Planning Commission
Regular Meeting
July 19, 2021
7:00 p.m.

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF AGENDA
5. APPROVAL OF MINUTES

   -June 21, 2022

6. CORRESPONDENCE / BOARD REPORTS / PRESENTATIONS
   A. Thering updates from Board of Trustees
   B. Buckley updates from ZBA
   C. Shingles updates from Sidewalk and Pathways

7. PUBLIC COMMENT: Restricted to (3) minutes regarding items not on this agenda

8. NEW BUSINESS
   A. PREZ22-02 Application for Rezoning from R-1, Rural Residential to B-4, General Business - Mid Michigan College Athletic Fields, 2600 S. Summerton Rd.
      a. Introduction
      b. Public hearing
      c. Updates from staff and the applicant
      d. Commission deliberation and action (recommendation to the Board of Trustees for approval, denial, approval with conditions, or postpone action)

   B. PSPR22-09 Final Site Plan Application for Fullerton Engineering with Parallel/AT&T for a new wireless communications facility (cell tower), 5450 S. Mission Rd.
      a. Introduction by Staff
      b. Updates from the applicant
      c. Commission review of the final site plan

d. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

C. PSPR22-10 Preliminary Site Plan Application - Michael Engineering Expansion, 5625 Venture Way

a. Introduction by Staff
b. Updates from the applicant
c. Commission review of the preliminary site plan
d. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

9. OTHER BUSINESS

A. Parks and Recreation Master Plan Update - Discussion

10. EXTENDED PUBLIC COMMENT: Restricted to 5 minutes regarding any issue
11. FINAL BOARD COMMENT
12. ADJOURNMENT

CHARTER TOWNSHIP OF UNION
Planning Commission
Regular Meeting Minutes

A regular meeting of the Charter Township of Union Planning Commission was held on June 21, 2022, at 7:00 p.m. at the Lincoln Reception Center, 2300 S. Lincoln Road.

Meeting was called to order at 7:00 p.m.

Roll Call
Present:
Albrecht, Buckley, Gross, LaBelle, Lapp, Squattrito, Thering and Williams
Excused:
Lapp and Shingles

Others Present
Rodney Nanney, Community and Economic Development Director; Peter Gallinat, Zoning Administrator; Tera Green, Administrative Assistant

Approval of Agenda
Gross moved **LaBelle** supported to approve the agenda as presented. **Vote: Ayes: 7. Nays: 0. Motion Carried**

Approval of Minutes
Buckley moved **Williams** supported to approve the regular meeting minutes from May 17, 2022 as presented. **Vote: Ayes: 7. Nays: 0. Motion carried.**

Correspondence / Reports/ Presentations
A. Board of Trustees updates by Thering – No updates were given
B. ZBA updates by Buckley – Buckley reported no meetings held due to a lack of agenda items.
C. Sidewalks and Pathway Prioritization Committee by Shingles – No updates were given.

Public Comment
Open 7:05 p.m**.**
No comments were offered
Closed 7:05 p.m.

New Business
A. PSUP22-01 Special Use Permit Application – Proposed Agri-Tourism/Farm Market, 5297 S. Whiteville Rd. (Michael & Jamie Klumpp)
a. Introduction
b. Public hearing
c. Updates from staff and the applicant

d. Commission deliberation and action (approval, denial, approval with conditions or postpone action)

Nanney gave an introduction of the PSUP22-01 Special Use Permit Application for Heirloom Grove Agri-Tourism business located at 5297 S. Whiteville Road.

Public Hearing

Open: 7:08 p.m.
Shelley Short, 5620 S. Lincoln Rd., expressed concern of how the business would affect surrounding property owners and if it would affect property taxes.
Ted Lownsbery,5320 S. Whiteville Rd., asked for a copy of the mailing list that the notices were sent to.
Cindy Wright, 5264 S. Lincoln Rd., asked why the Farm Market wasn't acted on when it was first presented to the Planning Commission.
Wayne Rhode, 5678 S. Whiteville Rd., emailed correspondence stating he is not opposed of the business if the property owner is the only vendor. He expressed concern with weekend and holiday activities creating extra traffic.
Closed: 7:16 p.m.

Tim Beebe from CMS&D addressed questions that were presented during Public Hearing.
Property owner, Mike Klumpp and Tim Beebe gave updates and were available for questions.
Deliberation by the Commissioners.

Buckley moved **Gross** supported to approve the PSUP 22-01 Special Use Permit Application for the proposed Heirloom Grove Agri-Tourism business located at 5297 South Whiteville Road in the northwest quarter of Section 32 and in the AG (Agricultural) zoning district, finding that it can comply with Section 14.3.J. (Standards for Special Use Approval), subject to the following conditions:

1. The lawn parking to the rear shall be reserved for passenger vehicles and light use trucks, with a prohibition on bus or large vehicle parking in this area.
2. Parking lot paving requirements are waived per Section 6.51.3., subject to Mt. Pleasant Fire Department acceptance of the gravel lot configuration as adequate for emergency vehicle accessibility, and asphalt or concrete paving of the barrier-free parking spaces and access to the public building entrance(s) with paving details added to the final site plan.
3. Parking lot landscaping requirements are waived per Section 6.51.F.5., provided that the applicant shall maintain for seasonal screening purposes an active 100-foot by 120-foot annual and perennial garden in the front yard, shall preserve four (4) existing deciduous trees, and shall actively maintain at least 2.75 acres to the rear of the property for orchard and berry fields; all as depicted on the approved site plan. The change-of-use for and necessary modifications to the existing agricultural building to establish a commercial Farm Market shall be subject to a building permit, compliance with Building Code requirements for a non-agricultural building with access by the general public, and

issuance of a new certificate of occupancy by the Township's Building Official.

Vote: Ayes: 7. Nays: 0. Motion carried.

B. <u>PSPR22-02 Combined Preliminary/Final Site Plan Application – Proposed Agri-Tourism/Farm Market, 5297 S. Whiteville Rd. (Michael & Jamie Klumpp)</u>

- **a.** Introduction by Staff
- **b.** Updates from the applicant
- **c.** Commission review of the combined preliminary/final site plan
- **d.** Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

Nanney introduced the Preliminary Site Plan Application for Heirloom Grove, Agri-Tourism business located at 5297 S. Whiteville Road.

Applicant, Michael Klumpp and Tim Beebe from CMS&D were available for questions. Deliberation by the Commissioners.

Albrecht moved **Williams** supported to approve the PSPR 22-02 preliminary site plan dated June 1, 2022 for the proposed Heirloom Grove Agri-Tourism business located at 5297 S. Whiteville Road in the northwest quarter of Section 32 and in the AG (Agricultural) District, finding that the site plan dated June 1, 2022 fully complies with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval). **Vote: Ayes: 7. Nays: 0. Motion carried.**

C. <u>PSPR22-06 Combined Preliminary/Final Site Plan Application – Isabella Citizens for Health Expansion, 2790 Healthcare Pkwy</u>

- **a.** Introduction
- **b.** Updates from the applicant
- **c.** Commission review of the combined preliminary/final site plan
- **d.** Commission deliberation and action (approval, denial or approval with conditions, or postpone action)

Nanney introduced the PSPR22-06 Combined Preliminary and Final Site Plan Approval Application for Isabella Citizens for Health, Phase Two Medical Office. Nanney reminded the Commissioners of the original site plan that was approved in April 2018 to include future phases to be constructed as needed. The final site plan will need amendments to the exterior lighting.

Tim Beebe from CMS&D was available for questions. Deliberation by the Commissioners.

Buckley moved **Gross** supported to approve the PSPR22-06 combined preliminary and final site plan for the Isabella Citizens for Health phase two medical office building and accessory storage building located at 2790 Health Parkway in the southeast quarter of Section 14 and in the OS

(Office Service) District, finding that the site plan dated May 27, 2022 can comply with applicable Zoning Ordinance requirements for final site plan approval, including Sections 14.2.P. (Required Site Plan Information) and 14.2.S. (Standards for Site Plan Approval), subject to the following conditions:

1. Update sheets E1.0-E1.2 to revise the phase 2 pole-mounted exterior lighting to be no higher than 22-feet, as measured from grade level to the top of the fixture, and update the photometric plan as needed to verify continuing compliance with Section 8.2.C.1. (Illumination Level).
2. Zoning Administrator review and approval of the updated sheets E1.0-E1.2 prior to issuance of a building permit for this project.

Vote: Ayes: 7. Nays: 0. Motion carried.

Other Business

A. **PREZ22-01 Planned Unit Development (PUD) Rezoning and Concept Plan Application – The Den on Broomfield Mixed Use Buildings, E. Broomfield Rd. at Sweeney Rd.**
   a. Introduction
   b. Re-open and continue the public hearing
   c. Updates from staff and the applicant
   d. Commission deliberation and action (recommendation to the Board of Trustees for approval, denial, approval with conditions, or postpone action)

Nanney introduced the PREZ22-01 Planned Unit Development (PUD) Rezoning and Concept Plan (PUD) Application for The Den on East Broomfield Rd and Sweeney Rd for a four (4) story tall, mixed-use (commercial and residential) building recommending that the Planning Commission request updated plans that address issues noted in the staff report and any additional concerns identified by the Commissioners. Nanney addressed typographical errors in the property address/PID noted in the report and the correction needed.

A public hearing for PREZ22-01 was adjourned at the May 17th meeting due to deficiencies meeting the minimum requirement of publication. Staff reposted the notice accordingly to reopen the public hearing for the regular June meeting.

LaBelle moved **Williams** supported to reopen the Public Hearing for PREZ22-01 Planned Unit Development (PUD) Rezoning and Concept Plan Application for The Den on Broomfield Mixed Use Buildings. **Vote: Ayes: 7. Nays: 0. Motion carried.**

Public Hearing

Open: 8:34 p.m.
No comments were offered
Closed: 8:35 p.m.

Tim Beebe from CMS&D was available for questions. Deliberation by the Commissioners.

Williams moved **Buckley** supported to postpone action on the PREZ22-01 request to rezone parcels 14-103-00-001-00 & -002-00 at E. Broomfield Road from B-5 (Highway Business) District to PUD (Planned Unit Development) until the August 16, 2022 regular Planning Commission meeting, for the following reasons:

1. The PUD Concept Plan dated April 25, 2022 is not ready for recommendation to the Board of Trustees.
2. The applicant is directed to prepare and submit an updated PUD Concept Plan addressing the deficiencies and additional requested documentation as noted in the staff report dated June 14, 2022 for further Planning Commission review.

Vote: Ayes: 7. Nays: 0. Motion carried.

B. **PSPR21-01 Sam's Club Filling Station, 4850 Encore Blvd. – request for an extension of final site plan approval**
   a. Introduction
   b. Commission deliberation and action (approval, denial, approval with conditions, or postpone action

Nanney introduced the PSPR21-01 Sam's Club Filling Station located at 4850 Encore Drive recommending approving the request for an extension of the Final Site Plan.

Buckley moved **Williams** supported to approve a 365 calendar day extension of approval for the PSPR21-01 final site plan dated January 26, 2021 for the Sam's Club Filling Station at 4850 Encore Drive (PID 14-026-30-001-07), finding that the provisions of Section 14.02.Q.3 for an extension have been satisfied. **Vote: Ayes: 7. Nays: 0. Motion carried.**

C. **Parks and Recreation Master Plan update**

Nanney gave an overview of the existing and potential new parks in Union Township. Discussion by the Commissioners.

Extended Public Comments

Open: 9:41 p.m.

Tim Beebe, CMS&D, requested a copy of the written response from the Utilities Director in regard to the Rezoning and Concept Plan Application for The Den on Broomfield.
Closed 9:42 p.m.

Final Board Comment

Squattrito – Recommended from now moving forward, that the Board take roll call votes on action items.
Nanney – updated the Commissioners on the air purifier at the Hall.
Squattrito – Reminded the Commissioners that the Planning Commission meetings will resume back at the Township Hall starting in July.
Buckley – Commented on sidewalks and the opportunity of growth in potential areas.

Adjournment – Chairman Squattrito adjourned the meeting at 9:47 p.m.

APPROVED BY: _____

Doug LaBelle – Secretary

(Recorded by Tera Green) Tera Albrecht – Vice Secretary

Board Expiration Dates

Planning Commission Board Members (9 Members) 3 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	James	Thering	11/20/2024
2-Chair	Phil	Squattrito	2/15/2023
3-Vice Chair	Ryan	Buckley	2/15/2025
4-Secretary	Doug	LaBelle II	2/15/2025
5 - Vice Secretary	Tera	Albrecht	2/15/2024
6	Stan	Shingles	2/15/2024
7	Paul	Gross	2/15/2025
8	Jack	Williams	2/15/2023
9	Jessica	Lapp	2/15/2023
Zoning Board of Appeals Members (5 Members, 2 Alternates) 3 year term			
#	F Name	L Name	Expiration Date
1- PC Rep	Ryan	Buckley	2/15/2025
2 - Chair	Andy	Theisen	12/31/2022
3 - Vice Chair	Liz	Presnell	12/31/2022
4 - Secretary	vacant seat		12/31/2022
5 -	Brandon	LaBelle	12/31/2022
Alt. #1	vacant seat		12/31/2022
Alt. #2	vacant seat		2/15/2021
Board of Review (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Doug	LaBelle II	12/31/2022
2	Sarvjit	Chowdhary	12/31/2022
3	Bryan	Neyer	12/31/2022
Alt #1	Randy	Golden	12/31/2022
Construction Board of Appeals (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Colin	Herren	12/31/2023
2	Joseph	Schafer	12/31/2023
3	Andy	Theisen	12/31/2023
Hannah's Bark Park Advisory Board (2 Members from Township) 2 year term			
1	Mark	Stuhldreher	12/31/2022
2	John	Dinse	12/31/2023
Chippewa River District Library Board 4 year term			
1	Ruth	Helwig	12/31/2023
2	Lynn	Laskowsky	12/31/2025

Board Expiration Dates

EDA Board Members (9 Members) 4 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	Bryan	Mielke	11/20/2024
2	Thomas	Kequom	4/14/2023
3	James	Zalud	4/14/2023
4	Richard	Barz	2/13/2025
5	Robert	Bacon	1/13/2023
6	Marty	Figg	6/22/2026
7	Cheryl	Hunter	6/22/2023
8	Jeff	Sweet	2/13/2025
9	David	Coyne	3/26/2026
Mid Michigan Area Cable Consortium (2 Members)			
#	F Name	L Name	Expiration Date
1	Kim	Smith	12/31/2022
2	vacant seat		
Cultural and Recreational Commission (1 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1	Robert	Sommerville	12/31/2022
Sidewalks and Pathways Prioritization Committee (2 year term -PC Appointments)			
#	F Name	L Name	Expiration Date
1 - BOT Representative	Kimberly	Rice	11/20/2024
2 - PC Representative	Stan	Shingles	2/15/2024
3 - Township Resident	Jeff	Siler	8/15/2023
4 - Township Resident	Jeremy	MacDonald	10/17/2022
5 - Member at large	Phil	Hertzler	8/15/2023
Mid Michigan Aquatic Recreational Authority (2 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1-City of Mt. Pleasant	John	Zang	12/31/2023
2-City of Mt. Pleasant	Judith	Wagley	12/31/2022
1-Union Township	Stan	Shingles	12/31/2023
2-Union Township	Allison	Chiodini	12/31/2022
1-Mt. Pleasant Schools	Lisa	Diaz	12/31/2022

Charter Township of Union

APPLICATION FOR REZONING APPROVAL

A completed application will contain all information required per the Zoning Ordinance, Section 14.5 (Amendments); including:

- ☑ Response to Rezoning Criteria (Section 14.5 G.)
- ☑ Vicinity Map and Survey/Drawing (Section 14 5 F 1.d)

Name of Proposed Development/Project	Mid Michigan College - Mt. Pleasant Athletic Complex
Common Description of Property & Address (if Issued)	Mid Michigan College - Mt. Pleasant Athletic Complex 2600 Summerton Road
Applicant's Name(s)	Hobbs and Black Architects (c/o Martin H. Ruiter Jr.)
Phone/Fax numbers	517-484-4870/517-484-1369 Email mruiter@hobbs-black.com
Address	117 East Allegan City: Lansing Zip 48933

Legal Description.		Attached	☑	Included on Survey

Tax Parcel ID Number(s): see attachment for all parcels

Existing Zoning: R-1 Land Acreage 1+1+ 59 Existing Use(s): vacant land used to support college operations

☑ ATTACHED: Letter describing the proposed land uses and reasons for the requested zoning change

Firm(s) or Individuals(s) who prepared the Land Survey/Drawing	1. Name: ROWE Professional Services Co. Phone 989-772-2138 Email lgunder@rowepsc.com 2. Address 127 S Main Street City: Mt. Pleasant State: Zip 48858 Contact Person: Troy R Gunder, P.E. Phone 989-772-2138
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application Attach a separate sheet if more space is needed	1. Name: Mid Michigan College Phone: 989-386-6622 Address: 1375 S. Clare Ave. City: Harrison State: Zip 48625 Signature: Elizabeth Lourde Interest in Property Owner 2 Name Phone: Address City. State. Zip: Signature. Interest in Property.

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information may be cause for rejection of the application Approval of any requested zoning change shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Signature of Applicant — Date: 6/21/22

Office Use Only

Application Received By: Fee Paid. $

Date Received Escrow Deposit Paid: $

Revised 9/14/2020

MID MICHIGAN COLLEGE

ATTACHMENT – REZONING APPLICATION

TAX PARCELS TO BE REZONED:

Parcel # 1: 2790 S. Summerton Rd., Mt. Pleasant, MI 48858

Parcel Number: 14-013-40-002-00

Legal Description: T14N, R4W, Sec 13, COMM 132 FT N of SE COR OF NE ¼ OF SE ¼ TH W 330 FT N 132 FT E 330 FT S 132 FT TO POB

Parcel #2: 2794 S. Summerton Rd., Mt. Pleasant, MI 48858

Parcel Number: 14-013-40-003-00

Legal Description: T14N R4W, SEC 13; COM AT SE COR OF NE ¼ OF SE ¼ TH W 330 FT TH N 132 FT TH E 330 FT TH S 132 FT TO POB

PARCEL #3: 2800 S. Summerton Rd., Mt. Pleasant, MI 48858

Parcel Number: 14-013-40-012-00

T14N R4W, SEC 13; N 137 FT OF E 159 FT OF SE ¼ OF SE ¼ SEC 13

MID MICHIGAN COLLEGE

June 21, 2022

Charter Township of Union
2010 S. Lincoln
Mt. Pleasant, MI 48858

RE: Rezoning Application –
Mid Michigan College

To Whom it May Concern:

Mid Michigan College is requesting the rezoning of three (3) individual properties that are contiguous to its campus in Union Township at 2600 S. Summerton Rd. These parcels are currently zoned residential and the College is requesting they be rezoned to B4 (General Business) to be consistent with other parcels owned by the College. This will facilitate future development of the College's campus for the benefit of the greater community. Following is Mid Michigan College's response to item G. Findings of Fact Required, which is provided as an attachment to the township's rezoning application.

1. **Evaluation of existing and proposed zoning districts:** The three parcels requested for rezoning from R1 to B4 are adjacent to B4 zoning to the North, East, and South. To the west, across Summerton Rd. is Chippewa Township. Once rezoned, the parcels will be incorporated into development of the site as an athletic complex, including a baseball field and softball field, as well as associated uses. This planned development and rezoning request is consistent with the Recreational/Institutional Future Land Use classification of all three parcels. Further, the current zoning status of the three parcels as R-1, surrounded by B4 zoning is likely to be prohibitive for any future residential use of the parcels.
2. **Apparent demand:** Mid Michigan College is seeing continued strong demand for extra-curricular activities, as supported by the proposed development for which the rezoning is requested. The rezoning of the three parcels with a total area of 2.59 acres is a relatively minor addition to a much larger 37+ acre site. However, the rezoning of the parcels is critical to development of the new facility, as the site has unique features that constrain development. The addition of the new athletic complex will attract visiting teams and fans to the township and surrounding area to support continued economic development.

3. **Availability of public services and infrastructure:** Access to the site will be from E. Broadway Road to the North and from Summerton to the East, and the site will connect to utilities that serve the existing Mid Michigan College facility. The addition of the athletic complex will not create significant new demands for public utility services, and it represents a small change in impervious surface, as the vast majority of the site will remain as athletic fields with appropriate drainage and stormwater management facilities.
4. **Consistency with the Master Plan:** The three sites for which a rezoning is requested are identified as recreational/institutional in the Union Charter Township Future Land Use map available on the township's website. This is consistent with the classification of the surrounding parcel.
5. **Additional factors:** The requested rezoning represents a change in the zoning map to be consistent with the planned future land use of the area according to the township's master plan. Additionally, the presence of wetlands and efforts by Mid Michigan College to minimize any negative effects on natural features require the athletic complex to shift toward the western portion of the site, where the three subject parcels are located.

Thank you for your consideration in this matter.

Best Regards,

MID MICHIGAN COLLEGE

Preliminary Site Plan Review Application

MID MICHIGAN COLLEGE

NEW SPORTS COMPEX

2600 South Summerton Road
Mt. Pleasant, Michigan

ARCHITECTURAL:

HOBBS + BLACK ARCHITECTS
117 E. ALLEGAN
LANSING, MI 48933
PH: (517) 484-4870

CIVIL:

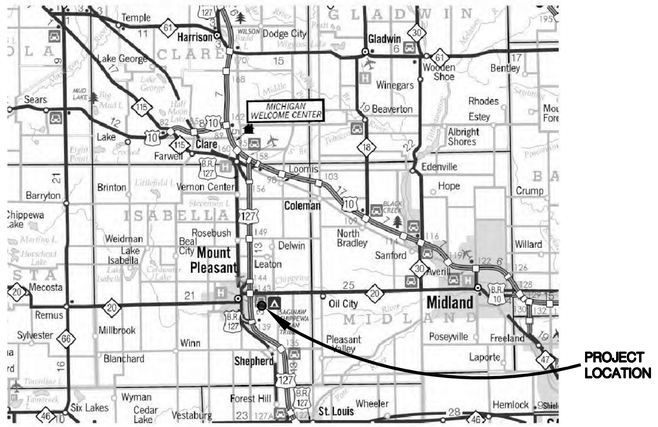
ROWE ENGINEERING & SURVEYING
127 S MAIN STREET
MT PLEASANT , MI 48858

MECHANICAL & ELECTRICAL ENGINEER:

PETER BASSO AND ASSOCIATES
5145 Livernois, Suite 100
Troy, MI 48098
PH: (248) 879-5666

STRUCTURAL:

JDH STRUCTURAL ENGINEERS
3000 IVANREST SW, SUITE B
GRANDVILLE, MI 49418
PH: (616) 531-6020



NORTH

VICINITY MAP
SCALE - N.T.S.

