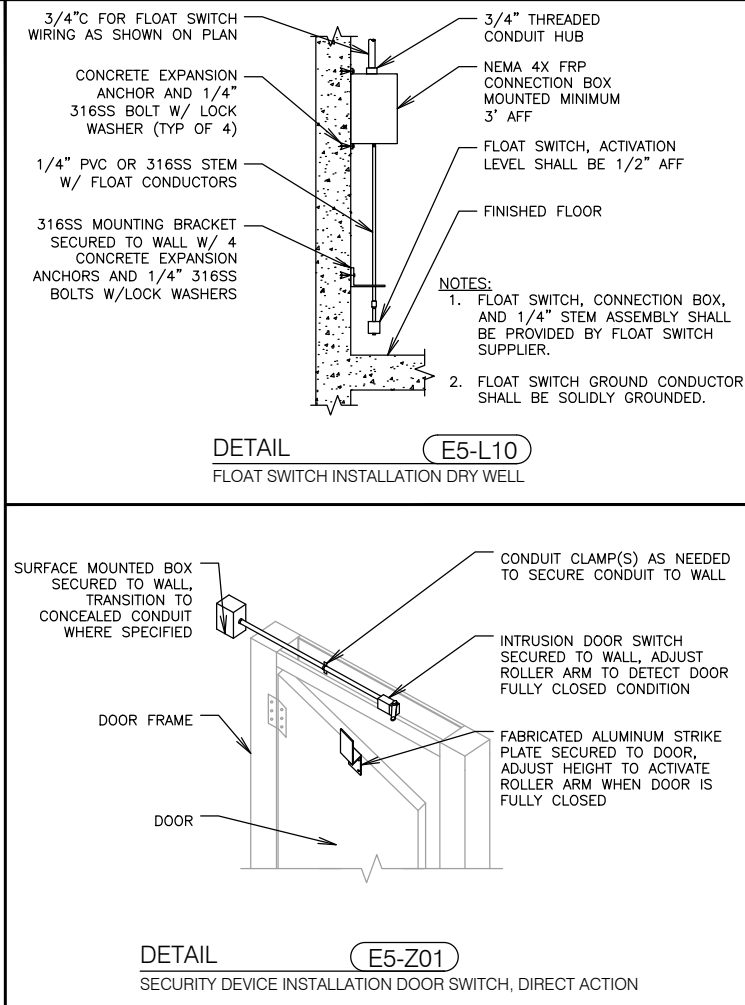
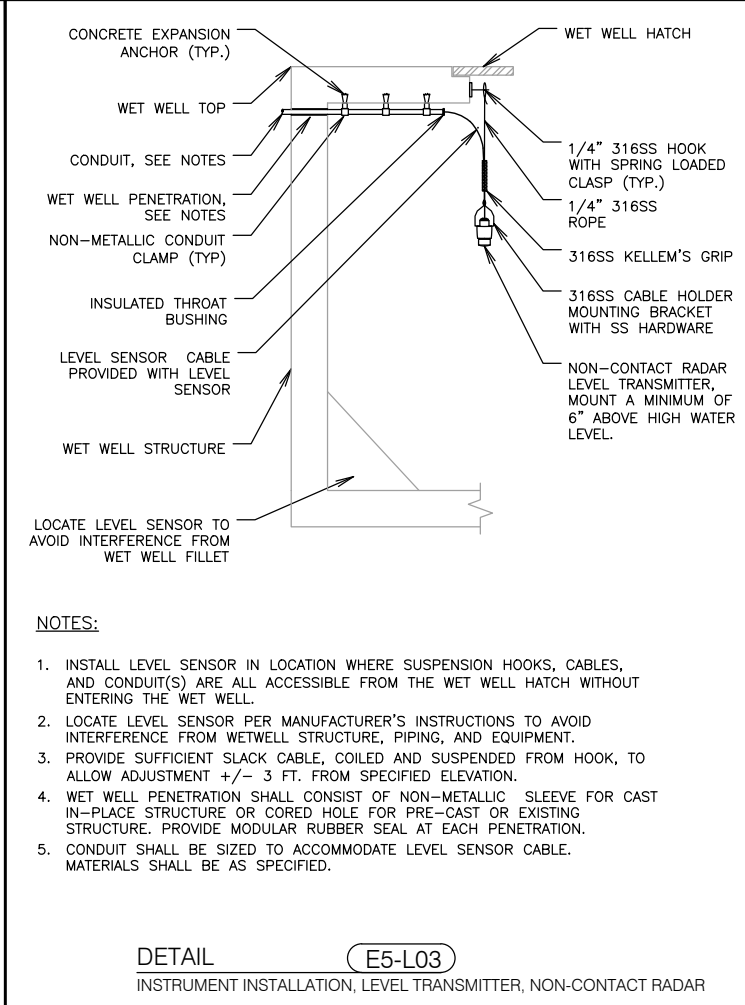
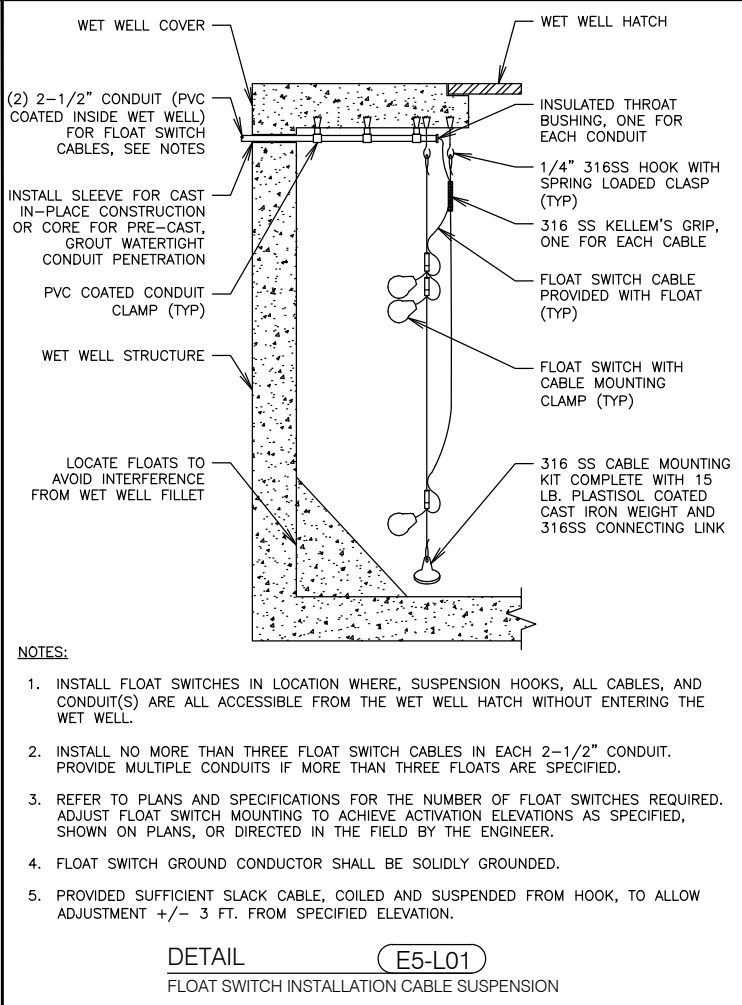
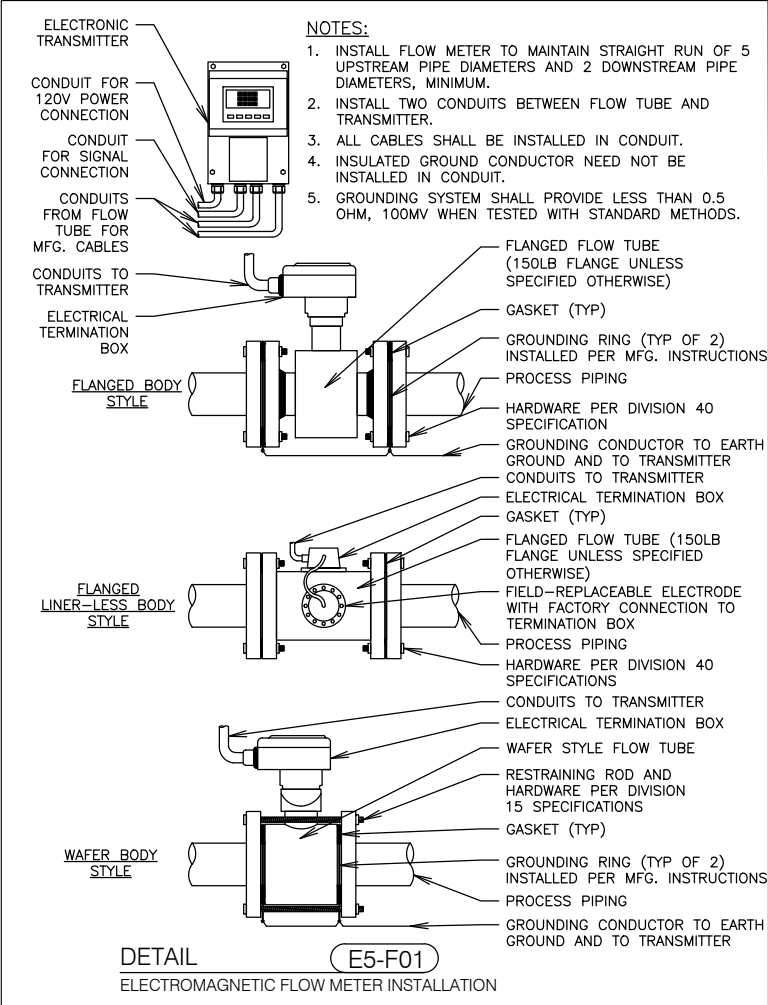
FIXTURE SCHEDULE					
TYPE	DESCRIPTION	LAMP TYPE	WATTS	MANUFACTURER	CATALOG NUMBER
A	1X4, LENSED INDUSTRIAL STRIP	LED - 4000K	52	METALUX	4SNLED-LD5-56L-LW-UNV-L840-CD1-U
D1	WALL PACK, EXTERIOR	LED - 3000K	52	GARCOO	121-32L-530-VW-G4-4-UNV-BL-IMR3-BZ
D2	POLE MOUNTED, EXTERIOR	LED - 4000K	45	CROUSE-HINDS	VMVL5P-UNV1-S891
X1	EXIT FIXTURE - LED NEMA 4X	LED	N/A	EMERGH-LITE	GA-SVX-1-R-4X
GENERAL NOTES: 1. ALL BALLASTS SHALL BE LOW HARMONIC ELECTRONIC. 2. HUBBELL AND DAYBRITE SHALL BE CONSIDERED EQUAL.					
FIXTURE NOTES:					