BUILDING HEIGHTS AND AREAS

TRAINING BUILDING	
FIRST FLOOR	10,647 sf
MEZZANINE	831 sf
BUILDING HEIGHT	25'-5"
MAINTENANCE BUILDING	
FIRST FLOOR	10,647 sf
MEZZANINE	564 sf
BUILDING HEIGHT	25'-5"
DUGOUTS BASEBALL	
HOME	612 sf
VISITORS	504 sf
BUILDING HEIGHTS	11'-0"
DUGOUTS SOFTBALL	
HOME	468 sf
VISITORS	355 sf
BUILDING HEIGHT	11'-0"
ANNOUNCERS BOOTH BASEBALL	
FIRST FLOOR	112 sf
SECOND FLOOR	112 sf
BUILDING HEIGHT	19'-6"
ANNOUNCERS BOOTH SOFTBALL	
FIRST FLOOR	112 sf
SECOND FLOOR	112 sf
BUILDING HEIGHT	19'-6"

DRAWING INDEX

GENERAL:

A-000 TITLE SHEET DRAWING INDEX

CIVIL

C-100 SITE NOTES
C-101 SITE LEGEND
C-102 SITE DETAILS
C-103 SITE DETAILS
C-104 SITE DETAILS

C-200 EXISTING CONDITIONS
C-201 DEMOLITION PLAN NORTHEAST
C-202 DEMOLITION PLAN SOUTHEAST
C-203 DEMOLITION PLAN NORTHWEST

C-300 OVERALL SITE PLAN
C-301 SITE PLAN NORTHEAST
C-302 SITE PLAN SOUTHEAST
C-303 SITE PLAN NORTHWEST

C-400 GRADING PLAN NORTHEAST
C-401 GRADING PLAN SOUTHEAST
C-402 GRADING PLAN NORTHWEST

C-500 UTILITY PLAN
C-600 LANDSCAPE PLAN

ARCHITECTURAL:

A-100 TRAINING BUILDING FLOOR PLAN
A-101 MAINTENANCE BUILDING FLOOR PLAN
A-102 BASEBALL HOME DUGOUT PLANS
A-103 SOFTBALL HOME DUGOUT PLANS
A-104 ANNOUNCERS BOOTH PLANS
A-110 ENLARGED AND MEZZANINE FLOOR PLAN

A-300 EXTERIOR ELEVATIONS TRAINING BUILDING
A-301 EXTERIOR ELEVATIONS MAINTENANCE BUILDING
A-302 EXTERIOR ELEVATIONS BASEBALL DUGOUTS
A-303 EXTERIOR ELEVATIONS SOFTBALL DUGOUTS
A-304 EXTERIOR ELEVATIONS ANNOUNCER BOOTH

PRELIM. SITE PLAN REVIEW 5/31/2022
DATE ISSUED

DRAWN BY

CHECKED BY

HOBBS + BLACK ARCHITECTS
117 E. Allegan Street
Lansing, MI 48933
P: 517 484 4870
www.hobbs-black.com

MID MICHIGAN COLLEGE
NEW SPORTS COMPLEX
2600 South Summerton Road
Mt. Pleasant, Michigan

PROJECT

CONSULTANT

TITLE SHEET

SHEET TITLE

22-703

PROJECT NUMBER

A-000

SHEET NUMBER

STATE OF MICHIGAN
MARTIN H RUITER
ARCHITECT
No. 1301046436
LICENSED ARCHITECT

Drawing: P:\2022\2022703\Dwgs\CDArchDWG\SITE PLAN REVIEW\PSHTA000 - site plan review.dwg
Date: May 26, 2022, 4:51 pm Layout: A-000 Plotted by: jmortimore

Drawing: R:\Projects\22\MOD13\3Dwg\Construction Drawings\SH-22MOD13-SURV.dwg
Date: May 31, 2022, 8:56am Layout: EX CONDITION5 Plotted by: 7599mm

LEGAL DESCRIPTION

PARCEL #14-013-40-001-04
PART OF THE EAST ONE-HALF OF THE SOUTHEAST ONE-QUARTER OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, STATE OF MICHIGAN DESCRIBED AS: BEGINNING AT THE EAST ONE-QUARTER CORNER OF SAID SECTION 13; THENCE N 88° 57' 50" W, ALONG THE EAST-WEST ONE-QUARTER LINE, 264.00 FEET; THENCE S 00° 22' 03" E, PARALLEL TO THE EAST SECTION LINE, 165.00 FEET; THENCE N 88° 57' 50" W, PARALLEL TO SAID EAST-WEST ONE-QUARTER LINE, 132.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 165.00 FEET TO THE EAST-WEST ONE-QUARTER LINE; THENCE N 88° 57' 50" W, ALONG SAID EAST-WEST ONE-QUARTER LINE, 500.44 FEET; THENCE S 00° 33' 46" E, 330.00 FEET; THENCE N 88° 57' 50" W, PARALLEL TO SAID EAST-WEST ONE-QUARTER LINE, 447.00 FEET TO THE EAST ONE-EIGHTH LINE; THENCE S 00° 33' 41" E, ALONG SAID EAST ONE-EIGHTH LINE, 1336.11 FEET; THENCE N 89° 37' 57" E, 1337.40 FEET TO THE EAST SECTION LINE; THENCE N 00° 22' 03" W, ALONG SAID EAST SECTION LINE, 179.98 FEET; THENCE N 88° 54' 19" W, PARALLEL TO THE SOUTH ONE-EIGHTH LINE, 159.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 137.00 FEET TO THE SOUTH ONE-EIGHTH LINE; THENCE N 88° 54' 19" W, ALONG SAID SOUTH ONE-EIGHTH LINE, 171.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 264.00 FEET; THENCE S 88° 54' 19" E, PARALLEL TO SAID SOUTH ONE-EIGHTH LINE, 330.00 FEET TO THE EAST SECTION LINE; THENCE N 00° 22' 03" W, ALONG SAID EAST SECTION LINE, 1052.22 FEET BACK TO THE PLACE OF BEGINNING. THIS PROPERTY IS SUBJECT TO AN EASEMENT FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES WITHIN THE RIGHT-OF-WAY OF BROADWAY ROAD AND SUMMERTON ROAD. CONTAINING 44.4 ACRES AND BEING SUBJECT TO RESTRICTIONS, RESERVATIONS, EASEMENTS, RIGHTS-OF-WAY, ZONING, GOVERNMENTAL REGULATIONS, AND MATTERS VISIBLE, IF ANY, UPON OR AFFECTING SAID LANDS.

PARCEL #14-013-40-002-00
COMMENCING 132 FEET NORTH OF THE SOUTHEAST CORNER OF THE NORTHEAST ¼ OF THE SOUTHEAST ¼ OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN; THENCE WEST 320 FEET; NORTH 132 FEET; EAST 330 FEET; SOUTH 132 FEET TO THE POINT OF BEGINNING.

PARCEL #14-013-40-003-00
COMMENCING AT THE SOUTHEAST OF THE NORTHEAST ¼ OF THE SOUTHEAST ¼ OF SECTION 13, T14N, R4W, CHARTER TOWNSHIP OF UNION, ISABELLA COUNTY, MICHIGAN; THENCE WEST 330 FEET, THENCE NORTH 132 FEET, THENCE EAST 330 FEET, THENCE SOUTH 132 FEET TO POINT OF BEGINNING.

PARCEL #14-013-40-012-00
A PARCEL OF LAND DESCRIBED AS THE NORTH 137 FEET OF THE EAST 159 FEET OF THE SOUTHEAST QUARTER (SE ¼) OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

EX STRUCTURE INVENTORY

MH# 3058
TYPE: STORM
COVER: BEEHIVE
RIM= 760.95
12" RCP N INV.=757.85
12" RCP E INV.=757.85

MH# 3070
TYPE: STORM
COVER: BEEHIVE
RIM= 761.35
12" RCP W INV.=758.25

MH# 3198
TYPE: SANITARY
COVER: SOLID
RIM= 764.10
8" PVC S INV.=750.90
8" PVC W INV.=750.90

MH# 3207
TYPE: SANITARY
COVER: SOLID
RIM= 764.03
8" PVC N INV.=750.53
8" PVC E INV.=750.43

MH# 3224
TYPE: SANITARY
COVER: SOLID
RIM= 763.76
8" PVC NE INV.=751.46
8" PVC SW INV.=751.36

MH# 3274
TYPE: SANITARY
COVER: SOLID
RIM= 762.58
8" PVC SW INV.=752.68
8" PVC NE INV.=752.68
8" PVC W INV.=755.38

MH# 3440
TYPE: SANITARY
COVER: SOLID
RIM= 763.33
8" PVC S INV.=749.63
8" PVC W INV.=750.23
8" PVC NE INV.=749.73

MH# 4127
TYPE: STORM
COVER: CURB INLET
RIM= 763.87
12" RCP E INV.=755.57
12" RCP S INV.=755.27
12" RCP W INV.=755.57
12" RCP N INV.=755.37

MH# 4130
TYPE: STORM
COVER: BEEHIVE
RIM= 761.78
8" PVC W INV.=756.58
12" RCP E INV.=756.48

MH# 5039
TYPE: STORM
COVER: SOLID
RIM= 761.30
12" RCP W INV.=756.30
12" RCP SE INV.=756.30

MH# 5139
TYPE: STORM
COVER: SOLID
RIM= 761.60
12" RCP NW INV.=755.90
12" RCP E INV.=755.90

MH# 5188
TYPE: STORM
COVER: CURB INLET
RIM= 763.12
12" RCP N INV.=755.72
12" RCP S INV.=755.62
12" RCP W INV.=755.72

MH# 5192
TYPE: STORM
COVER: CURB INLET
RIM= 763.38
12" RCP S INV.=755.68
12" RCP W INV.=755.78
12" RCP N INV.=755.78

MH# 5268
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.96
24" RCP N INV.=756.26
24" RCP S INV.=756.36

MH# 5289
TYPE: STORM
COVER: FLAT GRATE
RIM= 761.65
4" CPP S INV.=760.85

MH# 5354
TYPE: SANITARY
COVER: SOLID
RIM= 761.50
8" PVC SW INV.=754.50
8" PVC NE INV.=754.60

MH# 5629
TYPE: STORM
COVER: FLAT GRATE
RIM= 761.04
24" RCP NW INV.=756.74
24" RCP SE INV.=756.74

MH# 5630
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.44
18" RCP NW INV.=756.79
24" RCP SE INV.=756.79

MH# 5865
TYPE: STORM
COVER: BEEHIVE
RIM= 762.44
8" CPP NW INV.=758.33
12" RCP S INV.=757.14
6" PV NE INV.=758.94

MH# 6087
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.25
12" RCP E INV.=758.45

MH# 6089
TYPE: STORM
COVER: SOLID
RIM= 762.68
12" RCP N INV.=758.48
12" RCP S INV.=756.88
12" RCP W INV.=758.38
12" CMP E INV.=758.38

MH# 6150
TYPE: STORM
COVER: SOLID
RIM= 763.96
24" RCP S INV.=756.46
24" RCP N INV.=756.46
12" RCP W INV.=757.76

MH# 6151
TYPE: STORM
COVER: SOLID
RIM= 763.19
24" RCP NE INV.=756.39
24" RCP S INV.=756.39
12" PV W INV.=758.09

MH# 6163
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.97
24" RCP NW INV.=756.67
24" RCP SE INV.=756.67

MH# 6164
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.98
12" RCP N INV.=756.68
24" RCP NW INV.=756.68
30" RCP E INV.=756.68

MH# 6165
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.91
30" RCP W INV.=756.61
30" RCP E INV.=756.61

MH# 6166
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.87
30" RCP W INV.=756.37
12" RCP S INV.=756.47
30" RCP E INV.=756.37

MH# 6167
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.87
12" RCP N INV.=756.57

MH# 6168
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.84
30" RCP E INV.=756.04
30" RCP W INV.=756.04

MH# 6698
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.35
12" RCP W INV.=758.15
12" RCP S INV.=758.15

MH# 6700
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.19
12" RCP E INV.=758.39

MH# 6880
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.93
4" CPP SE INV.=758.43
12" RCP W INV.=757.83
8" CPP SW INV.=757.83
12" RCP N INV.=757.63

MH# 6928
TYPE: STORM
COVER: BEEHIVE
RIM= 760.83
12" RCP W INV.=757.83
12" RCP E INV.=757.83

MH# 6998
TYPE: STORM
COVER: BEEHIVE
RIM= 761.82
12" RCP W INV.=757.12
8" PV S INV.=757.12
12" RCP E INV.=756.82

MH# 7000
TYPE: STORM
COVER: SOLID
12" RCP N INV.=756.50
12" RCP W INV.=756.50
12" RCP E INV.=756.50

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 11	766298	13027153	764.98	BM 11
BM 12	766236	13026605	764.75	BM 12
BM 13	766074	13027699	763.78	BM 13

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 1	766291.6960	13027000.2720	TP 1
TP 2	766224.9610	13026654.8100	TP 2
TP 3	766180.7600	13027638.5860	TP 3

811
Know what's **below.**
Call before you dig.

Sheet Size – 24x36

PRELIM. SITE PLAN REVIEW 5/31/2022
DATE ISSUED

MJM
DRAWN BY

TRG
CHECKED BY

HOBBS+BLACK ARCHITECTS
117 E. Main Street
Leonard, MI 48367
P: 877.264.4326
www.hobbsblack.com

MID MICHIGAN COLLEGE NEW SPORTS COMPLEX
PROJECT

ROWE PROFESSIONAL SERVICES COMPANY
127 E. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7797
www.rowepsc.com
CONSULTANT

EXISTING CONDITIONS
SHEET TITLE

22-703
PROJECT NUMBER

C-200
SHEET NUMBER

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 241

REZONING REPORT

TO:	Planning Commission	**DATE:**	June 30, 2022
FROM:	Peter Gallinat, Zoning Administrator	**ZONING:**	R-1, Rural Residential

PROJECT: PREZ22-02 Request to rezone three parcels zoned R-1(Rural Residential) District to the B-4 (General Business) District, which would accommodate the development of an athletic sports complex for Mid-Michigan College.

PARCEL(S): PID 14-013-40-001-04, 14-013-40-002-00, 14-013-40-003-00, 14-013-40-012-00

OWNER(S): Mid Michigan College

LOCATION: 2.59 acres on the west side of S. Summerton Road in the SE 1/4 of Section 13.

EXISTING USE: Mid Michigan College, vacant land

ADJACENT ZONING: B-4, R-1, SCIT, Commercial/AG Chippewa Township

FUTURE LAND USE DESIGNATION: *Recreation/Institutional*: This category is designated primarily for indoor/outdoor recreation both private and publicly owned.

ACTIONS REQUESTED: To hold a public hearing and to recommend that the Board of Trustees [APPROVE] [DENY] the proposal to rezone (PID # PID 14-013-40-001-04, 14-013-40-002-00, 14-013-40-003-00, 14-013-40-012-00) located on the west side of S. Summerton Road from R-1 (Rural Residential District) to B-4 (General Business District) per Section 14.5 (Amendments).

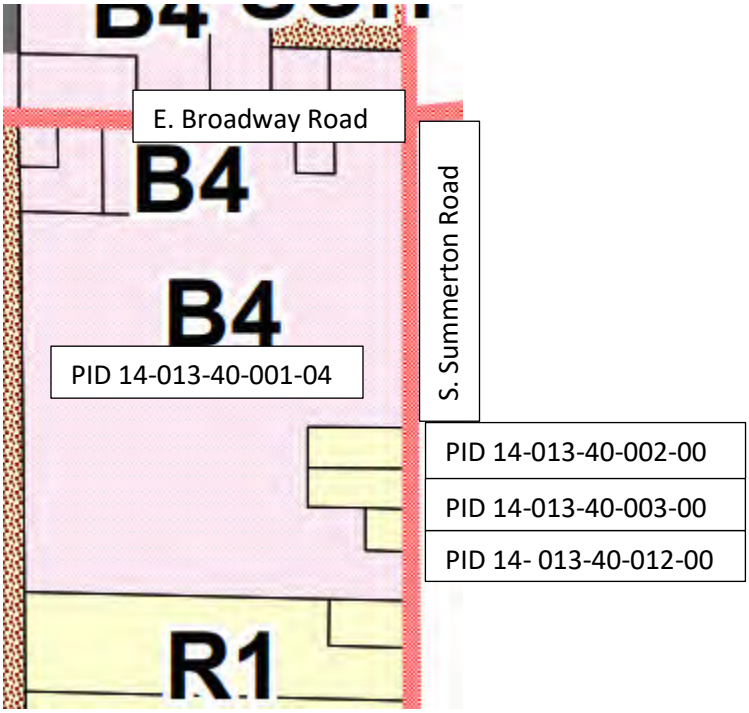
Background Information

Mid Michigan College submitted a preliminary site plan application for the development of an athletic sports complex located at their Mt. Pleasant campus. The area involved a total of 47 acres spanning over four (4) separate parcels. During the staff review of the application, it was noted that three (3) of the parcels (approximately 2.59 acres) are currently zoned R-1, Rural Residential District. Unfortunately, the R-1 District does not include colleges as an allowable use, meaning the associated athletic fields cannot be allowed as an accessory use if they are located in this zoning district. There is also no allowance for outdoor recreation facilities in the R-1 District.

These three (3) parcels were purchased in the past by the College with the intention for future development. They are currently vacant. All existing College facilities are located on the larger B-4 parcel. For the College's planned athletic fields development project to move forward, these three (3) parcels would need to be zoned B-4, General Business, and the College would need to take action to apply to the Township Assessor for a land combination of all four (4) parcels into one (1) new parcel.

Existing Zoning

The following is an excerpt from the Township's Official Zoning Map showing the subject parcel, existing zoning district arrangement, and surrounding zoning:



Review Comments

In reviewing any proposed amendment to the Official Zoning Map, the Planning Commission is required by Section 14.5.G. of the Zoning Ordinance to "*identify and evaluate all relevant factors in preparing its report of findings of fact, conclusions, and recommendation to the Township Board*." This Section includes a set of factors to consider, which are summarized below in the bold headings. These criteria are one of the new features of Zoning Ordinance No. 20-06. Staff comments follow under each heading:

Findings of Fact (Section 14.5.G)

1. **Evaluation of existing and proposed zoning districts.**

   a. Parcels in this area that abut Mid Michigan College are zoned B-4 to the north along E. Broadway Road. The Master Plan supports the proposed rezoning: The Future Land Use Map (pg. 24) designates the subject parcels for "*Recreation/Institutional*" uses, including "*indoor/outdoor recreation both public and privately owned.*"

   b. The three (3) subject parcels are surrounded by the existing Mid Michigan property and B-4, General Business zoning to the north, south and west.

   c. Leaving the subject parcels in the R-1 District would prohibit Mid Michigan College from using the land for purposes consistent with and common to a college campus.

2. **Apparent demand**.

   a. Mid Michigan College is the only institution of higher education in the Township. The applicant has indicated that there is a current demand from its student population for outdoor extracurricular activities, including outdoor athletics and recreation.

   b. Although any B-4 zoned parcel could be used for an outdoor recreation facility, this area is one where the Township Master Plan has specifically planned for it.

   c. The Township's ballfields at McDonald Park are used extensively during the baseball/softball season by youth leagues. In 2017 land adjacent on E. Remus Rd. at US-127 was rezoned by the Township for the purpose of outdoor athletic fields for Morey Courts. At that time, the Morey Foundation felt there was a need for additional athletic fields. Unfortunately, due to funding this project has not yet been realized.

3. **Availability of public services and infrastructure.** *Rezoning of undeveloped land to a more intensive zoning district should only take place in conjunction with the availability of public service and infrastructure to serve all of the allowable land uses in the proposed district*.

   a. The location has existing utilities to accommodate allowable uses in a B-4 District. The rezoning of the portion of the parcel from R-1 to B-4 would not compromise the health, safety and welfare of Township residents or burden public entities.

   b. Once all parcels are combined, the existing location will have sufficient access on E. Broadway Road and S. Summerton Road to accommodate anticipated traffic generated by uses permitted in the B-4 District.

   c. The Township is currently serviced by the Isabella County Sheriff, Mt. Pleasant Fire Department, Isabella County Transportation Commission, Isabella County Road Commission, and Mt. Pleasant Public Schools. All of these public services would be able to serve all potential uses on a B-4 parcel at this location.

4. **Consistency with the Master Plan.**

   a. *"Determine whether the intent and all of the allowable uses within the requested zoning district are compatible with the goals, objectives, and policies of the Master Plan, including the future land use designation(s) for the site*."

      ✓ The future land use designation for these parcels is recreational/institutional.

   b. "A rezoning inconsistent with the Master Plan should only be considered where specific findings are made that demonstrate conditions have changed significantly since the Plan was prepared, and/or new information supports a change. In such cases, the Township may first consider an amendment to the Plan."

      - Currently, the Master Plan suggest that the corresponding zoning district for a designated recreation/institutional area should be R-1. However, an R-1 District does not currently allow for a school/college land use, which often provide for indoor/outdoor recreation. This is a particular area that staff would recommend for Planning Commission consideration as part of any Master Plan update.

c. *"The future land use recommendations of the Master Plan are based upon a ten- to twenty-year timeframe. Consider whether the timing of the proposed rezoning is appropriate, given trends in the area, infrastructure capacity, and other factors."*

   ✓ Based on trends in the area, availability of public infrastructure, the timing of this rezoning proposal is appropriate for consideration.

5. **Additional factors.**

   a. No adverse impacts on physical, geological, hydrological, historical or archeological features are anticipated by the proposed rezoning or development of the parcels consistent with Zoning Ordinance requirements.
   b. This amendment will not create any special privilege.
   c. The amendment will not result in unlawful exclusionary zoning.
   d. The amendment will not set an inappropriate precedent.

Objective

Following the public hearing the Planning Commission shall review the rezoning application and then make a recommendation to the Board of Trustees. The Planning Commission may recommend approval of the zoning change as proposed by the applicant from R-1 (Rural Residential District) to B-4 (General Business District), or may recommend that the proposed rezoning be rejected (to retain the existing R-1 zoning of the subject parcels).

Key Findings

- The subject parcels were all purchased by Mid-Michigan College between 2012 and 2017.
- This rezoning is fully consistent with the Master Plan's goals, objectives, and policies for the Recreation/Institutional area as designated on the Future Land Use map.
- The College has no plans to use the existing parcels for any residential purpose.
- The proposed rezoning will not create any special privilege, result in unlawful exclusionary zoning or set an inappropriate precedent.
- No adverse impacts are anticipated by the proposed rezoning or development of the lot consistent with Zoning Ordinance requirements.

Recommendations

Based on the above findings, I would ask that the Planning Commission consider taking action to recommend that the Board of Trustees approve the proposal to rezone PID 14-013-40-002-00, 14-013-40-003-00, and 14-013-40-012-00 from R-1 (Rural Residential District) to B-4 (General Business District). Please contact me at (989) 772-4600 ext. 241, or via email at pgallinat@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,

Peter Gallinat, Zoning Administrator
Community and Economic Development Department

Draft Motions: Zoning Map Amendments
Mid Michigan College

MOTION TO RECOMMEND APPROVAL OF THE REZONING AS REQUESTED:

Motion by _____, supported by _____, to recommend to the Township Board of Trustees that the PREZ22-02 Zoning Map Amendment to rezone three (3) parcels totaling 2.59 acres of land (PID 14-013-40-002-00, -003-00, and -012-00) on the west side of S. Summerton Road in the southeast quarter of Section 13 from R-1 (Rural Residential District) to B-4 (General Business District) be adopted based on the following findings and conclusions:

1. This rezoning is fully consistent with the Master Plan's goals, objectives, and policies for the Recreation/Institutional area as designated on the Future Land Use map.
2. The subject parcels were all purchased by Mid-Michigan College between 2012 and 2017.
3. The College has no plans to use the existing parcels for any residential purpose.
4. The proposed rezoning will not create any special privilege, result in unlawful exclusionary zoning or set an inappropriate precedent.
5. No adverse impacts are anticipated by the proposed rezoning or development of the lot consistent with Zoning Ordinance requirements.

_____

MOTION TO RECOMMEND DENIAL OF THE REQUESTED REZONING:

Motion by _____, supported by _____, to recommend to the Township Board of Trustees that the PREZ22-02 Zoning Map Amendment to rezone three (3) parcels totaling 2.59 acres of land (PID 14-013-40-002-00, -003-00, and -012-00) on the west side of S. Summerton Road in the southeast quarter of Section 13 from R-1 (Rural Residential District) to B-4 (General Business District) be denied based on the following findings and conclusions:

1. This rezoning is not fully consistent with the Master Plan's goals, objectives, and policies for the Recreation/Institutional area as designated on the Future Land Use map.

_____

_____

_____

MOTION TO POSTPONE ACTION:

Motion by _____, supported by _____, to postpone action on the PREZ22-02 Zoning Map Amendment until _____ for the following reasons: _____

_____

Charter Township of Union

APPLICATION FOR SITE PLAN REVIEW

[ ] Minor Site Plan [ ] Preliminary Site Plan [x] Final Site Plan

A Completed Application will contain all the information required per the Zoning Ordinance, Section 14.2 (Site Plan Review).