FEEDER SCHEDULE															
IDENTIFIER	THERMAL-MAGNETIC CIRCUIT BREAKER	BREAKER PICKUP AMPS (80%)	SINGLE-PHASE TWO-WIRE CIRCUIT		SINGLE OR THREE-PHASE THREE-WIRE CIRCUIT		THREE-PHASE FOUR-WIRE CIRCUIT		ALL	MAX. DISTANCES (FT) 480V 3-PHASE		MAX. DISTANCES (FT) 240V 3-PHASE		MAX. DISTANCES (FT) 208V 3-PHASE OR 120/240V 1-PHASE	
			CONDUIT	CIRCUIT CONDUCTORS	CONDUIT	CIRCUIT CONDUCTORS	CONDUIT	CIRCUIT CONDUCTORS		EQUIPMENT GROUNDING CONDUCTOR	FEEDER (2% DROP)	BRANCH (3% DROP)	FEEDER (2% DROP)	BRANCH (3% DROP)	FEEDER (2% DROP)
1	10	8	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12	335	502	167	251	145	218
2	15	12	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12	223	335	112	167	97	145
3	20	16	3/4"	(2) #12	3/4"	(3) #12	3/4"	(4) #12	#12	167	251	84	126	73	109
4	25	20	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10	212	317	106	159	92	138
5	30	24	3/4"	(2) #10	3/4"	(3) #10	3/4"	(4) #10	#10	176	264	88	132	76	115
6	35	28	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10	241	361	120	181	104	157
7	40	32	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10	211	316	105	158	91	137
8	45	36	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10	187	281	94	140	81	122
9	50	40	3/4"	(2) #8	3/4"	(3) #8	3/4"	(4) #8	#10	169	253	84	126	73	110
10	60	48	3/4"	(2) #6	3/4"	(3) #6	1"	(4) #6	#10	224	336	112	168	97	146
11	70	56	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#8	305	457	152	228	132	198
12	80	64	1"	(2) #4	1"	(3) #4	1-1/4"	(4) #4	#8	266	400	133	200	115	173
13	90	72	1"	(2) #3	1"	(3) #3	1-1/4"	(4) #3	#8	290	436	145	218	126	189
14	100	80	1"	(2) #3	1"	(3) #3	1-1/4"	(4) #3	#8	261	392	131	196	113	170
15	110	88	1"	(2) #2	1"	(3) #2	1-1/2"	(4) #2	#6	307	461	154	230	133	200
16	125	100	1-1/4"	(2) #1	1-1/2"	(3) #1	1-1/2"	(4) #1	#6	340	510	170	255	147	221
17	150	120	1-1/4"	(1) #1/0	1-1/2"	(3) #1/0	2"	(4) #1/0	#6	355	533	178	266	154	231
18	175	140	N/A	N/A	2"	(3) #2/0	2"	(4) #2/0	#6	377	566	189	283	163	245
19	200	160	N/A	N/A	2"	(3) #3/0	2"	(4) #3/0	#6	413	619	206	310	179	268
20	225	180	N/A	N/A	2"	(3) #4/0	2-1/2"	(4) #4/0	#4	459	688	229	344	199	298
21	250	200	N/A	N/A	2-1/2"	(3) 250K CMIL	3"	(4) 250K CMIL	#4	484	725	242	363	210	314
22	300	240	N/A	N/A	3"	(3) 350K CMIL	3"	(4) 350K CMIL	#4	552	829	276	414	239	359
23	350	280	N/A	N/A	3"	(3) 500K CMIL	3-1/2"	(4) 500K CMIL	#3	647	970	323	485	280	420
24	400	320	N/A	N/A	3-1/2"	(3) 600K CMIL	4"	(4) 600K CMIL	#3	661	992	331	496	286	430
25	450	360	N/A	N/A	(2) 2"	2 SETS OF (3) #4/0	(2) 2-1/2"	2 SETS OF (4) #4/0	#2	459	688	229	344	199	298
26	500	400	N/A	N/A	(2) 2-1/2"	2 SETS OF (3) 250KCMIL	(2) 3"	2 SETS OF (4) 250KCMIL	#2	484	725	242	363	210	314
27	600	480	N/A	N/A	(2) 3"	2 SETS OF (3) 350KCMIL	(2) 3"	2 SETS OF (4) 350KCMIL	#1	552	829	276	414	239	359
28	700	560	N/A	N/A	(2) 3"	2 SETS OF (3) 500KCMIL	(2) 3-1/2"	2 SETS OF (4) 500KCMIL	#1/0	647	970	323	485	280	420
29	800	640	N/A	N/A	(2) 3-1/2"	2 SETS OF (3) 600KCMIL	(2) 4"	2 SETS OF (4) 600KCMIL	#1/0	661	992	331	496	286	430
30	900	720	N/A	N/A	(3) 3"	3 SETS OF (3) 350KCMIL	(3) 3"	3 SETS OF (4) 350KCMIL	#2/0	552	829	276	414	239	359
31	1000	800	N/A	N/A	(4) 2-1/2"	4 SETS OF (3) 250KCMIL	(4) 3"	4 SETS OF (4) 250KCMIL	#2/0	484	725	242	363	210	314
32	1200	960	N/A	N/A	(4) 3"	4 SETS OF (3) 350KCMIL	(4) 3"	4 SETS OF (4) 350KCMIL	#3/0	552	829	276	414	239	359
33	1600	1280	N/A	N/A	(4) 3-1/2"	4 SETS OF (3) 600KCMIL	(4) 4"	4 SETS OF (4) 600KCMIL	#4/0	661	992	331	496	286	430
34	1800	1440	N/A	N/A	(6) 3"	6 SETS OF (3) 350KCMIL	(6) 3"	6 SETS OF (4) 350KCMIL	250KCMIL	552	829	276	414	239	359
35	2000	1600	N/A	N/A	(6) 3"	6 SETS OF (3) 500KCMIL	(6) 3-1/2"	6 SETS OF (4) 500KCMIL	250KCMIL	679	1019	340	509	294	442
36	2500	2000	N/A	N/A	(6) 3-1/2"	6 SETS OF (3) 600KCMIL	(6) 4"	6 SETS OF (4) 600KCMIL	350KCMIL	635	952	317	476	275	413
37	3000	2400	N/A	N/A	(8) 3"	8 SETS OF (3) 500KCMIL	(8) 3-1/2"	8 SETS OF (4) 500KCMIL	400KCMIL	604	906	302	453	262	392
38	4000	3200	N/A	N/A	(10) 3-1/2"	8 SETS OF (3) 600KCMIL	(10) 4"	8 SETS OF (4) 600KCMIL	500KCMIL	529	793	264	397	229	344
39	20	16	N/A	N/A	1"	3C#12 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	167	251	84	126	73	109
40	30	24	N/A	N/A	1"	3C#10 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	176	264	88	132	76	115
41	50	40	N/A	N/A	1"	3C#8 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	169	253	84	126	73	110
42	80	48	N/A	N/A	1 1/4"	3C#6 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	224	336	112	168	97	146
43	80	64	N/A	N/A	1 1/4"	3C#4 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	266	400	133	200	115	173
44	100	80	N/A	N/A	1 1/2"	3C#3 SHIELDED MOTOR CABLE	N/A	N/A	(3) #10	261	392	131	196	113	170
45	125	100	N/A	N/A	2"	3C#1 SHIELDED MOTOR CABLE	N/A	N/A	(3) #8	340	510	170	255	147	221
46	175	140	N/A	N/A	2"	3C#2/0 SHIELDED MOTOR CABLE	N/A	N/A	(3) #6	377	566	189	283	163	245
47	200	160	N/A	N/A	2"	3C#3/0 SHIELDED MOTOR CABLE	N/A	N/A	(3) #4	413	619	206	310	179	268
48	225	180	N/A	N/A	2"	3C#4/0 SHIELDED MOTOR CABLE	N/A	N/A	(3) #4	459	688	229	344	199	298
49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	300	240	N/A	N/A	2 1/2"	3C#350 KCMIL SHIELDED MOTOR CABLE	N/A	N/A	(3) #2	552	829	276	414	239	359
51	350	280	N/A	N/A	3"	3C#500 KCMIL SHIELDED MOTOR CABLE	N/A	N/A	(3) #1	647	970	323	485	280	420
52	450	360	N/A	N/A	(2) 2"	2 SETS 3C#4/0 SHIELDED MOTOR CABLE	N/A	N/A	(3) #4 EACH	459	688	229	344	199	298
53	600	480	N/A	N/A	(2) 2 1/2"	2 SETS 3C#350 KCMIL SHIELDED MOTOR CABLE	N/A	N/A	(3) #2 EACH	552	829	276	414	239	359
54	700	560	N/A	N/A	(2) 3"	2 SETS 3C#500 KCMIL SHIELDED MOTOR CABLE	N/A	N/A	(3) #1 EACH	647	970	323	485	280	420
PLAN NOTATION:															
			SINGLE-PHASE, TWO-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER												
			SINGLE OR THREE-PHASE, THREE-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER												
			THREE-PHASE, FOUR-WIRE FEEDER, NUMBER IS THE FEEDER IDENTIFIER												

STR-10: PROCESS INSTRUMENTATION AND EQUIPMENT WIRING SCHEDULE													
		FIRST SIGNAL/CONTROL HOMERUN			SECOND SIGNAL/CONTROL HOMERUN			POWER HOMERUN					
TAG NUMBER	DESCRIPTION	DESTINATION	WIRING TYPE	WIRING	DESTINATION	WIRING TYPE	WIRING	CIRCUIT	VOLTAGE	CKT. BKR.	WIRING	DETAIL	NOTES
TJB-1	TERMINAL JUNCTION BOX	LS-LCP	120VAC DISCRETE	D12	LS-LCP	24VDC ANALOG	A1					E1-18	
TSH-1-1-1	TEMPERATURE SWITCH, HIGH, LIFT PUMP NO.1 MOTOR	TJB-1	120VAC DISCRETE	D2									
ME-1-1-1	MOISTURE SWITCH, HIGH, LIFT PUMP NO.1 MOTOR	TJB-1	120VAC DISCRETE	D2									
HS-1-1-1-1	JOG-OFF-REMOTE, LIFT PUMP NO.1	LS-LCP	120VAC DISCRETE	D2									
TSH-1-1-2	TEMPERATURE SWITCH, HIGH, LIFT PUMP NO.2 MOTOR	TJB-1	120VAC DISCRETE	D2									
ME-1-1-2	MOISTURE SWITCH, HIGH, LIFT PUMP NO.2 MOTOR	TJB-1	120VAC DISCRETE	D2									
HS-1-1-2-1	JOG-OFF-REMOTE, LIFT PUMP NO.2	LS-LCP	120VAC DISCRETE	D2									
TSH-1-1-3	TEMPERATURE SWITCH, HIGH, LIFT PUMP NO.3 MOTOR	TJB-1	120VAC DISCRETE	D2									
ME-1-1-3	MOISTURE SWITCH, HIGH, LIFT PUMP NO.3 MOTOR	TJB-1	120VAC DISCRETE	D2									
HS-1-1-3-1	JOG-OFF-REMOTE, LIFT PUMP NO.3	LS-LCP	120VAC DISCRETE	D2									
LSC-1-2	LEVEL SWITCH, LEAD PUMP ON, WET WELL	TJB-1	120VAC DISCRETE	D2									
LT-1-2	LEVEL TRANSDUCER, WET WELL LEVEL	TJB-1	24VDC ANALOG	A1									
LSH-1-2	LEVEL SWITCH, HIGH, LAG PUMP ON, WET WELL	TJB-1	120VAC DISCRETE	D2									
LSL-1-2	LEVEL SWITHCH, LOW, PUMPS OFF, WET WELL	TJB-1	120VAC DISCRETE	D2									
LSLL-1-2	LEVEL SWITCH, LOW LOW, WET WELL	TJB-1	120VAC DISCRETE	D2									
LSHH-1-2	LEVEL SWITCH, HIGH HIGH, ALARM, WET WELL	TJB-1	120VAC DISCRETE	D2									
LSHH-1-2	LEVEL SWITCH, HIGH HIGH, BACK-UP REQUIRED, WET WELL	TJB-1	120VAC DISCRETE	D2									