Name of Proposed Development/Project **PARALLEL / AT&T PIMI429**

Common Description of Property & Address (if issued)

5450 S MISSION ROAD, MT. PLEASANT, MI 48858

Applicant's Name(s) **TONY PHILLIPS-FULLERTON ENGINEERING FOR PARALLEL / AT&T**

Phone/Fax numbers **847-331-3659** Email **tphillips@fulleertonengineering.com**

Address **1100 E. WOODFIELD RD. SUITE 500** City: **SCHAUMBURG, IL** Zip: **60173**

Legal Description: [ ] Attached [x] Included on Site Plan Tax Parcel ID Number(s): **14-034-20-005-00**

Existing Zoning: **B-4** Land Acreage: **7.52** Existing Use(s): **COMMERCIAL BLDG / FARM**

[ ] **ATTACHED: Letter describing the project and how it conforms to Section 14.2.S. (Standards for Site Plan Approval)**

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: **FULLERTON ENGINEERING** Phone: **847-908-8400** Email **dzrnic@fullertonengineering.com** 2. Address: **1100 E WOODFIELD RD. SUITE 500** City: **SCHAUMBURG** State: **IL** Zip: **60173** Contact Person: **DALIBOR ZRNIC** Phone **847-908-8400**
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application. Attach a separate sheet if more space is needed.	1. Name: **KLUMP MANAGEMENT, LLC** Phone: **989-621-3577** Address: **1955 E WALTON ROAD** City: **SHEPHARD** State: **MI** Zip: **48883** Signature: **SEE ATTACHED LEASE** Interest in Property: **OWNER** 2. Name: Phone: Address: City: State: Zip: Signature: Interest in Property:

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and/or removal of work installed. Approval of this plan shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Signature of Applicant — Date: **6/21/22**

Office Use Only

Application Received By: _____ Fee Paid: $_____

Date Received: _____ Escrow Deposit Paid: $_____

Preliminary Site Plan Review Procedure

Each preliminary site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Preliminary Site Plan Approval

Approval of a preliminary site plan by the Planning Commission shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas in accordance with the standards for preliminary site plan approval specified in subsection 14.2(S). The Planning Commission may, at its discretion and with appropriate conditions attached, authorize limited work to begin for soils exploration, incidental site clearing, and other preliminary site work as specified in the authorization.

Outside Agency Approvals

The applicant shall be responsible for obtaining all necessary permits or approvals from applicable outside agencies, prior to final site plan approval.

Final Site Plan Review Procedure

Each final site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Final Site Plan Approval

Approval of a final site plan by the Planning Commission constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction, provided all other construction and engineering requirements have been met.

Minor Site Plan Review Procedure

A minor site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee, and two (2) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and site plans, at a maximum sheet size of 11 inches by 17 inches, at the Township Hall. The Zoning Administrator shall review the application materials and site plan for completeness, accuracy, and compliance with all applicable requirements and standards of this Ordinance and other Township ordinances.

The minor site plan shall be approved by the Zoning Administrator upon determination that all required information for the type of site plan has been provided per subsection 14.2(P), the site plan satisfies the applicable standards for site plan approval per subsection 14.2(S); and the site plan conforms to all other applicable requirements and standards of this Ordinance and other Township ordinances.

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: **AT&T MOBILITY**

Name of business owner(s): **ANNETTE FULLERTON - PROGRAM MANAGER**

Street and mailing address: **308 S. AKARD ST. 19TH FLOOR CUBE 1930.02**
DALLAS, TX 75202

Telephone:

Fax: **925-549-4281**

Email: **av8320@att.com**

I affirm that the information submitted is accurate.

Owner(s) signature and date: **4/17/22**

TONY PHILLIPS - AUTHORIZED REPRESENTATIVE

Information compiled by: **FULLERTON ENGINEERING CONSULTANTS, LLC**

Types and Quantities of Hazardous Substances and Polluting Materials Used, Stored or Generated On-Site

Please list the hazardous substances and polluting materials (including chemicals, hazardous materials, petroleum products, hazardous wastes and other polluting materials) which are expected to be used, stored or generated on -site. Quantities should reflect the maximum volumes on hand at any time. Attach additional pages if necessary to list all hazardous substances and polluting materials.

COMMON NAME	CHEMICAL NAME (components)	FORM	MAX QUANTITY ON HAND AT ONE TIME	TYPE OF STORAGE CONTAINERS
DIESEL FUEL		**LIQUID**	**190**	**AGT**
_____ NONE	**KEY:** LiQ. = liquid P.LIQ = pressurized liquid S = solids G = gas PG = pressurized gas			**KEY:** AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank

Section 14.2 Site Plan Review (excerpts)

A. Purpose and Scope.
The purposes of this Section are to establish uniform requirements of procedure for review of site plans for new development in the Township; to confirm compliance with this Ordinance and other Township ordinances prior to the start of construction; and to ensure that development in the Township is consistent with the adopted policies of the Township's Master Plan.

B. Authority.
Flexible standards have been established to ensure that the type of review and amount of required information is proportional to the project's scale and intensity. The Planning Commission shall have the authority to review and take action on preliminary site plan and final site plan applications and the Zoning Administrator shall have authority to review and take action on minor site plan applications, all in accordance with this Section and Ordinance.

1. Preliminary site plan. Requirements for a preliminary site plan are intended to allow for review of the general character of the proposed use(s), general site layout, and location of structures and other site improvements; and to confirm that the overall development can conform to Ordinance requirements.
2. Final site plan. A final site plan is a set of engineering, architectural, and/or landscape design drawings that satisfy all applicable requirements of this Ordinance and outside agencies with jurisdiction, which are prepared by registered design professionals based on an approved preliminary site plan and depict all planned building, pedestrian access, parking, grading, drainage, infrastructure, exterior lighting, and other site improvement details for a given lot and development project.
3. Minor site plan. The reduced information requirements for a minor site plan submittal, as specified in Section 14.2(P) (Required Site Plan Information), are intended to allow for administrative review of a limited range of low intensity projects that do not include significant engineering or design details.

C. Site Plan Approval Required.
No permits shall be issued, no construction of or addition to any structure shall take place, and no land use for which site plan approval is required shall be established or expanded until all required site plans have been approved in accordance with this Section and Ordinance. Except as permitted in accordance with this Section, no grading, grubbing, cutting of trees or other vegetation, excavation, landfilling, or construction of improvements shall commence for any development for which site plan approval is required until all required site plans have been approved in accordance with the following:

Site Plan Approval Required	Type of Approval Required			
	Preliminary Site Plan	Final Site Plan	Minor Site Plan	Exempt
Adult foster care large group homes, group child day care homes, and home-based limited businesses subject to special use permit approval in the zoning district per Section 3.			✔	
All other land uses subject to special use permit approval in the zoning district, and all land uses for which site plan approval is otherwise required by provisions of this Ordinance.	✔	✔		
Farm-based tourism and entertainment activities (agri-tourism), public stables, permanent auction facilities, and religious institutions as allowed in the Agricultural (AG) District per Section 3.	✔	✔		
Private off-road courses as allowed in the Agricultural (AG) District per Section 3.			✔	
Customary agricultural operations, private stables, and greenhouses as allowed in the Agricultural (AG) and Rural Residential (R-1) zoning districts per Section 3, provided that the structures and improvements shall conform to all applicable Ordinance standards.				✔
Construction, relocation or alteration of a two family (duplex) dwelling, detached single family dwelling or customary accessory structures on a single lot, provided that the structures and improvements shall conform to all applicable Ordinance standards.				✔

Site Plan Approval Required	Type of Approval Required			
	Preliminary Site Plan	Final Site Plan	Minor Site Plan	Exempt
Home occupations that conform to the requirements of Section 6.19.				✔
Family day care homes, adult foster care family homes and small group homes, and child foster family homes and family group homes, as licensed by the State of Michigan.				✔
Multiple-family residential buildings and uses, independent or dependent senior housing, assisted living facilities, nursing homes; homes for the aged, and religious institutions as allowed in the Residential Districts per Section 3.	✔	✔		
All land uses allowed in the Business Districts and Industrial Districts per Section 3.	✔	✔		
All planned unit development (PUD) projects, as approved by the Township Board in accordance with Section 3.18.	✔	✔		
Construction or expansion of buildings, equipment storage yards, and associated above-ground site improvements occupied by or intended for occupancy by essential services in any zoning district.	✔	✔		
The improvement, expansion, extension or abandonment of public or private overhead or underground utility lines or easements.				✔
Any development which would, if approved, provide for the establishment of more than one principal use or building on a lot.	✔	✔		
Establishment or alteration of a condominium subdivision of an existing building into separate units in accordance with the Condominium Act and Section 5.1 of this Ordinance provided that no new construction or alteration of existing buildings or site improvements are proposed or required, and compliance with the requirements and standards of this Ordinance will not be affected.			✔	
Establishment or alteration of any other condominium subdivision in accordance with the Condominium Act and Section 5.1.	✔	✔		
A change in use for an existing multiple-family, mixed use or non-residential building where the Zoning Administrator has determined that no new construction or alteration of the building or site improvements are required and compliance with the requirements and standards of this Ordinance will not be affected.			✔	
Any other change in use for an existing multiple-family, mixed use or non-residential building.	✔	✔		
Expansion of an existing multiple-family, mixed use or non-residential principal building of up to ten percent (10%) of the gross floor area, and any alterations that affect the exterior appearance, pedestrian access or function of the building without a floor area increase.			✔	
Expansion of an existing multiple-family, mixed use or non-residential principal building exceeding ten percent (10%) of the gross floor area.	✔	✔		
Relocation of a multiple-family, mixed use or non-residential building.	✔	✔		
Establishment or alteration of a multiple-family, mixed use or non-residential accessory use or structure where the Zoning Administrator has determined that compliance with the requirements and standards of this Ordinance will not be affected.			✔	
Any other establishment or alteration of any other multiple-family, mixed use or non-residential accessory use or structure,	✔	✔		
Expansion of any multiple-family, mixed use or non-residential off-street parking facility by up to 2,750 square feet.			✔	

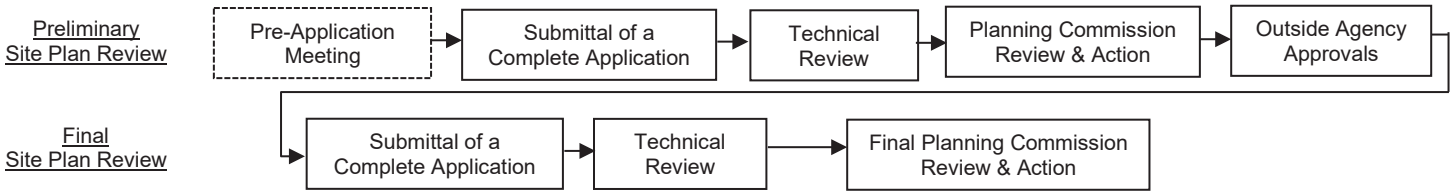
Site Plan Approval Required	Type of Approval Required			
	Preliminary Site Plan	Final Site Plan	Minor Site Plan	Exempt
Expansion of any multiple-family, mixed use or non-residential off-street parking facility exceeding 2,750 square feet.	✔	✔		
Construction, extension or alteration of a private road, as authorized by Ord. No. 2009-09, that is located outside of a subdivision plat.	✔	✔		
Incidental changes during construction due to unanticipated site constraints or outside agency requirements, and minor landscaping changes or species substitutions, consistent with an approved final site plan.			✔	
Incidental building modifications that do not significantly alter the facade, height or floor area of a multiple-family, mixed use or non-residential building.			✔	
Changes to a site required to comply with State Construction Code requirements.			✔	
Sidewalk or pedestrian pathway construction, or barrier-free improvements.			✔	
Construction of fences, exterior lighting improvements, or installation of screening around a waste receptacle, mechanical unit or similar equipment for a multiple-family, mixed use or non-residential use.			✔	
Re-occupancy of an existing multiple-family, mixed use or non-residential building that has been vacant for more than 365 calendar days, provided that no variances to the requirements of this Ordinance are required and the proposed use will be conducted within a completely enclosed building, and will not require access changes or other substantial modifications to the existing site.			✔	

1. Extraction operations. For extraction operations as authorized under the Township's Extraction Ordinance No. 20-01, Planning Commission approval of an Extraction Permit and associated mining and reclamation plans shall also constitute site plan approval for the use under this Ordinance.

2. Mobile home parks. Construction, expansion or alteration of a mobile housing park shall be subject to preliminary plan approval in accordance with Section 3.12 and the procedures and standards established under Section 11 of the Mobile Home Commission Act (Public Act 96 of 1987, as amended), as summarized below:

    a. The preliminary plan shall include the location, layout, general design, and general description of the project. The preliminary plan shall not include detailed construction plans.
    b. In preparing the preliminary plan and when reviewing the plan, the developer and Planning Commission shall generally follow the review procedure outlined in this Section for preliminary site plan approval, where applicable, except where pre-empted by requirements of the Mobile Home Commission Act or Manufactured Housing Rules.
    c. Pursuant to Section 11 of the Mobile Home Commission Act, the Planning Commission shall take action on the preliminary plan within 60 days after the Township officially receives the plan.

D. Summary of the Site Plan Review Processes.



NOTE: Applicant may combine preliminary and Final Site Plan Review, per Section 14.2(M)

P. Required Site Plan Information.

The following minimum information shall be included with any application for site plan approval, except where the Township Planner, Zoning Administrator or Planning Commission determines that an item of information is not applicable or necessary for review of the site plan:

Minimum Site Plan Information	Minor Site Plan	Preliminary Site Plan	Final Site Plan
SITE PLAN DESCRIPTIVE INFORMATION			
Name, address, and other contact information for the applicant and property owners, along with proof of ownership and signed consent if applicant is not the owner.	●	●	●
Name, address, and other contact information of the firm or individual preparing the site plan. Site plans prepared by an architect, community planner, engineer, landscape architect or land surveyor shall bear the individual's professional seal.	●	●	●
A final site plan shall be prepared and sealed by an architect, engineer, landscape architect or land surveyor registered in the State of Michigan.			●
Location, address(es), and tax identification number(s) of subject parcel(s); dimensions of the site, and the gross and net land area.	●	●	●
Legal description(s) of the subject parcel(s).		●	●
Legal description of the proposed development site and any non-contiguous open space area(s), if different from the subject parcel(s), with lot line angles or bearings indicated on the plan. Dimensions, angles, and bearings shall be based upon a boundary survey prepared by a registered surveyor.		●	●
Details of existing and proposed covenants or other restrictions imposed upon land or buildings, including bylaws, deed restrictions, and articles of incorporation for a cooperative, condominium, or homeowners' association.			●
Description of applicant's intentions regarding selling or leasing of all or portions of land, dwelling units or building spaces.		●	●
Residential projects: Gross and net dwelling unit density, lot area per dwelling unit, and a schedule of the number, sizes (bedrooms, floor areas), and types of dwellings.		●	●
A detailed use statement describing proposed use(s); including land or building areas for each use, number of units, number of anticipated employees, or other applicable information to verify Ordinance compliance.	●	●	●
SITE PLAN DATA AND NOTES			
Minor site plans shall be drawn to a scale appropriate for the sheet size and of such accuracy that the Zoning Administrator can readily interpret the plan.	●		
Preliminary and final site plans shall be drawn to an engineer's scale not greater than 1:50 and legible at the required sheet size. For a large development shown in sections on multiple sheets, one overall composite sheet shall be provided for clarity.		●	●
Vicinity map showing the general location of the site, map scale, north arrow, initial plan date, and any revision date(s).	●	●	●
Existing zoning classification(s) for the subject parcel(s) and surrounding parcels (including across road rights-of-way).		●	●
Owners' names, existing uses, and location of structures, drives, and improvements on surrounding parcels (including across rights-of-way).		●	●
Identification of all adjacent property in which the applicant(s), developer(s), or owner(s) have an ownership interest.		●	●
Dimensions of all property boundaries and interior lot lines.	●	●	●
Calculations for parking, lot coverage, total ground floor area, and other applicable Ordinance requirements.	●	●	●

Minimum Site Plan Information	Minor Site Plan	Preliminary Site Plan	Final Site Plan
EXISTING CONDITIONS			
Location of existing structures, fences, and driveways on the subject property, with notes regarding their preservation or alteration.	●	●	●
Location of existing walls, signs, utility poles and towers, pipelines, excavations, bridges, culverts, and other site features on the subject property, with notes regarding their preservation or alteration.		●	●
SITE PLAN DETAILS			
Delineation of required yards, and other setback areas and open space.	●	●	●
Identification of general location(s) and area(s) of each development phase; and the planned construction program and schedule for each development phase.		●	●
Location, width, purpose, and description of all existing and proposed easements and rights-of-way on or adjacent to the site.	●	●	●
Location, type, area, height, and lighting specifications of proposed signs.	●		●
An exterior lighting plan with all existing and proposed lighting locations, heights from grade, specifications, lamps types, and methods of shielding.	●		●
Location, area, and dimensions of any outdoor sales, display or storage areas.	●	●	●
Location of proposed outdoor waste receptacle enclosures; with size, elevation, and vertical cross-section showing materials and dimensions; indication how recycling will be implemented.		●	●
BUILDING DESIGN AND ORIENTATION			
Location, outline, ground floor area, and height of proposed structures; and of existing structures to remain on-site.	●	●	●
Dimensions, number of floors, and gross and net floor area of proposed principal buildings; and of existing principal buildings to remain on-site.		●	●
Separation distances between adjacent buildings, and between buildings and adjacent lot boundaries.		●	●
Detailed exterior building façade elevation drawings for all proposed dwellings, principal buildings, and additions, drawn to an appropriate scale and indicating types, colors, and dimensions of finished wall materials.		●	●
Finished floor elevations and contact grade elevations for proposed principal buildings and existing principal buildings to remain on-site, referenced to a common datum acceptable to the Township Engineer.			●
ACCESS AND CIRCULATION			
Locations, layout, surface type, centerlines, road pavement and right-of-way widths, and indication of public or private road status for all existing and proposed roads and access drives serving the site.		●	●
Conceptual locations, layout, and surface type for all parking lots, sidewalks, and pedestrian pathways within and accessing the site.	●	●	●
Locations and dimensions of vehicle access points, and distances between adjacent or opposing driveways and road intersections.	●	●	●
Details of the location, width, and paving of proposed sidewalks and pedestrian ways, including alignment, cross section, connections to existing or planned off-site facilities, and easement or right-of-way dedications.	●		●
Parking space dimensions, pavement markings, and traffic control signage.	●	●	●

Minimum Site Plan Information	Minor Site Plan	Preliminary Site Plan	Final Site Plan
Parking space angles; maneuvering aisle, island, and median dimensions; surface type; fire lanes; drainage patterns; location of loading areas; and typical cross-section showing surface, base, and sub-base materials.		●	●
Identification of proposed names for new public or private roads serving the site.		●	●
Spot elevations for existing roads on and adjacent to the subject parcel(s), including surface elevations at intersections with the internal roads and drives serving the proposed development; curve-radii and road grades; location and details of curbs, and turning lanes; and typical road cross sections showing surface, base, and sub-base materials and dimensions.			●
NATURAL FEATURES AND OPEN SPACE AREAS			
A general description and preliminary delineation of existing natural features on and abutting the site.		●	●
Details of all existing natural features on the site; indications of features to be preserved, removed, or altered; and any mitigation measures as may be required by Township ordinance or state statute.			●
Outdoor open space and recreation areas; location, area, and dimensions.		●	●
Description of the organization that will own and maintain open space and recreation areas, and a long-term maintenance plan for such areas.			●
SCREENING AND LANDSCAPING			
General layout of proposed landscaping and screening improvements; including plantings, topographic changes, and similar features.	●	●	●
A detailed landscape plan, including location, size, quantity and type of proposed plant materials and any existing plant materials to be preserved.			●
Planting list for all landscape materials, with the method of installation, botanical and common name, quantity, size, and height at planting.			●
Landscape maintenance plan, including notes regarding replacement of dead or diseased plant materials.			●
Proposed fences, walls, and other screening devices, including typical cross section, materials, and height above grade.	●	●	●
Screening methods for any waste receptacle areas, ground-mounted generators, transformers, mechanical (HVAC) units, and similar devices.	●	●	●
UTILITIES, STORMWATER MANAGEMENT, AND GRADING			
General layout of existing and proposed water supply systems, sanitary sewerage or septic systems, and stormwater management facilities.		●	●
Details of the location, layout, and size or capacity of the existing and proposed potable water supply and sewage treatment and disposal facilities serving the site, including line sizes, inverts, hydrants, flow patterns, manholes, and catch basins.			●
Location, size, and slope of proposed detention or retention ponds; and location and size of underground tanks and drain lines where applicable.			●
Calculations for capacity of stormwater management and drainage facilities.			●
Location and size of existing and proposed telephone, gas, electric, and similar utility lines and surface-mounted equipment.			●
General areas of intended filling or cutting.		●	●
Directional arrows showing existing and proposed drainage patterns on the lot.	●		●

Minimum Site Plan Information	Minor Site Plan	Preliminary Site Plan	Final Site Plan
A detailed grading plan, with details of proposed filling or cutting, existing and proposed topography at a minimum of two (2) foot contour levels, stormwater runoff drainage patterns, and a general description of grades within 100 feet of the site. All finished contour lines are to be connected to existing contour lines within the site or at the parcel boundaries.			●
Locations, dimensions, and materials of proposed retaining walls, with fill materials and typical vertical sections.		●	●
Description of measures to control soil erosion and sedimentation during construction operations, and until permanent groundcover is established.			●
Other information as requested by the Township Planner, Zoning Administrator or Planning Commission to verify compliance with the standards and conditions imposed by this Ordinance, the policies of the Township Master Plan, and other applicable Township ordinances or state statutes.	●	●	●

Q. Expiration and Extension of Site Plan Approval.
Site plan approvals shall expire and may be extended in accordance with the following:

1. Expiration of preliminary site plan approval. Approval of a preliminary site plan shall be valid for a period of 545 calendar days from the date of approval and shall expire and be of no effect unless an application for final site plan approval for all or part of the area included in the approved preliminary site plan is filed with the Township Clerk within that time period.

2. Expiration of final site plan approval. A final site plan shall expire and be of no effect unless construction has begun on the property and is diligently pursued in conformance with the approved final site plan within 545 calendar days of the final site plan approval.

3. Extension of preliminary or final site plan approval. The Planning Commission may, at its discretion and upon written request and showing of good cause by the applicant, grant an extension of a preliminary or final site plan approval for up to 365 calendar days, provided that site conditions have not changed in a way that would affect the character, design or use of the site, and that the approved site plan remains in conformance with applicable provisions of this Ordinance.

4. Expiration of Minor Site Plan Approval. A minor site plan shall expire and be of no effect unless, within 365 calendar days of approval, appropriate permits have been approved, construction has begun on the property, and such work is diligently pursued in conformance with the approved minor site plan. No extensions of minor site plan approval shall be granted by the Zoning Administrator.

R. Phasing of Development.
The applicant may divide the development into two (2) or more phases. Phasing shall be subject to the following requirements:

1. In the case of a phased development, the preliminary site plan shall cover the entire property involved and shall clearly indicate the location, size, and character of each phase.

2. In the case of a phased development, a final site plan shall be submitted for review and approval for each phase.

3. A phase shall not be dependent upon subsequent phases for safe and convenient vehicular and pedestrian access, adequate utility services, or open spaces and recreation facilities, and shall be capable of substantial occupancy, operation, and maintenance upon completion of construction and development.

4. The Township Planner or Planning Commission may require the applicant to post an acceptable performance guarantee to ensure that vehicular and pedestrian ways, utility services, open space and recreation facilities, and other amenities and infrastructure planned for later phases of the development are completed in a timely fashion.

S. Standards for Site Plan Approval.
In reviewing a minor, preliminary or final site plan, the Zoning Administrator or Planning Commission shall determine that the following standards are met, as applicable to the type of site plan:

Standards for Site Plan Approval	Minor Site Plan	Preliminary Site Plan	Final Site Pan
The applicant is legally authorized to apply for site plan approval, and all required information has been provided.	●	●	●
The proposed development conforms to the applicable standards and conditions imposed by this Ordinance and other applicable Township ordinances.	●	●	●
The final site plan is consistent with the policies of the Master Plan and other adopted Township planning documents, and with the approved preliminary site plan.			●
The proposed development will be harmonious with and not harmful, injurious, or objectionable to the environment or land uses in surrounding area.	●	●	●
The proposed development respects natural topography, floodways, and floodplains; and minimizes the amount and extent of cutting and filling.		●	●
Organic, wet, or other soils that are not suitable for development will be undisturbed or modified in such fashion as to make development feasible.		●	●
The movement of the vehicular and pedestrian traffic within the site and in relation to access streets and sidewalks will be safe and convenient.	●	●	●
The proposed development is adequately coordinated with improvements serving the area, and with other existing or planned development in the vicinity.		●	●
Satisfactory and harmonious relationships will exist between the proposed development and the existing and planned development of contiguous lands and the surrounding area, including provisions for proper extensions of public roads and sidewalks through the development in accordance with the Township ordinances.		●	●
Development phases are in logical sequence so that any phase will not depend upon a subsequent phase for access, utilities, drainage or erosion control.		●	●
The plan, including all engineering drawings, meets Township standards for fire and police protection, water supply, sewage disposal or treatment, storm drainage, and other public facilities and services.			●
The drainage plan conforms to applicable drainage and stormwater management standards, and any proposed improvements are adequate to handle anticipated stormwater runoff and accommodate upstream drainage without causing undue runoff on to neighboring property or overloading of area watercourses.			●
Proposed screening, buffering, and landscaping improvements are adequate for the location and intended purpose and conform to the standards of this Ordinance.	●		●
Exterior lighting conforms to Ordinance requirements and standards, and will not adversely affect adjacent or neighboring properties or traffic on adjacent roads.	●		●
The parking layout and vehicular circulation patterns and access points to the site are adequate to serve the proposed uses and will not adversely affect the flow of traffic on adjacent roads or create pedestrian-vehicle conflicts.	●		●
Grading or filling will not destroy or adversely affect the character of the property, adjacent properties or the surrounding area.			●
Erosion will be controlled during and after construction and will not adversely affect adjacent or neighboring property or public facilities or services.			●
The plan meets applicable standards of governmental agencies with jurisdiction, and necessary outside agency approvals have been obtained or are assured.	●		●

PERMIT INFORMATION CHECKLIST FOR FINAL SITE PLANS

Michigan.gov/EGLEpermits

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has prepared a list of key questions to help identify what EGLE permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from EGLE, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: Michigan.gov/EHSguide. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the EGLE programs noted below. [insertions and edits by Union Township]

How Do I Know that I Need a State of Michigan, County or Local Permit or Approval?	Yes ☐	No ☐
1) Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)? Air Quality Permit to Install, Air Quality Division (AQD), Permit Section	Y☐	N☒
2) Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos. Asbestos Notification, AQD, Asbestos Program, 517-284-6777	Y☐	N☒
3) Please consult the Permitting at the Land and Water Interface Decision Tree document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?). Land and Water Featured Programs (Water Resources Division - WRD) - Joint Permit Application, 517-284-5567:		
a. Does the project involve construction of a building or septic system in a designated Great Lakes high risk erosion area?	Y☐	N☒
b. Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated environmental area?	Y☐	N☒
c. Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y☐	N☒
d. Does the project involve construction of a dam, weir or other structure to impound flow?	Y☐	N☒
4) Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction) or does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? **Union Township and Isabella County**	Y☐	N☒
5) Does the project involve the construction or alteration of a water supply system system? **Union Township Public Services Department** and Drinking Water & Environmental Health Division (DWEHD), 517-284-6524	Y☐	N☒
6) Does the project involve construction or alteration of any sewage collection or treatment facility? **Union Township Public Services Department** and WRD, Part 41 Construction Permit Program (staff), 906-228-4527, or EGLE District Office	Y☐	N☒
7) Public Swimming Pool Construction (Spas/Hot Tubs) Permits: Will your business involve the construction or modification of a public swimming pool, spa or hot tub? **Union Township** and Public Swimming Pool Program, 517-284-6541, or EGLE District Office	Y☐	N☒
8) Does the project involve the construction or modification of a campground? **Union Township** and DWEHD,Campgrounds program, 517-284-6529	Y☐	N☒

9)	Does the project involve construction of a facility that landfills, transfers, or processes of any type of solid non-hazardous waste on-site, or places industrial residuals/sludge into or onto the ground? Materials Management Division (MMD), Solid Waste, 517-284-6588, or EGLE District Office	Y☐ N☒
10)	Does the project involve the construction of an on-site treatment, storage, or disposal facility for hazardous waste? MMD, Hazardous Waste Section, Treatment, Storage and Disposal, 517-284-6562	Y☐ N☒
Who Regulates My Drinking (Potable) Water Supply?		
11)	I am buying water from the municipal water supply system Contact the **Union Township Public Services Dept.**	Y☐ N☒
12)	I have a Non-Community Water Supply (Type II) Guide, Contact (District or County) Local Health Department, 517-485-0660	Y☐ N☒
13)	I am a community water supply (Type I) Community Water Supply, DWEHD District Office Community Water Supply Program, 517-284-6512	Y☐ N☒
14)	Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source including groundwater, inland surface water, or the Great Lakes and their connecting waterways? WRD, Great Lakes Shorelands Unit, Water Use Program, 517-284-5563	Y☐ N☒
Who Regulates My Wastewater Discharge System?		
15)	NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water? WRD, EGLE District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program, 517-284-5568	Y☐ N☒
16)	Does the facility have industrial activity that comes into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? WRD, Permits Section, or EGLE District Office, 517-284-5588	Y☐ N☒
17)	Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)? WRD, Groundwater Permits Program, 517-290-2570	Y☐ N☒
18)	Does the project involve the drilling or deepening of wells for waste disposal? Oil, Gas and Minerals Division (OGMD), 517-284-6841	Y☐ N☒
What Operational Permits Are Relevant to My Operation and Air Emissions?		
19)	Renewable Operating Permit: Does your facility have the potential to emit any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous air pollutant; or 25 tons per year or more of any combination of hazardous air pollutants? AQD, Permit Section, 517-284-6634	Y☐ N☒
20)	Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel? AQD, Acid Rain Permit Program, 517-780-7843	Y☐ N☒
What Operational Permits Are Relevant to My Waste Management?		
21)	Does the project involve landfilling, transferring, or processing of any type of solid non-hazardous waste on-site, or placing industrial residuals/sludge into or onto the ground? MMD, 517-284-6588 or EGLE District Office	Y☐ N☒
22)	Does the project involve the on-site treatment, storage, or disposal of hazardous waste? MMD, Hazardous and Liquid Waste, 517-284-6562	Y☐ N☒
23)	Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (Hazardous Waste Program Forms & License Applications) MMD, EGLE District Office, 517-284-6562	Y☐ N☒

24) Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form? MMD, Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
25) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
26) Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal? MMD, Medical Waste Regulatory Program, 517-284-6594	Y☐	N☒
What Sector-Specific Permits May be Relevant to My Business?		
Transporters		
27) Does the project involve the *transport* of some other facility's non-hazardous liquid waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
28) Does the project involve the *transport* of hazardous waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
29) Do you engage in the business of transporting bulk water for drinking or household purposes (except for your own household use)? DWEHD, Water Hauler Information, 517-284-6527	Y☐	N☒
30) Does the project involve *transport* of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground? DWEHD, Septage Program, 517-284-6535	Y☐	N☒
31) Do you store, haul, shred or process *scrap tires*? MMD, Scrap Tire Program, 517-284-6586	Y☐	N☒
Sectors		
32) Is the project a *dry cleaning* establishment utilizing perchloroethylene or a flammable solvent in the cleaning process? AQD, Dry Cleaning Program, 517-284-6780	Y☐	N☒
33) Does your *laboratory* test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act? Laboratory Services Certifications, 517-284-5424	Y☐	N☒
34) Does the project involve the operation of a *public swimming pool*? DWEHD, Public Swimming Pools Program, 517-284-6529	Y☐	N☒
35) Does the project involve the operation of a *campground*? **Union Township** and DWEHD, Campgrounds, 517-284-6529	Y☐	N☒
What Permits Do I Need to Add Chemicals to Lakes and Streams?		
36) Are you applying a chemical treatment for the purpose of aquatic nuisance control (pesticide/herbicide etc.) in a water body (i.e. lake, pond or river)? WRD, Aquatic Nuisance Control , 517-284-5593	Y☐	N☒
37) Are you applying materials to a water body for a water resource management project (i.e. mosquito control treatments, dye testing, or fish reclamation projects)? WRD, Surface Water Assessment Section, 517-331-5228	Y☐	N☒

Why would I be subject to Oil, Gas and Mineral Permitting?	
38) Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)? OGMD, Petroleum Geology and Production Unit, 517-284-6826	Y☐ N☒
39) Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline? OGMD, Minerals and Mapping Unit, Sand Dune Mining Program, 517-284-6826	Y☐ N☒
40) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD, Radioactive Protection Programs, 517-284-6581	Y☐ N☒
Petroleum & Mining, OGMD, 517-284-6826 41) Does the project involve the diversion and control of water for the mining and processing of low-grade iron ore? 42) Does the project involve the surface or open-pit mining of metallic mineral deposits? 43) Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines? 44) Does the project involve mining coal? 45) Does the project involve changing the status or plugging of a mineral well? 46) Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	 Y☐ N☒ Y☐ N☒ Y☐ N☒ Y☐ Y☐ N☒ Y☐ N☒

Contact **Union Township** and EGLE Permits & Bonding, OGMD, 517-284-6841

Site Plan Review Process:

Contact Information for Outside Agencies

Required Agency Contact Information

Mt. Pleasant Fire Department
Lt. Brad Doepker
804 E. High St.
Mt. Pleasant, MI 48858
Office: 989-779-5122
Cell Phone: 989-506-1442.
Email: bdoepker@mt-pleasant.org

Isabella County Drain Office – Stormwater Management
Timothy A. Warner, Project Manager
Rm 140, 200 N. Main Street
Mt. Pleasant, MI 48858
Ph# (989) 772-0911, ext. 222
Fax# (989) 779-8785
Email: twarner@isabellacounty.org

Charter Township of Union Department of Public Services
Kim Smith, Public Works Department Director
5228 South Isabella Road
Mt. Pleasant, MI 48858
Phone (989) 772-4600 ext. 224
Fax (989) 773-1988
ksmith@uniontownshipmi.com

Isabella County Road Commission
Patrick J. Gaffney, PE, Engineer Superintendent
2261 E. Remus Rd.
Mt. Pleasant, MI 48858
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

Isabella County Transportation Commission
Rick Collins, Executive Director
2100 E. Transportation Dr.
Mt. Pleasant, MI 48858
Phone 989-773-6766
Fax 989-773-1873
rcollins@ictcbus.com

Optional Agency Contact Information

Michigan Transportation Department **(Only required when work done in M-20 ROW) ***
Ben Burrows
Mt. Pleasant TSC
1212 Corporate Drive
Mount Pleasant, MI 48858
989-775-6104 ext. 305
burrowsb@michigan.gov

City of Mt. Pleasant - Division of Public Works **(Only required for Mt Pleasant city water/sewer) ***
Stacie Tewari, P.E., LEED® AP
City Engineer
1303 N. Franklin Avenue
Mt. Pleasant, MI 48858
Phone: 989.779.5404
Fax: 989.772.6250
stewari@mt-pleasant.org

Isabella County Soil Erosion & Sedimentation Control
200 N. Main St.
Mt. Pleasant, MI 48858
989-317-4061

Central Michigan District Health Department
2012 E. Preston
Mt. Pleasant, MI 48858
989-773-5921

DTE
111 E. Pickard St.
Mt Pleasant, MI 48858
989-772-9061

Miss Dig
1-800-482-7171

May 24, 2022

Mr. Tyler Durgan
Sr. Specialist – Site Acquisition
Fullerton Engineering

RE: 195' Monopole for PIMI429, MI

Dear Mr. Durgan,

The above referenced Sabre monopole was designed for a Basic Wind Speed of 106 mph with no ice and 40 mph with 1.5" ice, Risk Category II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-H, "Structural Standard for Antenna Supporting Structures and Antennas".

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the monopole shaft, above the base plate. Assuming that the wind pressure profile is similar to that used to design the monopole, the monopole will buckle at the location of the highest combined stress ratio within the monopole shaft. This is likely to result in the portion of the monopole above leaning over and remaining in a permanently deformed condition. ***Please note that this letter only applies to the above referenced monopole designed and manufactured by Sabre Towers & Poles***. This would effectively result in a fall radius less than or equal to 50% of the monopole height.

Sincerely,

STATE OF MICHIGAN
AMY R. HERBST
ENGINEER
NO. 53180
LICENSED PROFESSIONAL ENGINEER
5/24/22

Amy R. Herbst, P.E.
Senior Design Engineer

Sabre Industries, Inc. • 7101 Southbridge Drive • Sioux City, IA 51111
P: 712-258-6690 F: 712-279-0814 W: www.SabreIndustries.com

Sabre Industries™
INNOVATION DELIVERED

Structural Design Report

195' Monopole
Site: PIMI429, MI

Prepared for: FULLERTON ENGINEERING CONSULTANTS INC
by: Sabre Industries ™

Job Number: 23-0370-TJH

June 8, 2022

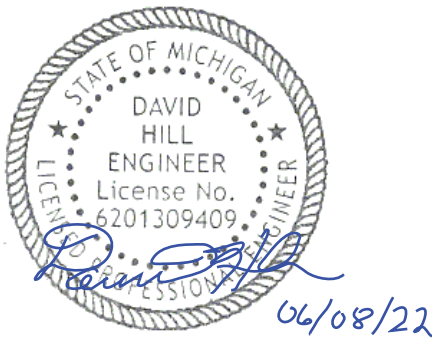
Monopole Profile..... 1

Foundation Design Summary (Option 1)..... 2

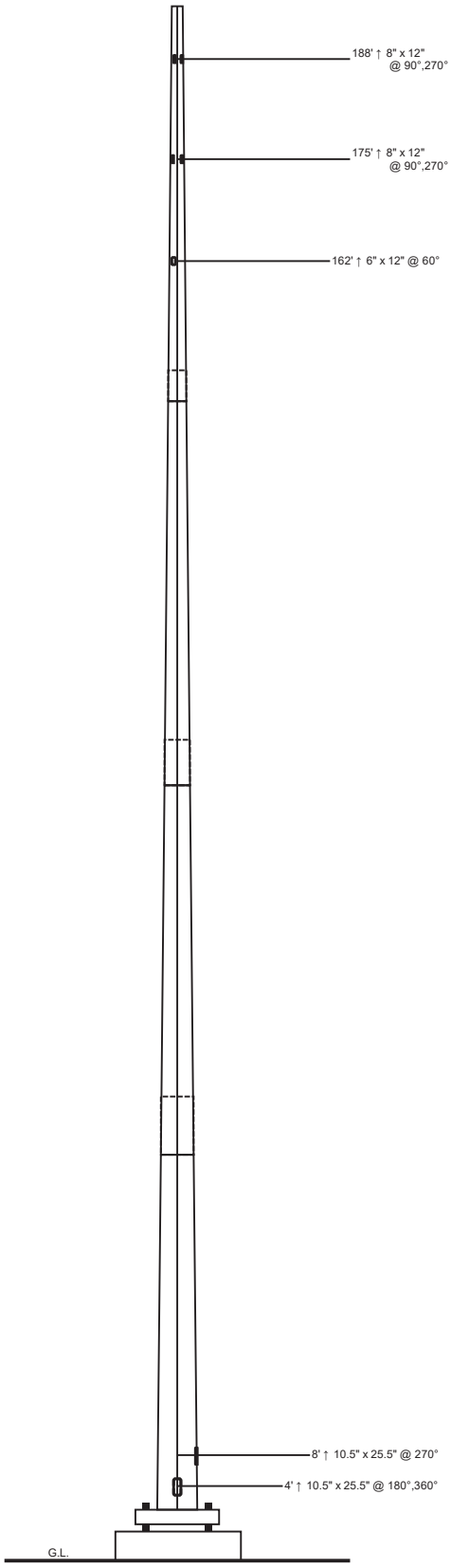
Foundation Design Summary (Option 2)..... 3

Pole Calculations..... 4-16

Foundation Calculations..... 17-25



Length (ft)	51'-0"	53'-6"	53'-6"	53'-3"
Number Of Sides	18			
Thickness (in)	1/4"	3/8"		
Lap Splice (ft)	A	5' - 9"	7' - 6"	
Top Diameter (in)	15.61"	27.47"	39.28"	50.62"
Bottom Diameter (in)	29.02"	41.54"	53.35"	64.63"
Taper (in/ft)	0.26298			
Grade	A572-65			
Weight (lbs)	3392	7846	10559	14790
Overall Steel Height (ft)	194			



Designed Appurtenance Loading

Elev	Description	Tx-Line
190	(1) 40,000 sq. in. antenna loading (below top)	(12) 1 5/8"
190		(3) 1 1/4"
177	(1) 30,000 sq. in. antenna loading (below top)	(12) 1 5/8"
177		(3) 1 1/4"
164	(1) 30,000 sq. in. antenna loading (below top)	(3) 1 1/4"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	106 mph
Wind Speed (Ice)	40 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	840 ft
Seismic Importance Factor, Ie	1.00
0.2-sec Spectral Response, Ss	0.066 g
1-sec Spectral Response, S1	0.04 g
Site Class	D (DEFAULT)
Seismic Design Category	A
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 Wo	63.01	37.72	5841.35	19.41	12.42
0.9 D + 1.0 Wo	47.37	37.68	5701.27	18.77	11.95
1.2 D + 1.0 Di + 1.0 Wi	104.22	9.98	1707.52	6.14	3.95
1.2 D + 1.0 Ev + 1.0 Eh	63.75	1.58	286.01	1.04	0.67
0.9 D - 1.0 Ev + 1.0 Eh	46.53	1.57	276.89	0.99	0.64
1.0 D + 1.0 Wo (Service @ 60 mph)	52.6	10.89	1675.95	5.72	3.6

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	77.25"	2"	71.5"	18	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2179.8	A615-75	Galv

Material List

Display	Value
A	4' - 0"

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) Full Height Step Bolts
5) Tower Rating: 100%
6) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2015 International Building Code.

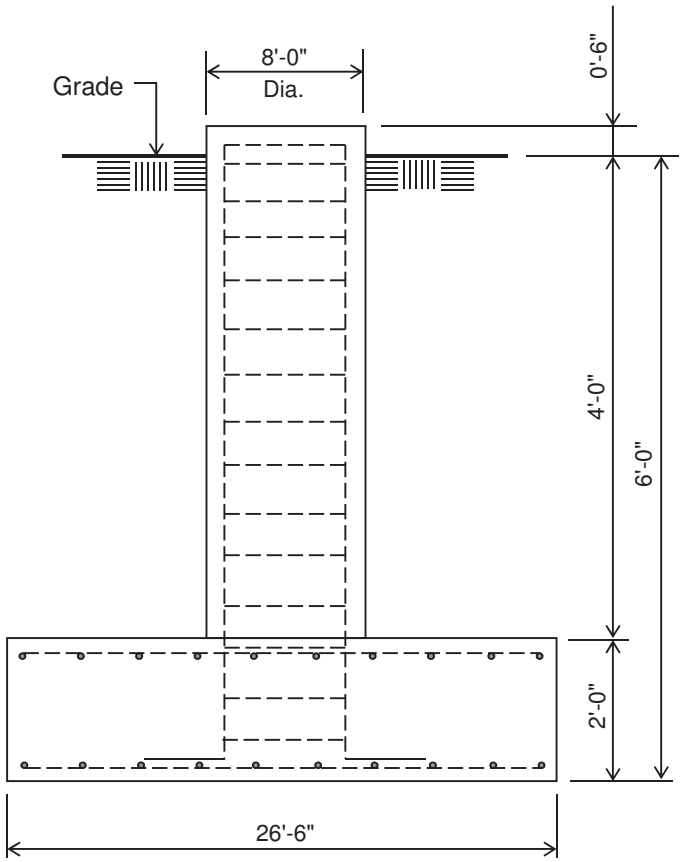
Sabre Industries
INNOVATION DELIVERED

Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

Job:	**23-0370-TJH**
Customer:	FULLERTON ENGINEERING CONSULTANTS INC
Site Name:	PIMI429, MI
Description:	195' Monopole
Date:	2022.06.08 By: DJH

No.: 23-0370-TJH
Date: 06/08/22
By: DJH

Customer: FULLERTON ENGINEERING CONSULTANTS INC
Site: PIMI429, MI
195' Monopole



ELEVATION VIEW
(60.40 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on the geotechnical report by Delta Oaks Group; project# GEO22-14165-08 Revision 0; dated May 20, 2022.
6) See the geotechnical report for compaction requirements, if specified.
7) 4 ft of soil cover is required over the entire area of the foundation slab.
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

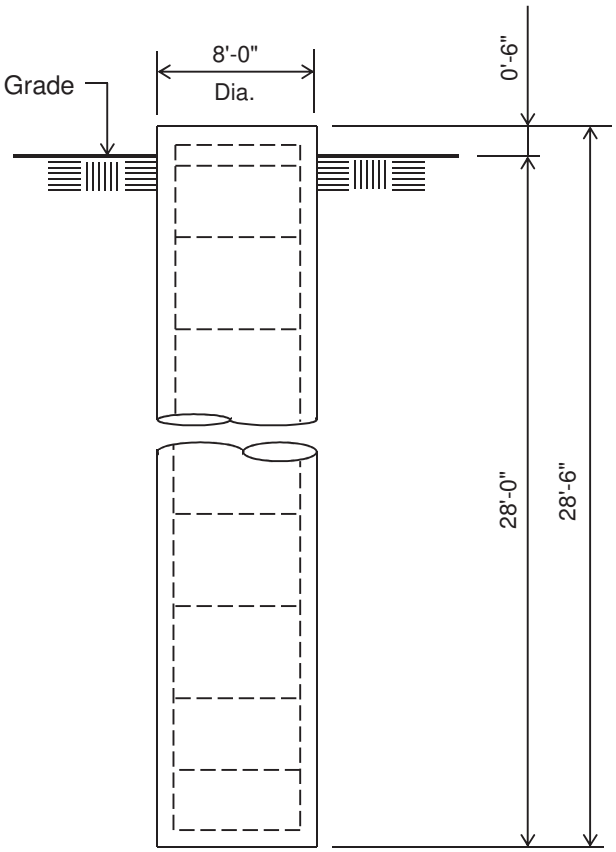
Rebar Schedule for Pad and Pier	
Pier	(44) #10 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(32) #10 horizontal rebar evenly spaced each way top and bottom (128 total)

7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

042

No.: 23-0370-TJH
Date: 06/08/22
By: DJH

Customer: FULLERTON ENGINEERING CONSULTANTS INC
Site: PIMI429, MI
195' Monopole



ELEVATION VIEW
(53.06 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.

2) Rebar to conform to ASTM specification A615 Grade 60.

3) All rebar to have a minimum of 3" concrete cover.

4) All exposed concrete corners to be chamfered 3/4".

5) The foundation design is based on the geotechnical report by Delta Oaks Group; project# GEO22-14165-08 Revision 0; dated May 20, 2022.

6) See the geotechnical report for drilled pier installation requirements, if specified.