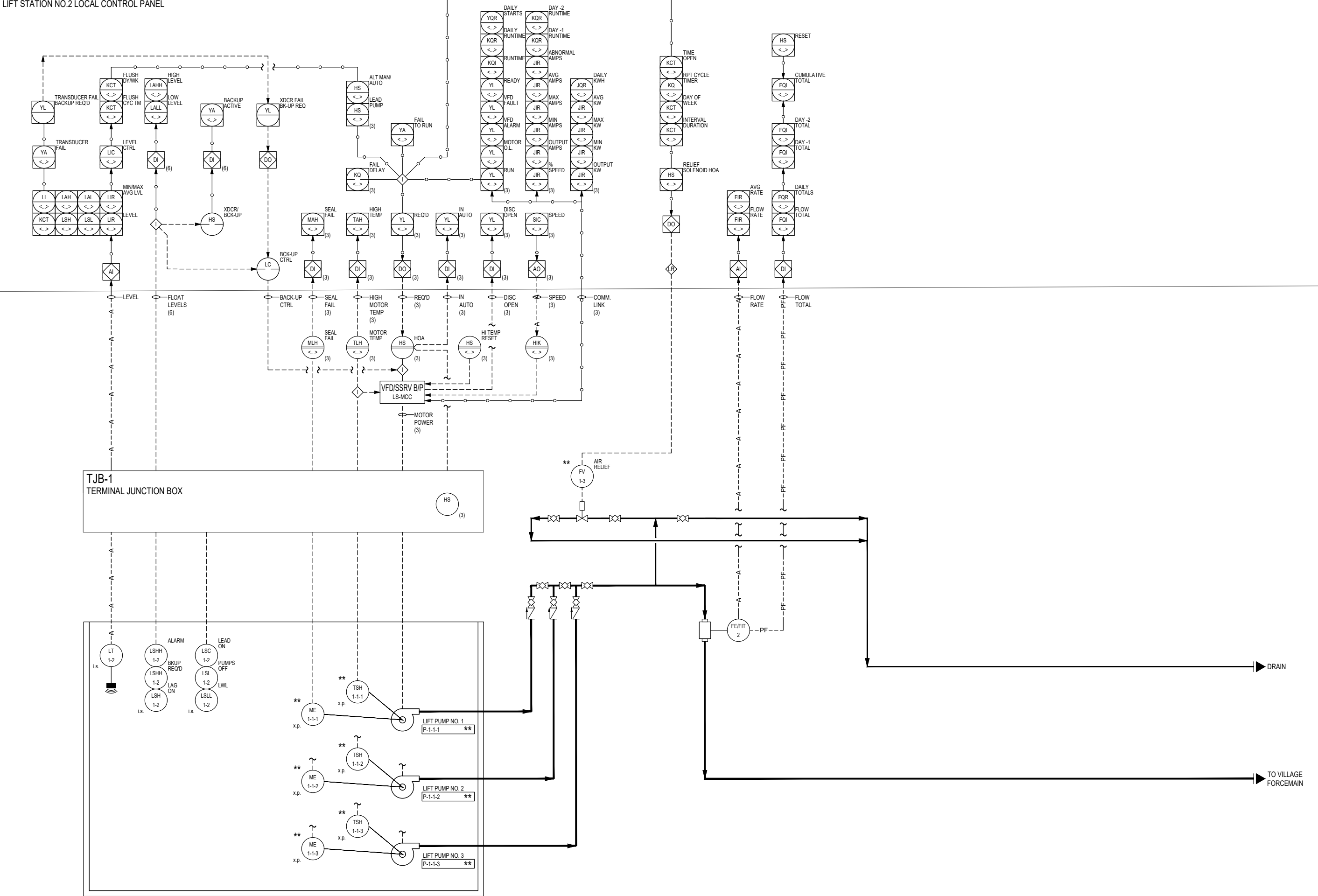
STR-20: PROCESS INSTRUMENTATION AND EQUIPMENT WIRING SCHEDULE													
		FIRST SIGNAL/CONTROL HOMERUN			SECOND SIGNAL/CONTROL HOMERUN			POWER HOMERUN					
TAG NUMBER	DESCRIPTION	DESTINATION	WIRING TYPE	WIRING	DESTINATION	WIRING TYPE	WIRING	CIRCUIT	VOLTAGE	CKT. BKR.	WIRING	DETAIL	NOTES
FV-1-3	AIR RELIEF VALVE	LS-LCP	120VAC DISCRETE	D2									
FE/FIT-2	FLOW ELEMENT/INDICATING TRANSMITTER, LIFT STATION NO.2	LS-LCP	24VDC ANALOG	A1	LS-LCP	PULSE FREQUENCY	A1	LA-XX	120V/1-PH	20A/1-POLE	2#12 & #12G	E5-F01	
TT-3-1	TEMPERATURE TRANSMITTER, PIPE GALLERY	LS-LCP	24VDC ANALOG	A1								E2-03	
LSH-3-2	FLOODING SWITCH, PIPE GALLERY	LS-LCP	120VAC DISCRETE	D2								E5-F12	
ZS-4-1-1	DOOR SWITCH, STORAGE ROOM	LS-LCP	120VAC DISCRETE	D2								E5-Z01	
ZS-4-1-2	DOOR SWITCH, ELECTRICAL ROOM	LS-LCP	120VAC DISCRETE	D2									
LCP-5-1	AUTOMATIC TRANSFER SWITCH	LS-LCP	120VAC DISCRETE	D12									
HS-5-2	GENERATOR E-STOP	LCP-5-2-1	120VAC DISCRETE	D2								E2-03	
LCP-5-2-1	GENERATOR CONTROL PANEL	LS-LCP	120VAC DISCRETE	D4	LCP-5-1	120VAC DISCRETE	D2						
LCP-5-2-2	GENERATOR REMOTE ANUNCIATOR	LS-LCP	MANUFACTURER'S CABLE	M1									
JA-5-3	POWER MONITOR	LS-LCP	COPPER ETHERNET600V	EH1									
LS-LCP	LIFT STATION NO.2 LOCAL CONTROL PANEL												