7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier	
Pier	(44) #10 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 7" C/C

7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

Processed under license at:

Sabre Towers and Poles on: 7 jun 2022 at: 17:00:36

195' Monopole / PIMI429, MI

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
194.0										
			15.85	0.250	905.5	283.8				
	A	18								9.8
			28.39	0.250	1576.4	897.6				
147.0										
			28.39	0.250	1576.4	897.6				
	A/B	18					SLIP	4.00	1.68	
			28.97	0.375	2489.7	1434.2				
143.0										
			28.97	0.375	2489.7	1434.2				
	B	18								12.5
			40.63	0.375	3413.1	2778.6				
99.2										
			40.63	0.375	3413.1	2778.6				
	B/C	18					SLIP	5.75	1.69	
			41.43	0.375	3461.8	2874.6				
93.5										
			41.43	0.375	3461.8	2874.6				
	C	18								18.2
			52.15	0.375	4047.3	4246.7				
53.2										
			52.15	0.375	4047.3	4246.7				
	C/D	18					SLIP	7.50	1.71	
			53.42	0.375	4107.6	4416.1				
45.7										
			53.42	0.375	4107.6	4416.1				
	D	18								23.8
			65.62	0.375	4595.3	6085.3				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	.....BOLTS AT BASE OF SECTION..... NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	143.000	0	A325	0.00	92.0	0	143.000
B	93.500	0	A325	0.00	92.0	0	93.500
C	45.750	0	A325	0.00	92.0	0	45.750
D	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH ft	OUTSIDE.DIAMETER BOT * in	TOP * in	BEND RAD in	MAT-ERIAL ID	FLANGE.ID BOT	TOP	FLANGE.WELD ..GROUP.ID.. BOT	TOP
A	18	51.00	29.47	15.85	0.625	1	0	0	0	0
B	18	53.50	42.18	27.89	0.625	2	0	0	0	0
C	18	53.50	54.17	39.88	0.625	3	0	0	0	0
D	18	53.25	65.62	51.40	0.625	4	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM. &	ORIENT deg	HEIGHT in	WIDTH in	.THICKNESS. WEB in	FLANGE in	IRREGULARITY .PROJECTION. % OF AREA	ORIENT deg
PL	1	1	0.0	29.47	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	42.18	0.38	0.375	0.375	0.00	0.0

PL	3	1	0.0	54.17	0.38	0.375	0.375	0.00	0.0
PL	4	1	0.0	65.63	0.38	0.375	0.375	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH .. Fu ksi	Fy ksi	THERMAL COEFFICIENT /deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170
4	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

106 mph wind with no ice. Wind Azimuth: 0◆ (1.2 D + 1.0 Wo)

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0155	0.0084	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	3.2795	0.0000	0.0000
C	189.000	0.00	0.0	0.0	9.3871	7.2000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0307	0.0168	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.0000	3.0540	0.0000	0.0000
C	176.000	0.00	0.0	0.0	6.9363	4.8000	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0303	0.0168	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0299	0.0168	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0000	0.3873	0.0000	0.0000
C	163.000	0.00	0.0	0.0	6.8258	4.8000	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0295	0.0168	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0291	0.0168	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0287	0.0168	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0282	0.0168	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0277	0.0168	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0272	0.0168	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0267	0.0168	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0260	0.0168	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0254	0.0168	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0246	0.0168	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0238	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0228	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0216	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0201	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0181	0.0168	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0397	0.0566	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0397	0.0566	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0480	0.0698	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0480	0.0698	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0560	0.0830	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0560	0.0830	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0607	0.2259	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0607	0.2259	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0640	0.1464	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0640	0.1464	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0703	0.1648	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0703	0.1648	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0761	0.1832	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0761	0.1832	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0798	0.3891	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0798	0.3891	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0815	0.2052	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0815	0.2052	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0852	0.2222	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0852	0.2222	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0879	0.2392	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0879	0.2392	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0892	0.5017	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0892	0.5017	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0882	0.2612	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0882	0.2612	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0869	0.2758	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0869	0.2758	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0826	0.2903	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0834	0.3048	0.0000	0.0000

LOADING CONDITION M

106 mph wind with no ice. Wind Azimuth: 0◆ (0.9 D + 1.0 Wo)

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0155	0.0063	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	2.4596	0.0000	0.0000
C	189.000	0.00	0.0	0.0	9.3871	5.4000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0307	0.0126	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.0000	2.2905	0.0000	0.0000
C	176.000	0.00	0.0	0.0	6.9363	3.6000	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0303	0.0126	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0299	0.0126	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0000	0.2905	0.0000	0.0000
C	163.000	0.00	0.0	0.0	6.8258	3.6000	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0295	0.0126	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0291	0.0126	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0287	0.0126	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0282	0.0126	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0277	0.0126	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0272	0.0126	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0267	0.0126	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0260	0.0126	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0254	0.0126	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0246	0.0126	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0238	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0228	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0216	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0201	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0181	0.0126	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0397	0.0425	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0560	0.0623	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0607	0.1694	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0607	0.1694	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0640	0.1098	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0640	0.1098	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0703	0.1236	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0703	0.1236	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0761	0.1374	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0761	0.1374	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0798	0.2918	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0798	0.2918	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0815	0.1539	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0815	0.1539	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0852	0.1666	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0852	0.1666	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0879	0.1794	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0879	0.1794	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0892	0.3762	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0892	0.3762	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0882	0.1959	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0882	0.1959	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0869	0.2068	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0869	0.2068	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0826	0.2177	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0834	0.2286	0.0000	0.0000

LOADING CONDITION Y

40 mph wind with 1.5 ice. Wind Azimuth: 0◆ (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0177	0.0204	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	3.2795	0.0000	0.0000
C	189.000	0.00	0.0	0.0	2.2921	17.9218	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0351	0.0288	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.0000	3.0540	0.0000	0.0000
C	176.000	0.00	0.0	0.0	1.6889	11.8974	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0345	0.0288	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0339	0.0288	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0000	0.3873	0.0000	0.0000
C	163.000	0.00	0.0	0.0	1.6567	11.8434	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0333	0.0288	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0326	0.0288	0.0000	0.0000

C	135.000	0.00	0.0	0.0	0.0319	0.0288	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0312	0.0288	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0304	0.0288	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0296	0.0288	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0288	0.0288	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0278	0.0288	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0268	0.0288	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0257	0.0288	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0244	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0230	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0214	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0194	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0167	0.0288	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0118	0.0996	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0118	0.0996	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0138	0.1215	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0138	0.1215	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0158	0.1431	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0158	0.1431	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0169	0.2911	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0169	0.2911	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0177	0.2153	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0177	0.2153	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0192	0.2411	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0192	0.2411	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0206	0.2665	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0206	0.2665	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0214	0.4771	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0214	0.4771	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0218	0.2958	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0218	0.2958	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0227	0.3184	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0227	0.3184	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0232	0.3405	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0232	0.3405	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0235	0.6063	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0235	0.6063	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0233	0.3673	0.0000	0.0000
D	11.438	0.00	180.0	0.0	0.0216	0.3985	0.0000	0.0000
D	11.438	0.00	180.0	0.0	0.0216	0.4070	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0216	0.4070	0.0000	0.0000

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LOADING CONDITION AK ==========

Seismic - Azimuth: 0◆ (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE
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LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	192.500	0.00	0.0	0.0	0.0005	0.0085	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.1735	3.3178	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.3808	7.2840	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0009	0.0170	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.1401	3.0896	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.2202	4.8560	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0008	0.0170	0.0000	0.0000
C	168.500	0.00	0.0	0.0	0.1529	3.6783	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0007	0.0170	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0152	0.3917	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.1888	4.8560	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0006	0.0170	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0005	0.0170	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0005	0.0170	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0004	0.0170	0.0000	0.0000
C	120.250	0.00	0.0	0.0	0.1895	8.9553	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0003	0.0170	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0003	0.0170	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0002	0.0170	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0002	0.0170	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0001	0.0170	0.0000	0.0000
C	72.500	0.00	0.0	0.0	0.0927	12.0537	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0001	0.0170	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0001	0.0170	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0170	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0000	0.0170	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0155	14.9517	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0170	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0170	0.0000	0.0000
D	194.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

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LOADING CONDITION AL ==========

Seismic - Azimuth: 0◆ (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0005	0.0062	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.1735	2.4213	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.3808	5.3160	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0009	0.0124	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.1401	2.2549	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.2202	3.5440	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0008	0.0124	0.0000	0.0000
C	168.500	0.00	0.0	0.0	0.1529	2.6845	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0007	0.0124	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0152	0.2859	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.1888	3.5440	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0006	0.0124	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0005	0.0124	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0005	0.0124	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0004	0.0124	0.0000	0.0000
C	120.250	0.00	0.0	0.0	0.1895	6.5357	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0003	0.0124	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0003	0.0124	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0002	0.0124	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0002	0.0124	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0001	0.0124	0.0000	0.0000
C	72.500	0.00	0.0	0.0	0.0927	8.7970	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0001	0.0124	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0001	0.0124	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0124	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0000	0.0124	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0155	10.9121	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0124	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0124	0.0000	0.0000
D	194.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

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195' Monopole / PIMI429, MI

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
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MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ..... ALONG	ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ..... ALONG	ACROSS	TWIST
194.0	19.41I	-0.06Q	2.86C	12.42I	-0.03H	0.01U
178.3	16.18I	-0.05Q	2.17C	12.13I	-0.03H	0.01U
162.7	13.13I	-0.04Q	1.55L	11.01I	-0.03B	0.01U
147.0	10.42I	-0.03Q	1.07L	9.34I	-0.03Q	0.01U
143.0	9.80I	-0.03Q	0.97L	9.02I	-0.03Q	0.00U
128.4	7.70I	-0.03Q	0.66L	7.81I	-0.02Q	0.00U
113.8	5.89I	-0.02Q	0.43L	6.64I	-0.02Q	0.00U
99.2	4.36I	-0.02Q	0.27L	5.56I	-0.02Q	0.00U
93.5	3.82I	-0.01Q	0.22L	5.16I	-0.02Q	0.00U
80.1	2.73I	-0.01Q	0.13L	4.23I	-0.01Q	0.00U
66.7	1.85I	-0.01Q	0.07L	3.38I	-0.01Q	0.00U
53.2	1.15I	0.00Q	0.03L	2.60I	-0.01Q	0.00U
45.7	0.84I	0.00Q	0.02L	2.20I	-0.01Q	0.00U

34.3	0.46I	0.00Q	0.01L	1.59I	-0.01Q	0.00U
22.9	0.20I	0.00Q	0.00L	1.02I	0.00Q	0.00U
11.4	0.05I	0.00Q	0.00AD	0.49I	0.00Q	0.00U
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
194.0	-0.01 M	0.00 F	0.00 E	0.01 F	0.00 F	0.00 F
	22.81 Y	10.09 M	0.00 E	-125.12 C	0.05 E	-0.05 T
178.3	22.81 AG	10.09 P	0.00 N	-125.13 C	0.05 E	-0.05 T
	51.95 AG	24.65 U	0.00 N	-430.39 C	-0.16 T	-0.16 T
162.7	51.95 AG	24.64 W	0.00 Q	-430.41 C	-0.17 T	-0.16 T
	54.22 AG	25.50 F	0.00 Q	-881.60 C	0.36 E	-0.34 T
147.0	54.22 AG	25.74 A	-0.14 R	-881.60 C	0.51 O	-0.32 T
	55.41 AG	26.01 A	-0.14 R	-998.39 L	0.62 H	-0.40 T
143.0	55.40 AI	25.98 N	0.18 U	-998.67 C	0.71 H	-0.41 T
	58.57 AI	26.93 N	0.18 U	-1435.84 I	2.68 B	0.71 U
128.4	58.59 AG	26.94 N	0.16 U	-1435.82 I	2.68 B	0.71 U
	62.16 AG	28.01 N	0.16 U	-1885.61 I	4.82 Q	1.09 U
113.8	62.16 AG	28.01 N	0.16 U	-1885.60 I	4.83 Q	1.09 U
	66.07 AG	29.14 N	0.16 U	-2348.30 I	7.05 Q	1.42 U
99.2	66.07 AG	29.16 I	-0.18 Q	-2348.12 I	7.02 Q	1.41 U
	68.84 AG	29.64 I	-0.18 Q	-2534.79 I	8.03 Q	1.52 U
93.5	68.84 AG	29.57 P	0.14 F	-2534.77 I	8.08 Q	1.53 U
	72.84 AG	30.69 P	0.14 F	-2978.00 I	9.71 Q	1.70 U
80.1	72.84 AG	30.69 I	-0.15 Q	-2977.99 I	9.72 Q	1.69 U
	77.14 AG	31.85 I	-0.15 Q	-3432.14 I	11.72 Q	1.83 U
66.7	77.14 AG	31.83 I	-0.15 H	-3432.16 I	11.70 Q	1.83 U
	81.77 AG	33.06 I	-0.15 H	-3897.16 I	13.68 Q	1.94 U
53.2	81.77 AG	33.06 E	0.17 F	-3897.18 I	13.66 Q	1.94 U
	86.31 AG	33.73 E	0.17 F	-4162.05 I	14.69 Q	1.99 U
45.7	86.31 AG	33.72 E	0.17 F	-4162.04 I	14.66 Q	1.99 U
	90.63 AG	34.77 E	0.17 F	-4572.50 I	16.31 Q	2.06 U
34.3	90.63 AG	34.80 E	0.17 F	-4572.51 I	16.31 Q	2.06 U
	95.04 AG	35.81 E	0.17 F	-4989.64 I	17.66 Q	2.11 U
22.9	95.04 AG	35.81 E	0.17 F	-4989.63 I	17.66 Q	2.11 U
	99.56 AG	36.77 E	0.17 F	-5412.79 I	19.09 Q	2.13 U
11.4	99.56 AG	36.77 E	0.17 F	-5412.79 I	19.09 Q	2.13 U
	104.22 AG	37.72 E	0.17 F	-5841.35 I	20.47 Q	2.14 U
base reaction	104.22 AG	-37.72 E	-0.17 F	5841.35 I	-20.47 Q	-2.14 U

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00							

	0.00M	0.00F	0.00F	0.00F	YES	9.78A	45.2
	0.02Y	0.27C	0.02M	0.28C	YES	12.68A	45.2
178.33							
	0.02AG	0.27C	0.02P	0.28C	YES	12.68A	45.2
	0.04AG	0.64C	0.04U	0.66C	YES	15.59A	45.2
162.67							
	0.04AG	0.64C	0.04W	0.66C	YES	15.59A	45.2
	0.03AG	0.98C	0.03F	1.00C	YES	18.49A	45.2
147.00							
	0.02AG	0.64C	0.02A	0.65C	YES	12.21A	45.2
	0.02AG	0.67L	0.02A	0.68L	YES	12.71A	45.2
143.00							
	0.02AI	0.70C	0.02N	0.71C	YES	12.47A	45.2
	0.02AI	0.77I	0.02N	0.79I	YES	14.27A	45.2
128.42							
	0.02AG	0.77I	0.02N	0.79I	YES	14.27A	45.2
	0.02AG	0.81I	0.02N	0.82I	YES	16.08A	45.2
113.83							
	0.02AG	0.81I	0.02N	0.82I	YES	16.08A	45.2
	0.02AG	0.84I	0.02N	0.86I	YES	17.88A	45.2
99.25							
	0.02AG	0.84I	0.02I	0.86I	YES	17.88A	45.2
	0.02AG	0.85I	0.02I	0.87I	YES	18.59A	45.2
93.50							
	0.02AG	0.88I	0.02I	0.89I	YES	18.24A	45.2
	0.02AG	0.90I	0.02I	0.91I	YES	19.90A	45.2
80.08							
	0.02AG	0.90I	0.02I	0.91I	YES	19.90A	45.2
	0.02AG	0.91I	0.02I	0.92I	YES	21.56A	45.2
66.67							
	0.02AG	0.91I	0.02I	0.92I	YES	21.56A	45.2
	0.02AG	0.92I	0.02N	0.93I	YES	23.22A	45.2
53.25							
	0.02AG	0.92I	0.02E	0.93I	YES	23.22A	45.2
	0.02AG	0.92I	0.02E	0.93I	YES	24.14A	45.2
45.75							
	0.02AG	0.94I	0.02E	0.96I	YES	23.79A	45.2
	0.02AG	0.95I	0.02N	0.96I	YES	25.21A	45.2
34.31							
	0.02AG	0.95I	0.02E	0.96I	YES	25.21A	45.2
	0.02AG	0.95I	0.02Q	0.96I	YES	26.62A	45.2
22.87							
	0.02AG	0.95I	0.02Q	0.96I	YES	26.62A	45.2
	0.02AG	0.96I	0.02Q	0.97I	YES	28.03A	45.2
11.44							
	0.02AG	0.96I	0.02Q	0.97I	YES	28.03A	45.2
	0.02AG	0.96I	0.02Q	0.97I	YES	29.45A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
==========

DOWN	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
kip	kip	kip	ft-kip	ft-kip	ft-kip
104.22	37.72	0.17	-5841.35	20.47	2.14
AG	E	F	I	Q	U

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195' Monopole / PIMI429, MI

********** Service Load Condition **********

* Only 1 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0◆ (1.0 D + 1.0 Wo)

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	192.500	0.00	0.0	0.0	0.0044	0.0070	0.0000	0.0000
C	189.000	0.00	0.0	0.0	0.0000	2.7329	0.0000	0.0000
C	189.000	0.00	0.0	0.0	2.6910	6.0000	0.0000	0.0000
C	185.000	0.00	0.0	0.0	0.0088	0.0140	0.0000	0.0000
C	176.000	0.00	0.0	0.0	0.0000	2.5450	0.0000	0.0000
C	176.000	0.00	0.0	0.0	1.9884	4.0000	0.0000	0.0000
C	175.000	0.00	0.0	0.0	0.0087	0.0140	0.0000	0.0000
C	165.000	0.00	0.0	0.0	0.0086	0.0140	0.0000	0.0000
C	163.000	0.00	0.0	0.0	0.0000	0.3227	0.0000	0.0000
C	163.000	0.00	0.0	0.0	1.9568	4.0000	0.0000	0.0000
C	155.000	0.00	0.0	0.0	0.0085	0.0140	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0084	0.0140	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0082	0.0140	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0081	0.0140	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0080	0.0140	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0076	0.0140	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0075	0.0140	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0073	0.0140	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0071	0.0140	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0068	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0065	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0062	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0058	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0052	0.0140	0.0000	0.0000
D	194.000	0.00	180.0	0.0	0.0114	0.0472	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0114	0.0472	0.0000	0.0000
D	178.333	0.00	180.0	0.0	0.0138	0.0582	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0138	0.0582	0.0000	0.0000
D	162.667	0.00	180.0	0.0	0.0160	0.0692	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0160	0.0692	0.0000	0.0000
D	147.000	0.00	180.0	0.0	0.0174	0.1883	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0174	0.1883	0.0000	0.0000
D	143.000	0.00	180.0	0.0	0.0183	0.1220	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0183	0.1220	0.0000	0.0000
D	128.417	0.00	180.0	0.0	0.0202	0.1373	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0202	0.1373	0.0000	0.0000
D	113.833	0.00	180.0	0.0	0.0218	0.1527	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0218	0.1527	0.0000	0.0000
D	99.250	0.00	180.0	0.0	0.0229	0.3242	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0229	0.3242	0.0000	0.0000
D	93.500	0.00	180.0	0.0	0.0234	0.1710	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0234	0.1710	0.0000	0.0000
D	80.083	0.00	180.0	0.0	0.0244	0.1851	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0244	0.1851	0.0000	0.0000
D	66.667	0.00	180.0	0.0	0.0252	0.1993	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0252	0.1993	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0256	0.4181	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0256	0.4181	0.0000	0.0000
D	45.750	0.00	180.0	0.0	0.0253	0.2177	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0253	0.2177	0.0000	0.0000
D	34.312	0.00	180.0	0.0	0.0249	0.2298	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0249	0.2298	0.0000	0.0000
D	22.875	0.00	180.0	0.0	0.0237	0.2419	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0239	0.2540	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ..... ALONG	ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ..... ALONG	ACROSS	TWIST
194.0	5.72I	-0.01I	0.25I	3.60I	-0.01I	0.00B
178.3	4.75I	-0.01I	0.19I	3.51I	-0.01I	0.00B
162.7	3.83I	-0.01I	0.13I	3.18I	-0.01I	0.00B
147.0	3.03I	-0.01I	0.09I	2.69I	-0.01I	0.00B

143.0	2.84I	-0.01I	0.08I	2.60I	-0.01I	0.00B
128.4	2.23I	-0.01I	0.06I	2.25I	-0.01I	0.00B
113.8	1.70I	-0.01I	0.04I	1.91I	0.00I	0.00B
99.2	1.25I	0.00I	0.02I	1.60I	0.00I	0.00B
93.5	1.10I	0.00I	0.02I	1.48I	0.00I	0.00B
80.1	0.79I	0.00I	0.01I	1.21I	0.00I	0.00B
66.7	0.53I	0.00I	0.01I	0.97I	0.00I	0.00B
53.2	0.33I	0.00I	0.00I	0.75I	0.00I	0.00B
45.7	0.24I	0.00I	0.00I	0.63I	0.00I	0.00B
34.3	0.13I	0.00I	0.00I	0.46I	0.00I	0.00B
22.9	0.06I	0.00I	0.00I	0.29I	0.00I	0.00B
11.4	0.01I	0.00I	0.00I	0.14I	0.00I	0.00B
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
194.0	0.00 L	0.00 D	0.00 B	0.00 D	0.00 B	0.00 B
	9.49 A	2.88 F	0.00 B	-36.26 B	-0.01 B	0.00 H
178.3	9.49 D	2.88 E	0.00 F	-36.26 B	-0.01 B	0.00 B
	21.30 D	7.06 E	0.00 F	-124.46 B	-0.03 B	-0.01 B
162.7	21.30 D	7.06 E	0.00 I	-124.46 B	-0.03 B	-0.01 B
	22.40 D	7.32 E	0.00 I	-254.33 B	-0.05 B	-0.02 B
147.0	22.40 D	7.34 D	-0.02 F	-254.32 L	-0.09 F	-0.02 B
	23.16 D	7.42 D	-0.02 F	-287.91 I	0.07 I	-0.02 B
143.0	23.17 K	7.48 I	-0.03 I	-287.83 I	-0.14 F	-0.03 B
	24.96 K	7.75 I	-0.03 I	-413.42 I	0.51 I	-0.04 B
128.4	24.97 C	7.74 I	-0.03 I	-413.41 I	0.51 I	-0.04 B
	27.00 C	8.05 I	-0.03 I	-542.09 I	0.94 I	-0.07 B
113.8	27.00 C	8.05 I	-0.03 B	-542.10 I	0.95 I	-0.07 B
	29.24 C	8.38 I	-0.03 B	-674.22 I	1.34 I	-0.09 B
99.2	29.24 C	8.37 I	-0.03 K	-674.22 I	1.36 I	-0.09 B
	31.12 C	8.51 I	-0.03 K	-727.37 I	1.50 I	-0.09 B
93.5	31.12 C	8.52 I	-0.04 I	-727.40 I	1.50 I	-0.09 B
	33.43 C	8.84 I	-0.04 I	-853.91 I	2.00 I	-0.10 B
80.1	33.42 C	8.86 I	-0.04 I	-853.91 I	2.00 I	-0.10 B
	35.92 C	9.19 I	-0.04 I	-983.78 I	2.61 I	-0.11 B
66.7	35.92 C	9.20 I	-0.04 I	-983.77 I	2.61 I	-0.11 B
	38.62 C	9.55 I	-0.04 I	-1116.92 I	3.22 I	-0.12 B
53.2	38.62 C	9.55 I	-0.05 I	-1116.90 I	3.21 I	-0.12 B
	41.76 C	9.74 I	-0.05 I	-1192.80 I	3.56 I	-0.12 B
45.7	41.76 C	9.74 I	-0.05 I	-1192.78 I	3.54 I	-0.12 B
	44.28 C	10.04 I	-0.05 I	-1310.52 I	4.08 I	-0.12 B
34.3	44.28 C	10.05 I	-0.05 I	-1310.51 I	4.08 I	-0.12 B
	46.92 C	10.34 I	-0.05 I	-1430.44 I	4.61 I	-0.12 B
22.9	46.92 C	10.34 I	-0.05 I	-1430.44 I	4.61 I	-0.12 B
	49.73 C	10.61 I	-0.05 I	-1552.29 I	5.15 I	-0.12 B

11.4						
	49.73 C	10.61 I	-0.05 I	-1552.29 I	5.14 I	-0.12 B
	52.60 C	10.89 I	-0.05 I	-1675.95 I	5.67 I	-0.13 B
base reaction	52.60 C	-10.89 I	0.05 I	1675.95 I	-5.67 I	0.13 B

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
194.00							
	0.00L	0.00D	0.00D	0.00D	YES	9.78A	45.2
	0.01A	0.08B	0.01F	0.09B	YES	12.68A	45.2
178.33							
	0.01D	0.08B	0.01E	0.09B	YES	12.68A	45.2
	0.02D	0.18B	0.01E	0.20B	YES	15.59A	45.2
162.67							
	0.02D	0.18B	0.01E	0.20B	YES	15.59A	45.2
	0.01D	0.28B	0.01E	0.30B	YES	18.49A	45.2
147.00							
	0.01D	0.18L	0.01D	0.19L	YES	12.21A	45.2
	0.01D	0.19I	0.01D	0.20I	YES	12.71A	45.2
143.00							
	0.01K	0.20I	0.01I	0.21I	YES	12.47A	45.2
	0.01K	0.22I	0.01I	0.23I	YES	14.27A	45.2
128.42							
	0.01C	0.22I	0.01I	0.23I	YES	14.27A	45.2
	0.01C	0.23I	0.01I	0.24I	YES	16.08A	45.2
113.83							
	0.01C	0.23I	0.01I	0.24I	YES	16.08A	45.2
	0.01C	0.24I	0.00I	0.25I	YES	17.88A	45.2
99.25							
	0.01C	0.24I	0.00I	0.25I	YES	17.88A	45.2
	0.01C	0.25I	0.00I	0.25I	YES	18.59A	45.2
93.50							
	0.01C	0.25I	0.00I	0.26I	YES	18.24A	45.2
	0.01C	0.26I	0.00I	0.27I	YES	19.90A	45.2
80.08							
	0.01C	0.26I	0.00I	0.27I	YES	19.90A	45.2
	0.01C	0.26I	0.00I	0.27I	YES	21.56A	45.2
66.67							
	0.01C	0.26I	0.00I	0.27I	YES	21.56A	45.2
	0.01C	0.26I	0.00I	0.27I	YES	23.22A	45.2
53.25							
	0.01C	0.26I	0.00I	0.27I	YES	23.22A	45.2
	0.01C	0.26I	0.00I	0.27I	YES	24.14A	45.2
45.75							
	0.01C	0.27I	0.00I	0.28I	YES	23.79A	45.2
	0.01C	0.27I	0.00I	0.28I	YES	25.21A	45.2
34.31							
	0.01C	0.27I	0.00I	0.28I	YES	25.21A	45.2
	0.01C	0.27I	0.00I	0.28I	YES	26.62A	45.2
22.87							
	0.01C	0.27I	0.00I	0.28I	YES	26.62A	45.2
	0.01C	0.27I	0.00I	0.29I	YES	28.03A	45.2
11.44							
	0.01C	0.27I	0.00I	0.29I	YES	28.03A	45.2
	0.01C	0.28I	0.00I	0.29I	YES	29.45A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
kip	kip	kip	ft-kip	ft-kip	ft-kip
52.60 C	10.89 I	-0.05 I	-1675.95 I	5.67 I	-0.13 B

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Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	
Risk Category	II
R	1.500
S_S	0.066
S_1	0.040
Site Class	D (default)
T_L (sec)	12.000
F_a	1.600
F_v	2.400
S_{MS}	0.106
S_{M1}	0.096
S_{DS}	0.070
S_{D1}	0.064
T_s	0.914
I_e	1.000
Ω	1.500
C_S	0.030
E (ksi)	29,000
I_{top} (in^4)	364
I_{bot} (in^4)	39,985
I_{avg} (in^4)	20,175
g (in/s^2)	386.4
W_t (kips)	52.511
W_u (kips)	14.000
W_L (kips)	38.511
L_p (in)	2328
f_1 (Hertz)	0.243
T (sec)	4.118
k_e	2.0000
V_s (kips)	1.575
Seismic Design Category	A

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
Step Bolts/Safety Climb Load	192.50	0.0070	0.0000	259.3938	0.0005	0.0001	0.0085	0.0062
Antenna Load	189.00	6.0000	6.0000	214,326.0000	0.3808	0.0840	7.2840	5.3160
Line Deadload	189.00	2.7329	0.0000	97,621.9209	0.1735	0.0383	3.3178	2.4213
Step Bolts/Safety Climb Load	185.00	0.0140	0.0000	479.1500	0.0009	0.0002	0.0170	0.0124
Antenna Load	176.00	4.0000	4.0000	123,904.0000	0.2202	0.0560	4.8560	3.5440
Line Deadload	176.00	2.5450	0.0000	78,833.9200	0.1401	0.0356	3.0896	2.2549
Step Bolts/Safety Climb Load	175.00	0.0140	0.0000	428.7500	0.0008	0.0002	0.0170	0.0124
Structure - Section 1	168.50	3.0299	0.0000	86,025.6783	0.1529	0.0424	3.6783	2.6845
Step Bolts/Safety Climb Load	165.00	0.0140	0.0000	381.1500	0.0007	0.0002	0.0170	0.0124
Antenna Load	163.00	4.0000	4.0000	106,276.0000	0.1888	0.0560	4.8560	3.5440
Line Deadload	163.00	0.3227	0.0000	8,573.8163	0.0152	0.0045	0.3917	0.2859
Step Bolts/Safety Climb Load	155.00	0.0140	0.0000	336.3500	0.0006	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	145.00	0.0140	0.0000	294.3500	0.0005	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	135.00	0.0140	0.0000	255.1500	0.0005	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	125.00	0.0140	0.0000	218.7500	0.0004	0.0002	0.0170	0.0124
Structure - Section 2	120.25	7.3767	0.0000	106,667.5430	0.1895	0.1033	8.9553	6.5357
Step Bolts/Safety Climb Load	115.00	0.0140	0.0000	185.1500	0.0003	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	105.00	0.0140	0.0000	154.3500	0.0003	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	95.00	0.0140	0.0000	126.3500	0.0002	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	85.00	0.0140	0.0000	101.1500	0.0002	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	75.00	0.0140	0.0000	78.7500	0.0001	0.0002	0.0170	0.0124
Structure - Section 3	72.50	9.9289	0.0000	52,188.7806	0.0927	0.1390	12.0537	8.7970
Step Bolts/Safety Climb Load	65.00	0.0140	0.0000	59.1500	0.0001	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	55.00	0.0140	0.0000	42.3500	0.0001	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	45.00	0.0140	0.0000	28.3500	0.0001	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	35.00	0.0140	0.0000	17.1500	0.0000	0.0002	0.0170	0.0124
Structure - Section 4	26.62	12.3161	0.0000	8,727.4890	0.0155	0.1724	14.9517	10.9121
Step Bolts/Safety Climb Load	25.00	0.0140	0.0000	8.7500	0.0000	0.0002	0.0170	0.0124
Step Bolts/Safety Climb Load	15.00	0.0140	0.0000	3.1500	0.0000	0.0002	0.0170	0.0124
	Σ	52.51	14.0000	886,602.84	1.58	0.74	63.75	46.52

SO#: 23-0370-TJH
Site Name: PIMI429, MI
Date: 2022.06.08

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter:	64.630	in (flat to flat)
Thickness:	0.375	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	5841.35	ft-kips
Axial, Pu:	63.01	kips
Shear, Vu:	37.72	kips

Anchor Rod Data

Quantity:	18		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	71.5	BC Override:	

Anchor Rod Results (per 4.9.9)

Maximum Put:	215.23	Kips
Φt*Rnt:	243.75	Kips
Vu:	2.10	Kips
Φv*Rnv:	149.10	Kips
Tension Interaction Ratio:	0.78	
Maximum Puc:	221.36	Kips
Φc*Rnc:	268.39	Kips
Vu:	2.10	Kips
Φc*Rnvc:	120.77	Kips
Compression Interaction Ratio:	0.83	
Maximum Interaction Ratio:	**82.5%**	**Pass**

Plate Data

Diameter (in):	77.25	Dia. Override:	
Thickness:	2	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	11.40	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	30.25	in. center of pole to center of drain hole	
Center Hole:	52.5	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	42.3	ksi	
Allowable Φ*Fy:	45.0	ksi	(per AISC)
Base Plate Interaction Ratio:	**94.0%**	**Pass**	

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

195' Monopole FULLERTON ENGINEERING CONSULTANTS INC PIMI429, MI (23-0370-TJH) 06/08/22 DJH

Overall Loads:			
Factored Moment (ft-kips)	5841.35		
Factored Axial (kips)	63.01		
Factored Shear (kips)	37.72		
Bearing Design Strength (ksf)	12.375	Max. Net Bearing Press. (ksf)	7.13
Water Table Below Grade (ft)	**44**		
Width of Mat (ft)	26.5	Allowable Bearing Pressure (ksf)	**8.25**
Thickness of Mat (ft)	2	Safety Factor	**2.00**
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	16.50
Quantity of Bolts in Bolt Circle	18	Bearing Φs	0.75
Bolt Circle Diameter (in)	71.5		
Effective Anchor Bolt Embedment (in)	66.5		
Diameter of Pier (ft)	8	Minimum Pier Diameter (ft)	8.00
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	7.09
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	**N**
Quantity of Bars in Mat	32		
Bar Diameter in Mat (in)	1.27		
Area of Bars in Mat (in^2)	40.54		
Spacing of Bars in Mat (in)	10.02	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	44		
Bar Diameter in Pier (in)	1.27		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	4		
Area of Bars in Pier (in^2)	55.74	Minimum Pier A_s (in^2)	36.19
Spacing of Bars in Pier (in)	6.25	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	**0.105**		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	60.40		
Two-Way Shear Action:			
Average d (in)	19.73		
ϕv_c (ksi)	0.195	v_u (ksi)	0.107
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.302		
$\phi v_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}$	0.195	J (in^3)	1.528E+07
$\phi v_c = \phi 4 f'_c{}^{1/2}$	0.201	c + d (in)	104.81
Shear perimeter, b_o (in)	419.23	$0.40M_{sc}$ (ft-kips)	2404.4
β_c	1		
One-Way Shear:			
ϕV_c (kips)	631.3	V_u (kips)	386.1
Stability:			
Overturning Design Strength (ft-k)	6808.5	Total Applied M (ft-k)	6086.5

Pier-Slab Transfer by Flexure:

b_{slab} (ft)	14.00		
ϕM_n (ft-kips)	3610.1	$0.60M_{sc}$ (ft-kips)	3606.7

Pier Design:

ϕV_n (kips)	1275.2	V_u (kips)	37.7
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	745.1		
V_s (kips)	706.9	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1978.3
Maximum Spacing (in)	7.62	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.46	Req'd Hook Development l_{dh} (in) - Tension	15.90
		Req'd Hook Development l_{dc} (in) - Compression	17.15

Flexure in Slab:

ϕM_n (ft-kips)	3416.7	M_u (ft-kips)	3137.1
a (in)	2.00		
Steel Ratio	0.00646		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	108.00	Required Development in Pad (in)	34.08

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

```
================================================================================

                     LPile for Windows, Version 2019-11.009

                Analysis of Individual Piles and Drilled Shafts
               Subjected to Lateral Loading Using the p-y Method
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================================================================================

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--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
23-037O-TJH.lp11d

Name of output report file:
23-037O-TJH.lp11o

Name of plot output file:
23-037O-TJH.lp11p

Name of runtime message file:
23-037O-TJH.lp11r



--------------------------------------------------------------------------------
                           Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  June 8, 2022               Time:  16:51:09



--------------------------------------------------------------------------------
                                  Problem Title
--------------------------------------------------------------------------------

Site         : PIMI429, MI


Tower        : 195' Monopole


Prepared for : FULLERTON ENGINEERING CONSULTANTS INC


Job Number   : 23-037O-TJH


Engineer     : DJH




--------------------------------------------------------------------------------
                          Program Options and Settings
--------------------------------------------------------------------------------

Computational Options:
 - Conventional Analysis
Engineering Units Used for Data Input and Computations:
 - US Customary System Units (pounds, feet, inches)

Analysis Control Options:
 - Maximum number of iterations allowed                =          999
 - Deflection tolerance for convergence                =   1.0000E-05 in
 - Maximum allowable deflection                        =     100.0000 in
 - Number of pile increments                           =          100

Loading Type and Number of Cycles of Loading:
 - Static loading specified

 - Use of p-y modification factors for p-y curves not selected
```

- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined	=	1
Total length of pile	=	28.500 ft
Depth of ground surface below top of pile	=	0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	96.0000
2	28.500	96.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile

Length of section	=	28.500000 ft
Shaft Diameter	=	96.000000 in
Shear capacity of section	=	0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle	=	0.000 degrees
	=	0.000 radians
Pile Batter Angle	=	0.000 degrees
	=	0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 7 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer	=	0.500000 ft
Distance from top of pile to bottom of layer	=	4.500000 ft
Effective unit weight at top of layer	=	105.000000 pcf
Effective unit weight at bottom of layer	=	105.000000 pcf
Undrained cohesion at top of layer	=	1000.000000 psf
Undrained cohesion at bottom of layer	=	1000.000000 psf
Epsilon-50 at top of layer	=	0.010000
Epsilon-50 at bottom of layer	=	0.010000

Layer 2 is stiff clay without free water

Distance from top of pile to top of layer	=	4.500000 ft
Distance from top of pile to bottom of layer	=	7.000000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Undrained cohesion at top of layer	=	2650. psf
Undrained cohesion at bottom of layer	=	2650. psf
Epsilon-50 at top of layer	=	0.005000
Epsilon-50 at bottom of layer	=	0.005000

Layer 3 is stiff clay without free water

Distance from top of pile to top of layer	=	7.000000 ft
Distance from top of pile to bottom of layer	=	9.500000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Undrained cohesion at top of layer	=	2600. psf
Undrained cohesion at bottom of layer	=	2600. psf
Epsilon-50 at top of layer	=	0.005000
Epsilon-50 at bottom of layer	=	0.005000

Layer 4 is stiff clay without free water

Distance from top of pile to top of layer	=	9.500000 ft
Distance from top of pile to bottom of layer	=	14.500000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Undrained cohesion at top of layer	=	2050. psf
Undrained cohesion at bottom of layer	=	2050. psf
Epsilon-50 at top of layer	=	0.007000
Epsilon-50 at bottom of layer	=	0.007000

Layer 5 is stiff clay without free water

Distance from top of pile to top of layer	=	14.500000 ft
Distance from top of pile to bottom of layer	=	19.500000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Undrained cohesion at top of layer	=	1550. psf
Undrained cohesion at bottom of layer	=	1550. psf
Epsilon-50 at top of layer	=	0.007000
Epsilon-50 at bottom of layer	=	0.007000

Layer 6 is stiff clay without free water

Distance from top of pile to top of layer	=	19.500000 ft
Distance from top of pile to bottom of layer	=	24.500000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Undrained cohesion at top of layer	=	2500. psf
Undrained cohesion at bottom of layer	=	2500. psf
Epsilon-50 at top of layer	=	0.005000
Epsilon-50 at bottom of layer	=	0.005000

Layer 7 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer	=	24.500000 ft
Distance from top of pile to bottom of layer	=	29.500000 ft
Effective unit weight at top of layer	=	115.000000 pcf
Effective unit weight at bottom of layer	=	115.000000 pcf
Friction angle at top of layer	=	33.000000 deg.
Friction angle at bottom of layer	=	33.000000 deg.
Subgrade k at top of layer	=	90.000000 pci
Subgrade k at bottom of layer	=	90.000000 pci

(Depth of the lowest soil layer extends 1.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	Angle of Friction deg.	E50 or krm	kpy pci
1	Stiff Clay w/o Free Water	0.5000 4.5000	105.0000 105.0000	1000.0000 1000.0000	-- --	0.01000 0.01000	-- --
2	Stiff Clay w/o Free Water	4.5000 7.0000	115.0000 115.0000	2650. 2650.	-- --	0.00500 0.00500	-- --
3	Stiff Clay w/o Free Water	7.0000 9.5000	115.0000 115.0000	2600. 2600.	-- --	0.00500 0.00500	-- --
4	Stiff Clay w/o Free Water	9.5000 14.5000	115.0000 115.0000	2050. 2050.	-- --	0.00700 0.00700	-- --
5	Stiff Clay w/o Free Water	14.5000 19.5000	115.0000 115.0000	1550. 1550.	-- --	0.00700 0.00700	-- --
6	Stiff Clay w/o Free Water	19.5000 24.5000	115.0000 115.0000	2500. 2500.	-- --	0.00500 0.00500	-- --
7	Sand (Reese, et al.)	24.5000 29.5000	115.0000 115.0000	-- --	33.0000 33.0000	-- --	90.0000 90.0000

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length	Run Analysis
1	1	V = 50293. lbs	M = 93461600. in-lbs	84013.	No	Yes
2	1	V = 10890. lbs	M = 20111400. in-lbs	52600.	No	Yes

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	28.500000 ft
Shaft Diameter	=	96.000000 in
Concrete Cover Thickness (to edge of long. rebar)	=	3.625000 in
Number of Reinforcing Bars	=	44 bars
Yield Stress of Reinforcing Bars	=	60000. psi
Modulus of Elasticity of Reinforcing Bars	=	29000000. psi
Gross Area of Shaft	=	7238. sq. in.
Total Area of Reinforcing Steel	=	55.737823 sq. in.
Area Ratio of Steel Reinforcement	=	0.77 percent
Edge-to-Edge Bar Spacing	=	4.970752 in
Maximum Concrete Aggregate Size	=	0.750000 in
Ratio of Bar Spacing to Aggregate Size	=	6.63
Offset of Center of Rebar Cage from Center of Pile	=	0.0000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As	=	30817.300 kips
Tensile Load for Cracking of Concrete	=	-3348.733 kips
Nominal Axial Tensile Capacity	=	-3344.269 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	43.740000	0.00000
2	1.270000	1.266769	43.294790	6.224851
3	1.270000	1.266769	41.968223	12.322982
4	1.270000	1.266769	39.787303	18.170253
5	1.270000	1.266769	36.796430	23.647629
6	1.270000	1.266769	33.056486	28.643609
7	1.270000	1.266769	28.643609	33.056486
8	1.270000	1.266769	23.647629	36.796430
9	1.270000	1.266769	18.170253	39.787303
10	1.270000	1.266769	12.322982	41.968223
11	1.270000	1.266769	6.224851	43.294790
12	1.270000	1.266769	0.00000	43.740000
13	1.270000	1.266769	-6.224851	43.294790
14	1.270000	1.266769	-12.322982	41.968223
15	1.270000	1.266769	-18.170253	39.787303
16	1.270000	1.266769	-23.647629	36.796430
17	1.270000	1.266769	-28.643609	33.056486
18	1.270000	1.266769	-33.056486	28.643609
19	1.270000	1.266769	-36.796430	23.647629
20	1.270000	1.266769	-39.787303	18.170253
21	1.270000	1.266769	-41.968223	12.322982
22	1.270000	1.266769	-43.294790	6.224851
23	1.270000	1.266769	-43.740000	0.00000
24	1.270000	1.266769	-43.294790	-6.224851
25	1.270000	1.266769	-41.968223	-12.322982
26	1.270000	1.266769	-39.787303	-18.170253
27	1.270000	1.266769	-36.796430	-23.647629
28	1.270000	1.266769	-33.056486	-28.643609
29	1.270000	1.266769	-28.643609	-33.056486
30	1.270000	1.266769	-23.647629	-36.796430

31	1.270000	1.266769	-18.170253	-39.787303
32	1.270000	1.266769	-12.322982	-41.968223
33	1.270000	1.266769	-6.224851	-43.294790
34	1.270000	1.266769	0.00000	-43.740000
35	1.270000	1.266769	6.224851	-43.294790
36	1.270000	1.266769	12.322982	-41.968223
37	1.270000	1.266769	18.170253	-39.787303
38	1.270000	1.266769	23.647629	-36.796430
39	1.270000	1.266769	28.643609	-33.056486
40	1.270000	1.266769	33.056486	-28.643609
41	1.270000	1.266769	36.796430	-23.647629
42	1.270000	1.266769	39.787303	-18.170253
43	1.270000	1.266769	41.968223	-12.322982
44	1.270000	1.266769	43.294790	-6.224851

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 4.971 inches
between bars 15 and 16.

Ratio of bar spacing to maximum aggregate size = 6.63

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	52.600
2	84.013

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	52.600	137680.033	0.00300000
2	84.013	138793.154	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial Load No.	Resist. Factor	Nominal Ax. Thrust kips	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in^2
1	0.65	52.600000	137680.	34.190000	89492.	3.2576E+09
2	0.65	84.013333	138793.	54.608667	90216.	3.2874E+09
1	0.75	52.600000	137680.	39.450000	103260.	3.1402E+09
2	0.75	84.013333	138793.	63.010000	104095.	3.1703E+09
1	0.90	52.600000	137680.	47.340000	123912.	2.0477E+09
2	0.90	84.013333	138793.	75.612000	124914.	2.0707E+09

Layering Correction Equivalent Depths of Soil & Rock Layers

Layer No.	Top of Layer Below Pile Head ft	Equivalent Top Depth Below Grnd Surf ft	Same Layer Type As Layer Above	Layer is Rock or is Below Rock Layer	F0 Integral for Layer lbs	F1 Integral for Layer lbs

1	0.5000	0.00	N.A.	No	0.00	107006.
2	4.5000	1.6369	Yes	No	107006.	174594.
3	7.0000	4.2052	Yes	No	281600.	185658.
4	9.5000	8.1942	Yes	No	467258.	348516.
5	14.5000	16.1021	Yes	No	815774.	342255.
6	19.5000	15.1708	Yes	No	1158029.	490165.
7	24.5000	17.6707	No	No	1648193.	N.A.

Notes: The F0 integral of Layer n+1 equals the sum of the F0 and F1 integrals
for Layer n. Layering correction equivalent depths are computed only
for soil types with both shallow-depth and deep-depth expressions for
peak lateral load transfer. These soil types are soft and stiff clays,
non-liquefied sands, and cemented c-phi soil.

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	50293.	M, in-lb	9.35E+07	84013.	3.6607	-0.01778	-557869.	9.49E+07
2	V, lb	10890.	M, in-lb	2.01E+07	52600.	0.04707	-3.39E-04	-126352.	2.03E+07

Maximum pile-head deflection = 3.6607188714 inches
Maximum pile-head rotation = -0.0177773527 radians = -1.018567 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	5,841.35	
Shear (k)	37.72	
Caisson diameter (ft)	8	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	28	
Lateral soil pressure (lb/ft^2)	**321.43**	
Ground to application of force, h (ft)	155.36	
Applied lateral force, P (lb)	37,720	
Lateral soil bearing pressure, S_1 (lb/ft)	3,000.00	
Diameter, b (ft)	8	
A	3.68	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	26.86	$= 0.5A[\ 1 + (\ 1 + (\ 4.36h\ /\ A\ )\ )^{1/2}\ ]$

Parallel INFRASTRUCTURE

SITE NAME: OML06772

SITE NUMBER: PIMI429

FA NUMBER: 15708593

SITE ADDRESS: 5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SITE TYPE: RAW LAND - MONOPOLE

PROJECT INFORMATION

SITE NAME:	OML06772
SITE NUMBER:	PIMI429
PARCEL:	14-034-20-005-00
COUNTY:	ISABELLA
JURISDICTION:	CHARTER TOWNSHIP OF UNION
SOURCE:	FROM 1A LETTER
LATITUDE (NAD 83):	43.5613450°
LONGITUDE (NAD 83):	-84.7687950°
GROUND ELEVATION (FT):	844
SITE TYPE:	RAW LAND
TOWER OWNER:	PARALLEL INFRASTRUCTURE 15105 JOHN J. DELANEY DRIVE, SUITE D-3 CHARLOTTE, NC 28277 (704) 357-1919
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT (FT):	195'-0"
ANTENNA CL HEIGHT (FT):	190'-0"
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

NOTE: DRAWING SCALES ARE FOR 11"x17" SHEETS UNLESS OTHERWISE NOTED

PROJECT CONSULTANTS

PROJECT MANAGER:	PARALLEL INFRASTRUCTURE
ADDRESS:	15105 JOHN J. DELANEY DRIVE, SUITE D-3 CHARLOTTE, NC 28277
CONTACT:	EVELYN M. RADOWICZ evelyn.radowicz@pitowers.com (413) 658-4815
ENGINEER/ARCHITECT:	FULLERTON ENGINEERING CONSULTANTS, LLC
ADDRESS:	1100 E. WOODFIELD ROAD, SUITE 500 SCHAUMBURG, ILLINOIS 60173
CONTACT:	KIRA BAUMAN
PHONE:	(817) 821-5545
EMAIL:	kbauman@fullertonengineering.com

SCOPE OF WORK

THE SCOPE OF WORK CONSISTS OF:

- NEW 60'-0" X 60'-0" FENCED EQUIPMENT COMPOUND INSIDE NEW 100'-0" X 100'-0" LEASE AREA
- NEW WUC ON NEW CONCRETE PAD
- NEW GENERATOR ON NEW STEEL PLATFORM WITH HELICAL PIERS
- NEW 195'-0" TALL MONOPOLE
- NEW ANTENNAS AND EQUIPMENT ON NEW MONOPOLE

- CONTRACTOR SHALL FURNISH ALL MATERIAL WITH THE EXCEPTION OF PARALLEL SUPPLIED MATERIAL.
- ALL MATERIAL SHALL BE INSTALLED BY THE CONTRACTOR, UNLESS STATED OTHERWISE.