LS-LCP
LIFT STATION NO.2 LOCAL CONTROL PANEL

LIFT STATION PUMP CONTROL AND ALTERNATION STRATEGY



6264 Nesbitt Road
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(608) 273-3350
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tc TOWN & COUNTRY
ENGINEERING, INC.

PID No.1
STRUCTURE 10

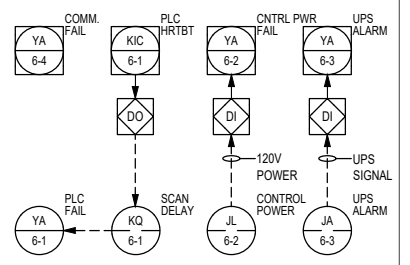
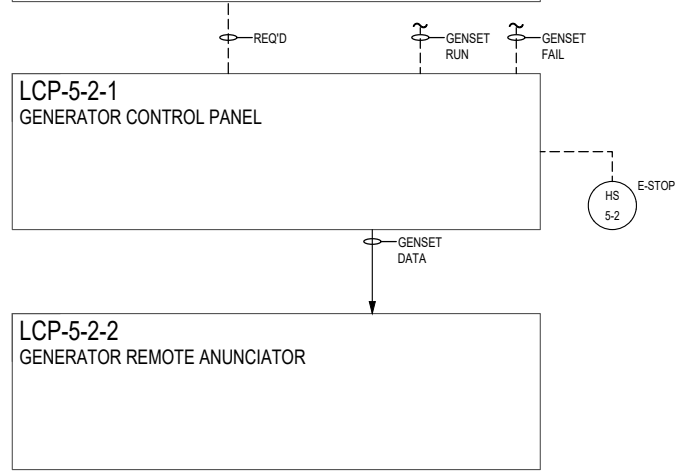
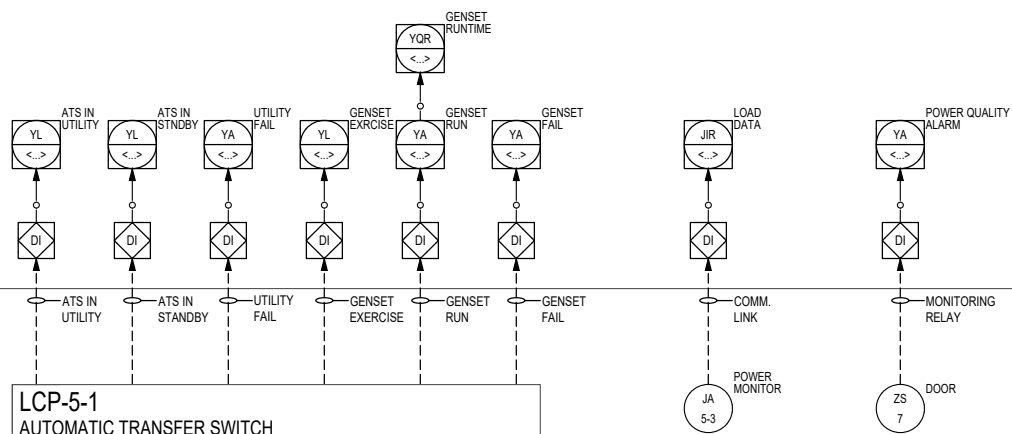
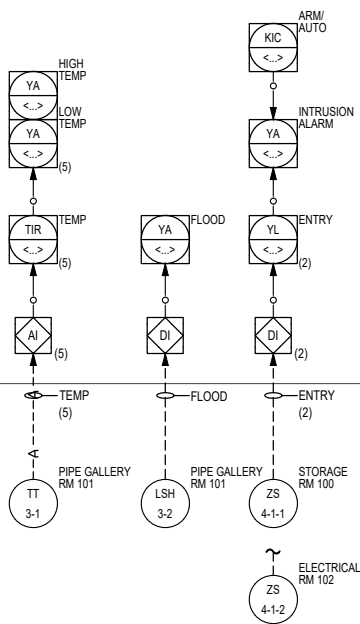
2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.: MC 198
DRAWING FILE: 100-W-01 PID No.1
DRAWN BY: N.W.W.
CHECKED BY: S.R.M.
DATE: 9-1-23
REVISIONS:

SCALE:
0 1 2 4
FEET

SHEET:
100-W-01
PID No.1

XXXXXXX LOCAL CONTROL PANEL



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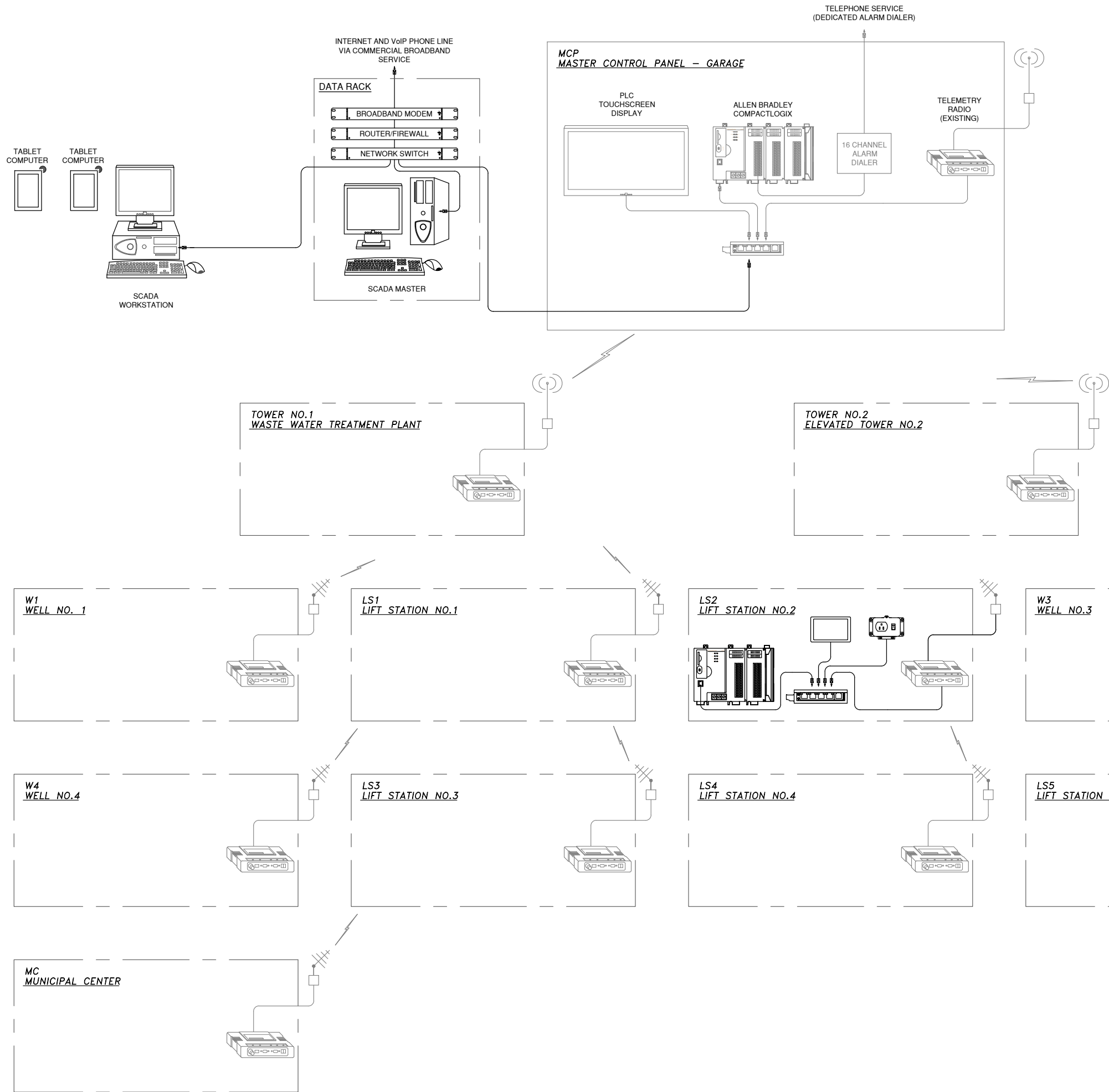


PID No.2
STRUCTURE 10

2023 LIFT STATION 2 IMPROVEMENTS
Marsh Woods Drive
Village of McFarland, Wisconsin

PROJECT NO.:	MC 198
DRAWING FILE:	100-W-02 PID No.2
DRAWN BY:	N.W.W
CHECKED BY:	S.R.M.
DATE:	9-1-23
REVISIONS:	
SCALE:	
0 1 2 4 FEET	
SHEET:	

100-W-02



- GENERAL NOTES**
1. THIS DRAWING INCLUDES PLAN NOTES THAT ARE REFERENCED ON THE SCADA SYSTEM ARCHITECTURE DRAWING.
 2. ALL EQUIPMENT SHOWN IS NEW, UNLESS OTHERWISE NOTED.
 3. REFER TO SCADA SYSTEM P&IDS FOR I/O REQUIREMENTS OF NEW PLC SYSTEM. PROVIDE A MINIMUM OF 10% SPARE I/O FOR EACH TYPE IN USE AT EACH PANEL.
 4. THE SYSTEM INTEGRATOR SHALL CONFIGURE ALL ETHERNET SWITCHING EQUIPMENT TO PROVIDE OPTIMAL NETWORK PERFORMANCE.
 5. CONFIGURE ROUTER/FIREWALL AS GATEWAY BETWEEN SCADA NETWORK AND OFFICE NETWORK.
 6. ETHERNET CABLES SHALL BE INDUSTRIAL UTP CAT 6 CABLE. PROVIDE ALL CABLE REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
 7. PROVIDE A GRAPHIC OPERATOR MANUAL. INCLUDE SCREEN PRINTOUTS OF EACH SCREEN, AND A NARRATIVE FOR WHAT IS DISPLAYED, ALL OPERATOR ADJUSTABLE SET-POINTS, AND PERMISSIBLE RANGES OF VALUES.
 8. SCADA GRAPHIC DESIGN, ALARM POINT ENABLE/DISABLE FUNCTIONALITY, AND ALARM AND EVENT LOGGING AND REPORTING SHALL COMPLY WITH TYPICAL TOWN & COUNTRY PROJECT REQUIREMENTS.