APPLICABLE BUILDING CODES AND STANDARDS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

- 2015 MICHIGAN BUILDING CODE
- 2017 NATIONAL ELECTRICAL CODE

- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- ADA ACCESS REQUIREMENTS ARE NOT REQUIRED.
- THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE

SITE LOCATION MAP

NO SCALE

DIRECTIONS

SCAN QR CODE
FOR LINK TO SITE
LOCATION MAP

MISS DIG System, Inc.
1-800-482-7171

811
Know what's below.
Call before you dig.

DRAWING INDEX

T-1	TITLE SHEET
GN-1	GENERAL NOTES
S-1	SITE SURVEY
S-2	SITE SURVEY
C-1	OVERALL SITE PLAN
C-1A	SITE PLAN
C-2	ENLARGED SITE PLAN
C-2A	EQUIPMENT LAYOUT
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C-4	EQUIPMENT DETAILS
C-4A	CONCRETE FOUNDATION AND DETAILS
C-5	GENERATOR DETAILS
C-6	FENCE DETAILS
C-7	SITE DETAILS
C-8	ANTENNA PLAN AND DETAILS
C-8A	RF EQUIPMENT SCHEDULE
C-8B	EQUIPMENT SPECIFICATIONS
C-9	SITE GRADING PLAN
C-10	SITE DETAILS AND NOTES
C-11	EROSION CONTROL DETAILS
E-1	UTILITY PLAN
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E-4	ELECTRICAL PANEL SCHEDULE, DIAGRAM AND NOTES
G-1	COMPOUND GROUNDING PLAN AND NOTES
G-2	EQUIPMENT GROUNDING PLAN AND RISER DIAGRAM
G-3	GROUNDING DETAILS

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
A	02/24/22	90% REVIEW	LA
B	03/24/22	REVISION	LA
C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
TITLE SHEET

SHEET NUMBER
T-1

066

PROJECT# 2020.0198 . 0094

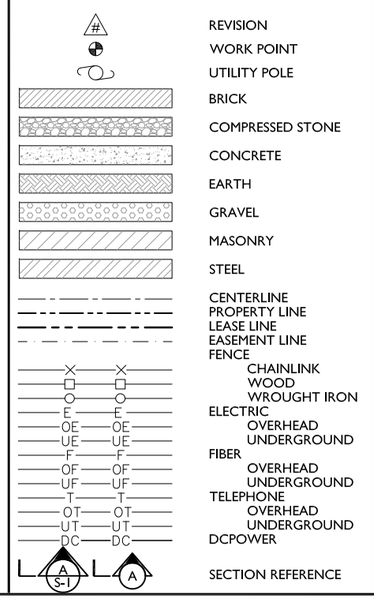
GENERAL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL LAWS, REGULATIONS, AND RULES SET FORTH BY FEDERAL, STATE, AND LOCAL AUTHORITIES WITH JURISDICTION OVER THE PROJECT. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THESE SPECIFICATIONS.
2. ALL WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND THE CONSTRUCTION CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL HAVE AND MAINTAIN A VALID CONTRACTOR'S LICENSE FOR THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED. FOR JURISDICTIONS THAT LICENSE INDIVIDUAL TRADES, THE TRADESMAN OR SUBCONTRACTOR PERFORMING THOSE TRADES SHALL BE LICENSED.
4. FOLLOW ALL APPLICABLE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND STATE LAW AS DEFINED IN THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT.
5. PRIOR TO THE SUBMISSION OF THE BID, THE CONTRACTOR SHALL VISIT THE JOB SITE, VERIFY ALL DIMENSIONS AND BECOME FAMILIAR WITH THE FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
6. DRAWING PLANS SHALL NOT BE SCALED.
7. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK NOT CLEARLY IDENTIFIED ON THE DRAWINGS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE PROJECT MANAGER.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE NOTED.
9. ALL MEANS AND METHODS OF CONSTRUCTION DEALING WITH TOWER CONSTRUCTION AND SAFETY, STEEL ERECTION, EXCAVATIONS, TRENCHING, SCAFFOLDING, FORMWORK, ELECTRICAL, AND WORK IN CONFINED SPACES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. WHEN THE CONTRACTOR ACTIVITIES IMPEDE OR OBSTRUCT TRAFFIC FLOW, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DEVICES, SIGNS, AND FLAGMEN IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, DOT AND LOCAL REQUIREMENTS.
11. THE CONTRACTOR SHALL COORDINATE SITE ACCESS AND SECURITY WITH THE PROPERTY OWNER AND THE PROJECT MANAGER PRIOR TO CONSTRUCTION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH UTILITIES.
13. THE CONTRACTOR SHALL CALL THE LOCAL PUBLIC UTILITY LOCATING PROVIDER (811) A MINIMUM OF THREE BUSINESS DAYS PRIOR TO EXCAVATING IN THE PUBLIC RIGHT OF WAY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING PRIVATE UTILITIES.
15. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY UTILITIES OR FACILITIES IT DEEMS NECESSARY TO COMPLETE THE WORK. THIS INCLUDES, BUT IS NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, HEAT, LIGHTING OR SECURITY.
16. WHEN EXCAVATING IN THE AREA OF EXISTING UTILITIES, THE CONTRACTOR SHALL USE REASONABLE CARE IN PROTECTING SUCH UTILITIES. CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER IMMEDIATELY OF ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED CONSTRUCTION.
17. DAMAGE TO PUBLIC OR PRIVATE UTILITIES SHALL BE REPORTED TO THE PROJECT MANAGER AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE RESULTING FROM CONTRACTORS NEGLIGENCE OR FAILURE TO ACT WITH DUE REGARD SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
18. UNLESS OTHERWISE NOTED ON THE PLANS, CONTRACTOR SHALL ASSUME ALL SURFACE FEATURES SUCH AS BUT NOT LIMITED TO BUILDINGS, PAVEMENTS, LANDSCAPING FEATURES, PLANTS, ETC. ARE TO BE SAVED AND PROTECTED FROM DAMAGE. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SITE CONDITIONS AND UPON COMPLETION OF WORK REPAIR BACK TO ORIGINAL CONDITIONS ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION.
19. KEEP THE CONSTRUCTION SITE CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND SHALL BE SUBJECT TO APPROVAL BY THE PROPERTY OWNER AND THE PROJECT MANAGER.
20. THE CONTRACTOR SHALL PROVIDE ON-SITE TRASH RECEPTACLES FOR COLLECTION OF NON-TOXIC DEBRIS. ALL TRASH SHALL BE COLLECTED ON A DAILY BASIS.
21. ALL TOXIC AND ENVIRONMENTALLY HAZARDOUS SUBSTANCES SHALL BE USED AND DISPOSED OF IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. UNDER NO CIRCUMSTANCES SHALL RINSING OR DUMPING OF THESE SUBSTANCES OCCUR ON-SITE.
22. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS NECESSARY FOR CONSTRUCTION.
23. THE PROJECT MANAGER MAY RETAIN THE SERVICES OF A TESTING LABORATORY TO PERFORM QUALITY ASSURANCE TESTING ON VARIOUS PORTIONS OF THE CONTRACTORS WORK. WHEN REQUESTED, THE CONTRACTOR SHALL INFORM THE TESTING LABORATORY AND ASSIST THEM IN COMPLETING TESTS.
24. THE CONTRACTOR SHALL MAINTAIN AND SUPPLY THE PROJECT MANAGER WITH AS-BUILT PLANS UPON COMPLETION OF THE PROJECT.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGL	ABOVE GROUND LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BBU	BASE BAND UNIT
℄	CENTERLINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
CRAN	CENTRALIZED RAN
C-RAN	CLOUD RAN
DWG	DRAWING
FT	FOOT(FEET)
EGB	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
(E)	EXISTING
EXT	EXTERIOR
FND	FOUNDATION
F	FIBER
GA	GAUGE
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
GSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATION
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MIMO	MULTIPLE IN MULTIPLE OUT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
PPC	POWER PROTECTION CABINET
℄	PROPERTY LINE
RAN	RADIO ACCESS NETWORK
RBS	RADIO BASED STATION
RRH	REMOTE RADIO HEAD
RGS	RIGID GALVANIZED STEEL
IN	INCH(ES)
INT	INTERIOR
LB(S), #	POUND(S)
SF	SQUARE FOOT
STL	STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UMTS	UNIVERSAL MOBILE TELE-COMMUNICATION SYSTEM
VIF	VERIFY IN FIELD
W/	WITH
XFMR	TRANSFORMER

SYMBOLS



REVISION
WORK POINT
UTILITY POLE
BRICK
COMPRESSED STONE
CONCRETE
EARTH
GRAVEL
MASONRY
STEEL
CENTERLINE
PROPERTY LINE
LEASE LINE
EASEMENT LINE
FENCE
CHAINLINK
WOOD
WROUGHT IRON
ELECTRIC
OVERHEAD
UNDERGROUND
FIBER
OVERHEAD
UNDERGROUND
TELEPHONE
OVERHEAD
UNDERGROUND
DCPOWER
SECTION REFERENCE

Parallel INFRASTRUCTURE

Site Maintenance Standard Program Summary

PI Site Name: MI-MOUNT PLEASANT-Mission

PI Site ID: PIMI429

Site Address: 5450 SOUTH MISSION ROAD MOUNT PLEASANT, MI 48858

Parallel Infrastructure has implemented a Tower Site Maintenance Program that meets or exceeds the telecommunication tower industry standards.

General Summary Below:

Tower Inspections

- **Tower Inspections are conducted in accordance with the TIA 322 recommendations for how often the tower is inspected and the tower items to be inspected at each interval.**
  - **PIMI429 195' Monopole - Inspected 5 years from its Construction Complete date and every 5 years thereafter**

Tower Lighting Monitoring

- **Tower lighting is monitored 24/7 by Flash Technologies and meets FAA guidelines. Any system malfunctions are evaluated in real time on a case-by-case basis and repair crews are dispatched as needed.**

Compound and Access Management

- **PIMI429 will be visited at least two times per year to:**
  - **Conduct a general review of the review compound**
  - **Conduct general vegetation control and maintenance**
- **Special circumstances will be evaluated and addressed on a case by case basis**

Sterling McMath
Director Safety and Site Management
Parallel Infrastructure
Charlotte, NC
M469-360-0026
Sterling.mcmath@pitowers.com | www.pitowers.com

SITE MAINTENANCE PLAN

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
A	02/24/22	90% REVIEW	LA
B	03/24/22	REVISION	LA
C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

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SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
GENERAL NOTES

SHEET NUMBER
GN-1
067

PROJECT# 2020.0198 . 0094

PIMI429
OML06772

SURVEYOR'S NOTE

THE PARENT PARCEL BOUNDARY OF THIS DRAWING IS ILLUSTRATED FROM RECORD INFORMATION AND IS APPROXIMATE.

THE TOPOGRAPHICAL SURVEY FOR THIS MAP WAS PERFORMED ON FEBRUARY 09, 2022.

NOT TO BE USED AS CONSTRUCTION DRAWINGS.

THE LEASED PREMISES IS CONTIGUOUS ALONG ITS COMMON BOUNDARIES TO THE ACCESS AND UTILITY EASEMENT WHICH IN TURN IS CONTIGUOUS ALONG ITS COMMON BOUNDARIES TO THE SOUTH MISSION ROAD RIGHT OF WAY. THERE ARE NO GAPS, GORES, SPACES OR OVERLAPS BETWEEN OR AMONG ANY OF SAID PARCELS OF LAND.

NO WETLANDS AREAS HAVE BEEN INVESTIGATED BY THIS SURVEY.

NO IRONS WERE SET AT THE TIME OF SURVEY.

NO UTILITY PROVIDERS GIVEN AT THE TIME OF SURVEY.

AREA

PARENT PARCEL AREA: 330,079 SQUARE FEET, MORE OR LESS
100'x100' LEASED PREMISES: 10,000 SQUARE FEET OR 0.23 ACRES, MORE OR LESS
30.00' WIDE ACCESS & UTILITY EASEMENT: 9,790 SQUARE FEET OR 0.22 ACRES, MORE OR LESS

BASIS OF BEARINGS

LATITUDE AND LONGITUDE OF SITE REFERENCE POINT ARE BASED ON THE HARN (HIGH ACCURACY REFERENCE NETWORK) NAD83 (CORS 96)

BEARINGS ARE BASED ON MICHIGAN STATE PLANE, MI SOUTH 2113 TO ORIENT DRAWING TO TRUE NORTH, ROTATE COUNTERCLOCKWISE 00°16'21.61".

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM.

CONTOURS ARE ILLUSTRATED AT 1.0' INTERVALS.

BM#1) ELEV. 838.61
DESCRIPTION: RAILROAD SPIKE ON NORTH SIDE OF UTILITY POLE, NORTH SIDE OF DRIVEWAY ENTRANCE.

ZONING DATA

ACCORDING TO THE SITE CANDIDATE INFORMATION PACKAGE THE SUBJECT SITE ZONING:

SETBACKS:
FRONT:
REAR:
SIDE:

ZONING NOT PROVIDED

PROPRIETOR

FEE OWNER
KLUMPP MANAGEMENT, LLC
1955 E WALTON RD
SHEPHERD, MI 48883

TOWER CENTROID
LATITUDE: 43°33'40.84" N
LONGITUDE: 84°46'07.66" W
GROUND ELEVATION: 844'±

FLOOD PLAIN INFORMATION

WE HAVE CONSULTED THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE MAP AS PREPARED FOR THE CHARTER TOWNSHIP OF UNION, ISABELLA COUNTY, MICHIGAN, COMMUNITY PANEL NUMBER 26073C0325D DATED FEBRUARY 05, 2014 AND FIND THAT THE PROJECT SITE IS ZONED X (UNSHADED)(AREA OF MINIMAL FLOOD HAZARD).

EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS

THE TITLE COMMITMENT ISSUED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY AS COMMITMENT NO. 35870213, DATED OCTOBER 11, 2021, LISTS THE FOLLOWING EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS, THAT ARE MATTERS OF SURVEY, AFFECTING THE PARENT PARCEL UNDER "SCHEDULE B-II":

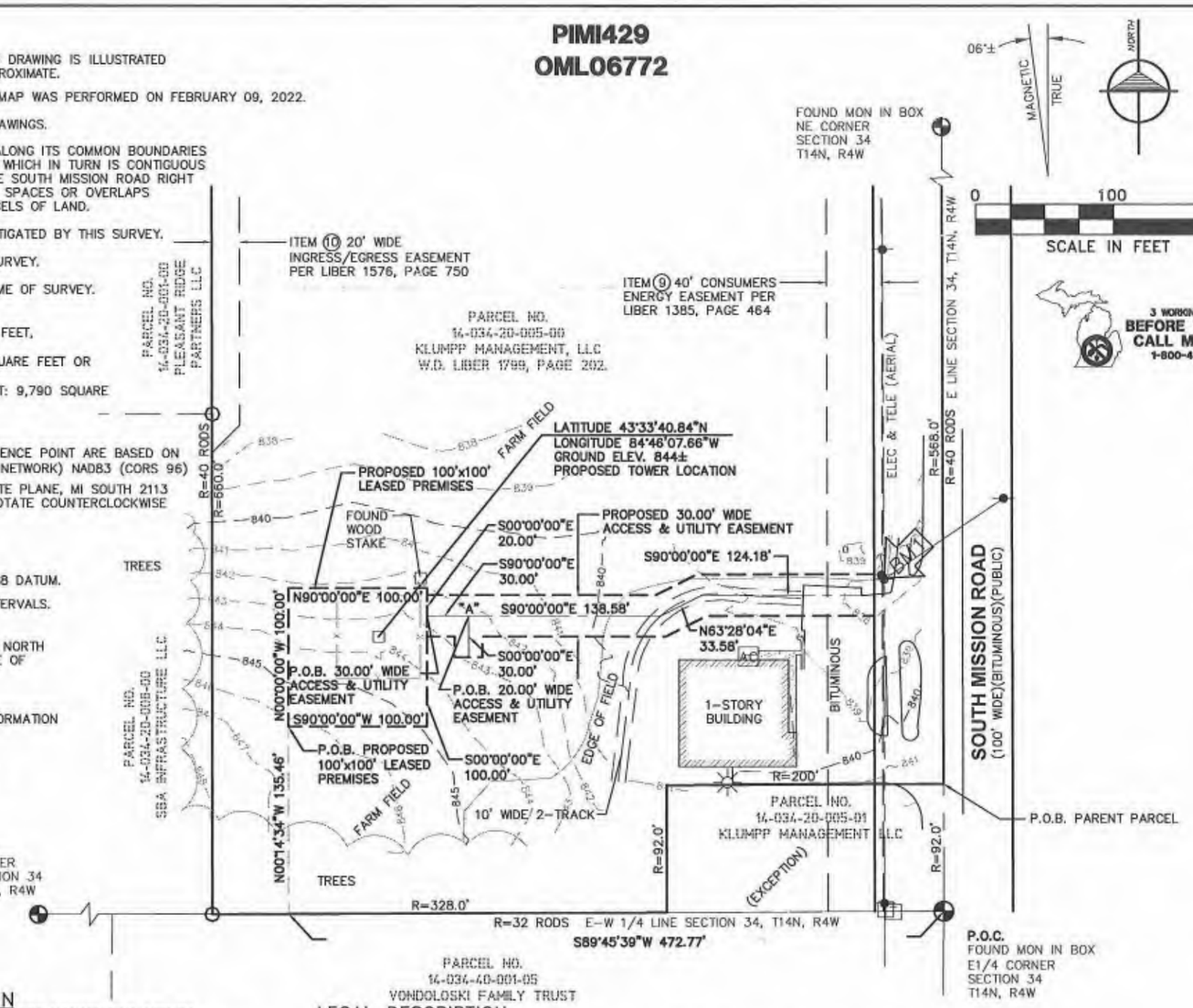
SEE SHEET 2 OF 2

LEGAL DESCRIPTION

PROPOSED 100'X100' LEASED PREMISES
SEE SHEET 2 OF 2

LEGAL DESCRIPTION

PROPOSED 30.00' WIDE ACCESS & UTILITY EASEMENT
SEE SHEET 2 OF 2



VICINITY MAP
N.T.S.

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

LEGEND

- TRAVERSE POINT
- WELL
- HIGHWAY
- MONUMENT
- MONUMENT BOX
- RIGHT OF WAY MARKER
- SET WOODSTAKE
- XCUT
- PK NAIL
- FOUND IRON STAKE
- SET IRON STAKE
- SIGN
- RR SIGN
- AC UNIT
- U.G. UTILITY MARKER
- FIRE HYDRANT
- POST INDICATOR VALVE
- WATER VALVE
- GAS VALVE
- UST FILL PORT
- GAS PUMP
- GUY POLE
- GUY ANCHOR
- UTILITY POLE
- SHRUB
- TREE
- PINE TREE
- EXISTING CONTOURS
- TELEPHONE UTILITY LINE
- ELECTRIC UTILITY LINE
- WATER UTILITY LINE
- GAS UTILITY LINE
- STEAM UTILITY LINE
- STORM UTILITY LINE
- SANITARY UTILITY LINE
- FIBER OPTIC UTILITY LINE
- OVERHEAD UTILITY LINE
- FENCE LINE
- GUARD RAIL
- CONCRETE

All utilities as shown are approximate locations derived from actual measurements and available records. They should not be interpreted to be in exact location nor should it be assumed that they are the only utilities in the area.

LEGAL DESCRIPTION

PARENT PARCEL (PER TITLE DESCRIPTION)

An interest in land, said interest being over a portion of the following described parent parcel:

The following described premises situated in Union Township, County of Isabella and State of Michigan, to-wit:

A parcel of land commencing at the Southeast corner of the Southeast 1/4 of the Northeast 1/4 of Section 34, T14N, R4W, Union Township, Isabella County, Michigan; thence North, 40 rods; thence West, 32 rods; thence South 40 rods; thence East, 32 rods to the place of beginning, except the South, 92 feet of the East, 200 feet thereof, and more particularly described as beginning at a point on the East section line, which is North 00°15'00" West, 92.0 feet from the East 1/4 corner of said Section 34; thence North 00°15'00" West, 568.0 feet; thence South 89°38'30" West, 528.00 feet; thence South 00°15'00" East, 660.0 feet; thence North 89°38'30" East, 328.0 feet along the East and West 1/4 line; thence North 00°15'00" West, 92.0 feet; thence North 89°38'30" East, 200 feet to the Place of Beginning.

AND BEING the same property conveyed to Klumpp Management, LLC, a limited liability corporation from Richard and Joanne Green Revocable Trust dated July 25, 2007 by Warranty Deed dated February 23, 2018 and recorded February 23, 2018 in Liber 1799, Page 202.

Tax Parcel No. 14-034-20-005-00

Said interest being over land more particularly described by the following description:

This map was made from the above legal description which was given to us as a complete description of the property. Both map and description should be compared with the Abstract of Title or Title Policy for any exceptions, easements or differences in description.

STATE OF MICHIGAN
Curtis Raymond Zack
License No. 4001069464
LICENSED PROFESSIONAL SURVEYOR

CERTIFICATION:
To: Parallel Towers III LLC, a Delaware limited liability company; its successors, assigns and/or designees and Old Republic National title Insurance Company as commitment no. 35870213, dated October 11, 2021.

I, Curtis R. Zack, a Michigan Professional Land Surveyor, certify that the information shown hereon was compiled using data from an actual field survey made under my direct supervision and that the field survey and the compilation of information shown herein were conducted in accordance standard mapping procedures and that the relating positional precision of each corner is within the limits accepted by the practice of professional survey under the requirements of P.A. 132 of 1970 as amended. The field work was completed on February 09, 2022.

Curtis R. Zack
Michigan Professional Land Surveyor No. 4001069464
Expires September 23, 2023

Note: This certification only applies to improvements within the lease site and easements as shown hereon.

Dated: 3/24/22

DATE: 02/09/22	DWG. BY: C.C.V.
SCALE: 1"=100'	SURVEYED: D.S.
UPDATE: MM/DD/22	CHKD BY: C.R.Z.
PROJECT NO.: 22016B.021	

Parallel INFRASTRUCTURE

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

PIMI429
OML06772

Project Manager: TIMOTHY MAY

REVISIONS		
NO.	DESCRIPTION	DATE
1	LEGALS	02/15/22
2	CLIENT COMMENTS	03/17/22
3	CLIENT COMMENTS	03/23/22

SURVEYED BY:
williams&works
engineers | surveyors | planners
549 Ottawa Ave NW | 616.224.1500 phone | Grand Rapids, MI 49503 | http://williams-works.com

SITE NAME
OML06772

SITE NUMBER
PIMI429

SITE ADDRESS
6450 S. MISSION ROAD
MT. PLEASANT, MI
48858
ISABELLA COUNTY
PARCEL NO.
14-034-20-005-00

SHEET TITLE
SURVEY

SHEET 1 OF 2

SURVEYOR'S NOTE

THE PARENT PARCEL BOUNDARY OF THIS DRAWING IS ILLUSTRATED FROM RECORD INFORMATION AND IS APPROXIMATE.