**VILLAGE OF
McFarland
SUMMARY SHEET**

MEETING DATE: Monday, January 22, 2024

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Lee Igl, Public Works Director

AGENDA ITEM: Discussion and action to make a recommendation to the Village Board regarding a proposal from Town & Country Engineering for design and construction engineering for the Lift Station 2 project.

PREVIOUS ACTION:

The Public Works & Utilities Committee recommended approval regarding a proposal from Town & Country Engineering for final design engineering at their May 22, 2023 meeting.

ISSUE SUMMARY:

Lift Station #2, located along Pheasant Run, is in the process of planning for an upgrade. This station was constructed back in the late 1970's and is an underground steel-canned unit that houses the pumps and motors along with controls. This station handles over 50% of the village's daily volume of sewage pumped into Madison Metropolitan Sewerage District's conveyance pipes. Lift station #2 is responsible for handling the ongoing growth on the eastside of the village.

Village staff met with engineering personnel from Town & Country Engineers to discuss the needs of a station to handle today's flows while looking into future projections related to village growth on the east side. As part of the concept of a building layout, confined space entry elimination was included. This elimination helps to promote worker safety. Another aspect of the design is the inclusion of a permanent indoor backup electrical generator with an instantaneous start. All new controls along with pumping apparatuses are being planned to be incorporated too.

The current wetwell, where the sewage is stored until pumping time, will be turned into a manhole structure. A new wetwell will be constructed to accommodate the new submissible pumping system along with capacity for future growth.

With the bids in for the lift station project, Town and Country Engineering was asked for a proposal to oversee the construction services and loan administration. The details are covered in their proposal and Town & Country will review their proposal with the committee during the meeting. Staff are recommending approval of the proposal to Village Board.

FINANCIAL/BUDGET IMPACT:

The enclosed proposal is for the amendment amount of \$165,000. This amount is included within the expenses planned for the project.



VILLAGE PLAN REFERENCE:

None.

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended motion:

Motion, second to recommend approval to the Village Board regarding a proposal from Town & Country Engineering for construction engineering related to the Lift Station 2 project not to exceed \$165,000.

ATTACHMENTS:

1. Amendment to Task Order No. 5

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services – Task Order Edition** dated February 1, 2020.

Amendment To Task Order No. 5

1. Background Data:

- a. Effective Date of Task Order: January 17, 2024
- b. Owner: Village of McFarland, Wisconsin
- c. Engineer: Town & Country Engineering, Inc.
- d. Specific Project: Lift Station No. 2 Replacement

2. Description of Modifications

- a. Engineer shall perform the following Additional Services: Construction and Post-Construction support in addition to the services to be provided or furnished by Engineer under Task Order No. 5 and are described in Attachment A of Task Order No. 5, and the services (and related terms and conditions) set forth in Task Order No. 5's Exhibit A.
- b. For the Additional Services or the modifications to services set forth above, Owner shall pay Engineer the following additional or modified compensation: This amendment amount: \$165,000.

3. Task Order Summary (Reference only)

- a. Original Task Order amount: \$125,000
- b. This amendment amount: \$165,000
- d. Adjusted Task Order amount: \$290,000

Standard Hourly Rates and Reimbursable Expense Rates Schedule

Standard Hourly Rates and Reimbursable Expense Rates are set forth below. Standard Hourly Rates include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.

Schedule:

Principal (700).....	\$160.00 per hour
Senior Project Manager (714)	\$155.00 per hour
Senior Project Engineer (701).....	\$140.00 per hour
Project Engineer II (702)	\$130.00 per hour
Project Engineer I (703).....	\$125.00 per hour
Staff Engineer II (704)	\$110.00 per hour

Exhibit K – Amendment to Task Order

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Staff Engineer I (705)	\$100.00 per hour
Senior Engineering Technician (706)	\$100.00 per hour
Engineering Technician II (707)	\$90.00 per hour
Engineering Technician I (708)	\$80.00 per hour
Resident Inspector II (713)	\$90.00 per hour
Resident Inspector I (711)	\$80.00 per hour
Grant Writer (712)	\$80.00 per hour
Administrative II (709)	\$70.00 per hour
Administrative I (710)	\$65.00 per hour
Mileage	\$0.70 per mile
Total Station/GPS Survey Equipment	\$25.00 per hour of actual use
Computer used for CADD	\$15.00 per hour of actual use
Plotter	\$15.00 per plan page

The foregoing Task Order Summary is for reference only and does not alter the terms of the Task Order, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Task Order as set forth in this Amendment. All provisions of the Agreement and Task Order not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is January 17, 2024.

OWNER: Village of McFarland, Wisconsin

ENGINEER: Town & Country Engineering, Inc.

By:

By:



Title: Village Administrator

Title: President

Date

Date

Signed: _____

Signed: 1/17/2024

Exhibit K – Amendment to Task Order

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