THE TOPOGRAPHICAL SURVEY FOR THIS MAP WAS PERFORMED ON FEBRUARY 09, 2022.

NOT TO BE USED AS CONSTRUCTION DRAWINGS.

EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS

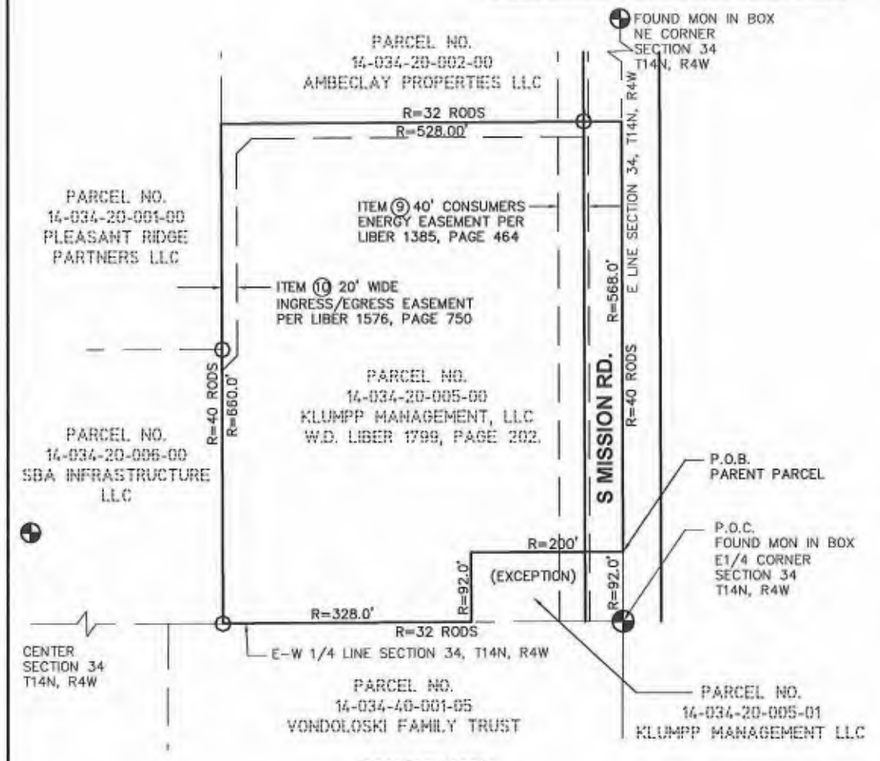
THE TITLE COMMITMENT ISSUED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY AS COMMITMENT NO. 35870213, DATED OCTOBER 11, 2021, LISTS THE FOLLOWING EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS, THAT ARE MATTERS OF SURVEY, AFFECTING THE PARENT PARCEL UNDER "SCHEDULE B-II":

9. Easement in favor of Consumers Energy Company, a Michigan corporation set forth in instrument recorded on March 5, 2007 in Liber 1385, Page 464. AFFECTS THE SUBJECT PROPERTY AS SHOWN.

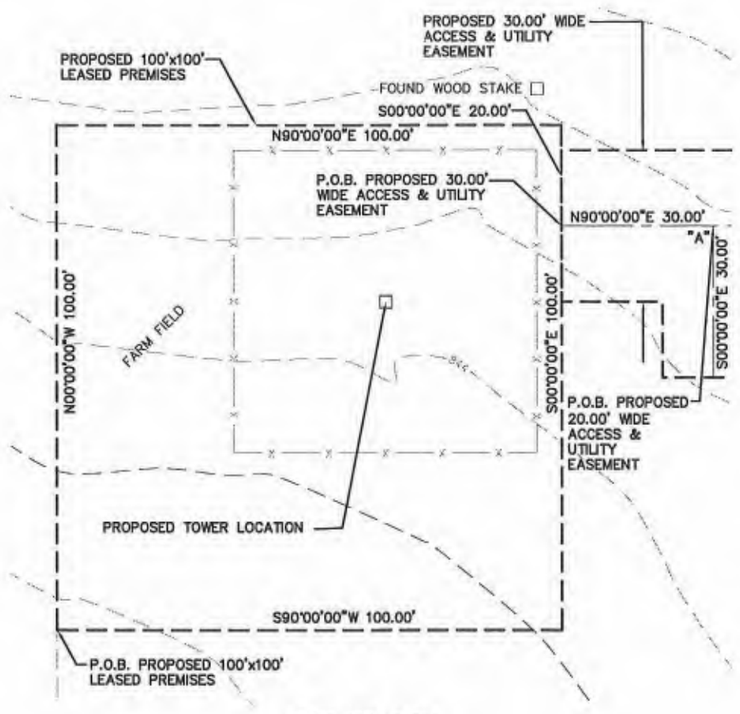
10. Easement Agreement dated November 10, 2011 by and between Richard Green and Joanne Green, as Co-Trustees of The Richard and Joanne Green Revocable Trust dated July 25, 2007, as Grantor, and SBA Infrastructure LLC, a limited liability company, as Grantee, recorded on January 11, 2012 in Liber 1576, Page 750.
AFFECTS THE SUBJECT PROPERTY AS SHOWN. DOES NOT AFFECT THE LEASED PREMISES OR ACCESS/UTILITY EASEMENT.

PIMI429
OML06772

VICINITY MAP
N.T.S.



PROPERTY DETAIL
SCALE 1"=200'



LEASE AREA DETAIL
SCALE 1"=30'

LEGEND

- TRAVERSE POINT
- WELL
- HIGHWAY
- MONUMENT
- MONUMENT BOX
- RIGHT OF WAY MARKER
- SET WOODSTAKE
- XCUT
- PK NAIL
- FOUND IRON STAKE
- SET IRON STAKE
- SIGN
- RR SIGN
- AC UNIT
- U.G. UTILITY MARKER
- FIRE HYDRANT
- PIV POST INDICATOR VALVE
- WATER VALVE
- GAS VALVE
- UST FILL PORT
- GAS PUMP
- GUY POLE
- GUY ANCHOR
- UTILITY POLE
- SHRUB
- TREE
- PINE TREE
- (ELEV) EXISTING CONTOURS
- TELEPHONE UTILITY LINE
- ELECTRIC UTILITY LINE
- WATER UTILITY LINE
- GAS UTILITY LINE
- STEAM UTILITY LINE
- STORM UTILITY LINE
- SANITARY UTILITY LINE
- FIBER OPTIC UTILITY LINE
- OVERHEAD UTILITY LINE
- FENCE LINE
- GUARD RAIL
- CONCRETE

All utilities as shown are approximate locations derived from actual measurements and available records. They should not be interpreted to be in exact location nor should it be assumed that they are the only utilities in the area.

LEGAL DESCRIPTION

PROPOSED 100'X100' LEASED PREMISES

All that part of the Southeast 1/4 of the Northeast 1/4 of Section 34, Town 14 North, Range 4 West, Union Township, Isabella County, Michigan; described as; Commencing at the East 1/4 corner of said Section 34; thence South 89°45'39" West 472.77 feet along the East-West 1/4 line of said Section 34; thence North 00°14'34" West 135.46 feet TO THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence North 00°00'00" West 100.00 feet; thence North 90°00'00" East 100.00 feet; thence South 00°00'00" East 100.00 feet thence South 90°00'00" West 100.00 feet.
Containing 10,000 square feet, more or less.

LEGAL DESCRIPTION

PROPOSED 30.00' WIDE ACCESS & UTILITY EASEMENT

A 30.00 foot wide and 20.00 foot wide easement in that part of the Southeast 1/4 of the Northeast 1/4 of Section 34, Town 14 North, Range 4 West, Union Township, Isabella County, Michigan; the centerline of which is described as; Commencing at the East 1/4 corner of said Section 34; thence South 89°45'39" West 472.77 feet along the East-West 1/4 line of said Section 34; thence North 00°14'34" West 135.46 feet to the Southwest corner of a 100.00 foot by 100.00 foot Leased Premises; thence North 00°00'00" West 100.00 feet; thence North 90°00'00" East 100.00 feet; thence South 00°00'00" East 30.00 feet FOR THE PLACE OF BEGINNING OF THIS 30.00 FOOT WIDE EASEMENT CENTERLINE DESCRIPTION; thence South 90°00'00" East 30.00 feet to a POINT "A"; thence continuing South 90°00'00" East 138.58 feet; thence North 68°28'04" East 33.58 feet; thence South 90°00'00" East 124.18 feet to the westerly right of way line of South Mission Road (100.00 feet) for the place of ending of this centerline description; thence recommencing at the aforedescribed Point "A" FOR THE PLACE OF BEGINNING OF THIS 20.00 FOOT WIDE EASEMENT CENTERLINE DESCRIPTION; thence South 00°00'00" East 30.00 feet for the place of ending of this centerline description. The sidelines of this easement are to be lengthened and/or shortened to intersect at angle points and terminate on the westerly right-of-way line of said South Mission Road and Leased Premises. Containing 10,090 square feet more or less.

STATE OF MICHIGAN
Curtis
Raymond
Zack
License No.
4001069464
LICENSED PROFESSIONAL SURVEYOR

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I, Curtis R. Zack, a Michigan Professional Land Surveyor, certify that the information shown hereon was compiled using data from an actual field survey made under my direct supervision and that the field survey and the compilation of information shown herein were conducted in accordance standard mapping procedures and that the relating positional precision of each corner is within the limits accepted by the practice of professional survey under the requirements of P.A. 132 of 1970 as amended. The field work was completed on February 09, 2022.

Curtis R. Zack
Michigan Professional Land Surveyor No. 4001069464
Expires September 23, 2023

Note: This certification only applies to improvements within the lease site and easements as shown hereon.

Dated: 3/24/22

DATE: 02/09/22	DWG. BY: E.C.V.
SCALE: VARIES	SURVEYED: D.S.
UPDATE: WBM032323	CHKD BY: C.R.Z.
PROJECT NO.: 220168.021	

Parallel INFRASTRUCTURE

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

PIMI429
OML06772
Project Manager: TIMOTHY MAY

REVISIONS		
NO.	DESCRIPTION	DATE
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2	CLIENT COMMENTS	03/17/22
3	CLIENT COMMENTS	03/23/22

SURVEYED BY:
williams&works
engineers | surveyors | planners
616.224.1500 phone | http://williams-works.com
549 Ottawa Ave NW | Grand Rapids, MI 49503

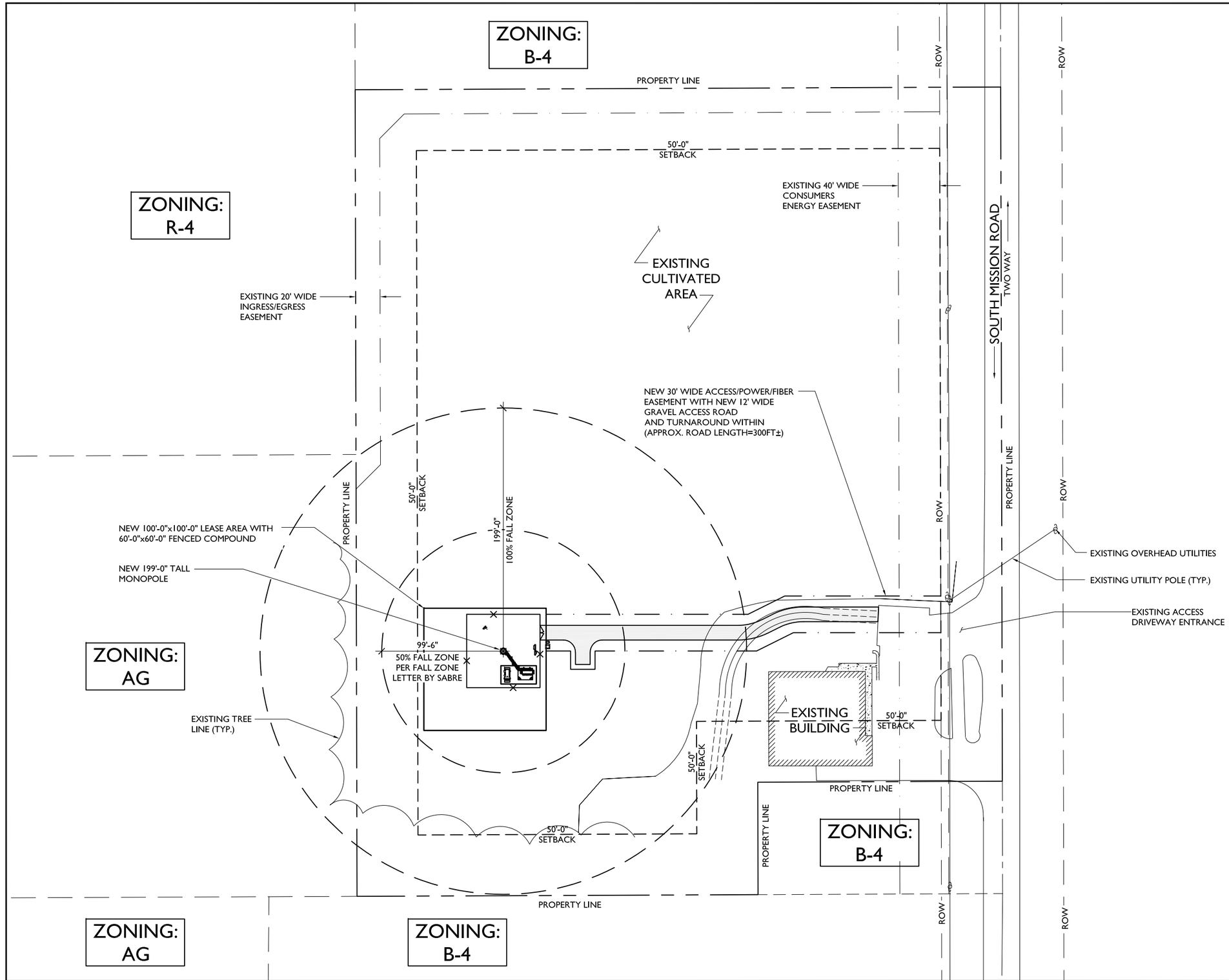
SITE NAME
OML06772

SITE NUMBER
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI
48858
ISABELLA COUNTY
PARCEL NO.
14-034-20-005-00

SHEET TITLE
SURVEY

SHEET 2 OF 2



OVERALL SITE PLAN

SCALE: 1" = 80'-0"

1

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
A	02/24/22	90% REVIEW	LA
B	03/24/22	REVISION	LA
C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

SITE NAME

OML06772

SITE NUMBER:

PIMI429

SITE ADDRESS

5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

OVERALL SITE PLAN

SHEET NUMBER

C-1

070

PROJECT# 2020.0198 . 0094

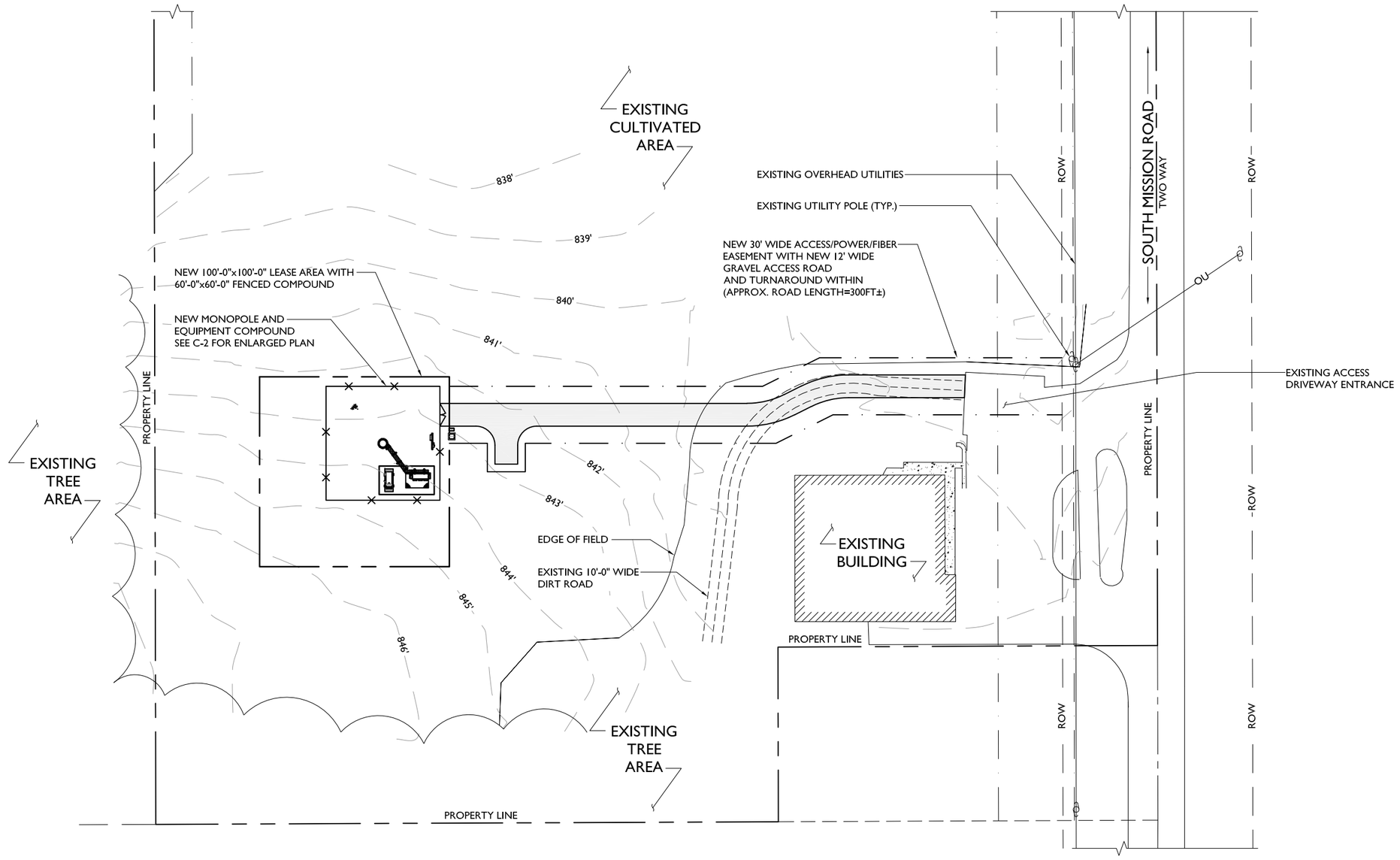
TOWER SETBACKS TO PROPERTY LINES (FROM EDGE OF MONOPOLE CONCRETE FOUNDATION)	
NORTH	457'-0"±
SOUTH	197'-6"±
EAST	405'-0"±
WEST	117'-6"±

NOTE:

PER SECTION 10.7 MODIFICATIONS TO LANDSCAPE REQUIREMENTS, LANDSCAPING WILL BE PROVIDED IF DETERMINED TO BE NECESSARY.

NOTES:

1. SITE DESIGN HAS NOT BEEN COORDINATED WITH FINAL STAMPED TOWER FABRICATION DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ANGLES ON THIS SITE DESIGN WITH FINAL STAMPED TOWER FABRICATION DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED.
2. CONTRACTOR TO CLEAR AND GRUB EXISTING VEGETATION AS NEEDED WITHIN LEASE AREA, ACCESS ROAD AND TURNAROUND AREA.



SITE PLAN

0 30 60 90

SCALE: 1" = 60'-0"

1

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
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SITE NAME

OML06772

SITE NUMBER:

PIMI429

SITE ADDRESS

5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

SITE PLAN

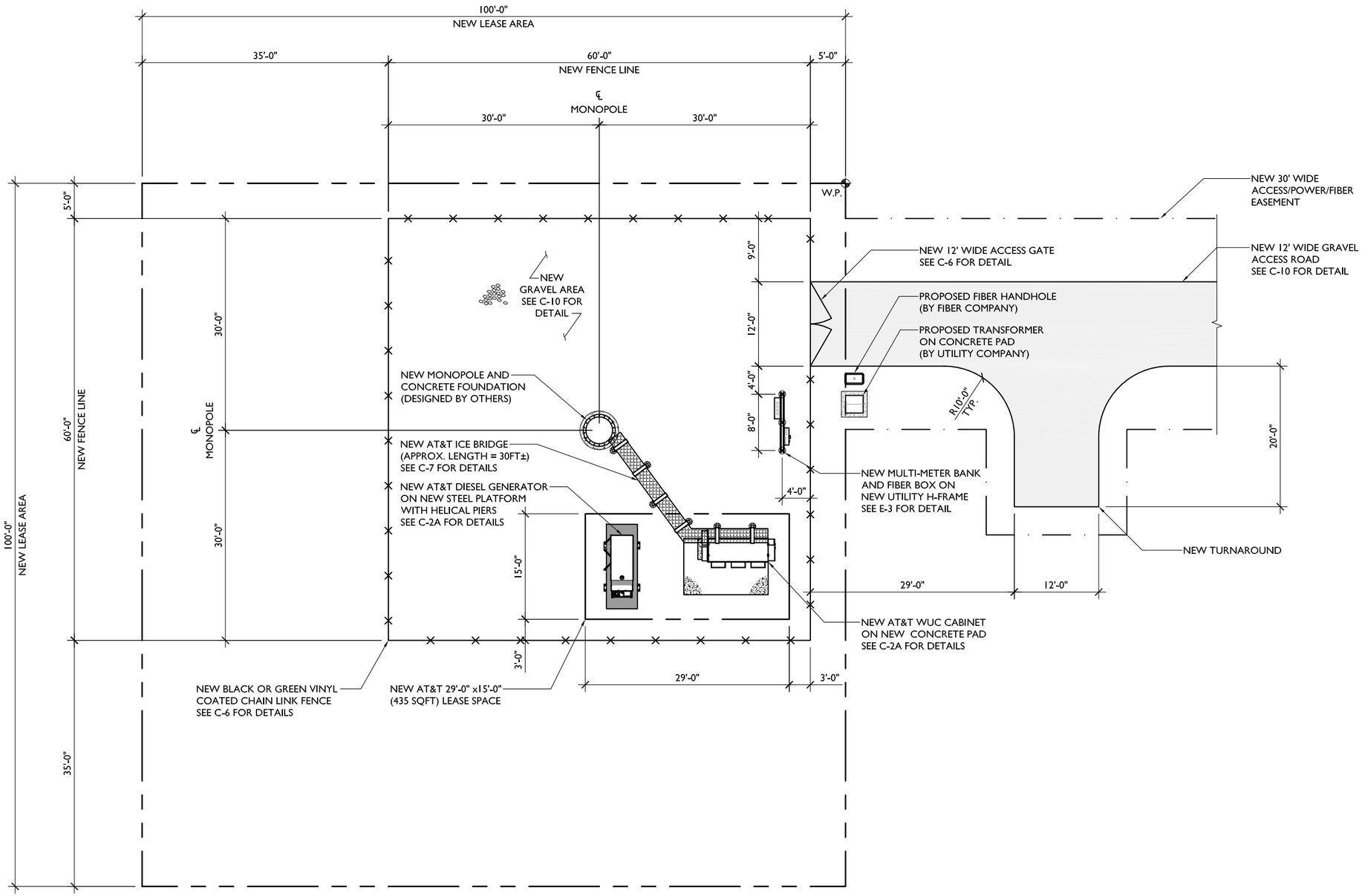
SHEET NUMBER

C-1A

071

PROJECT# 2020.0198 . 0094

NOTE:
PER SECTION 10.7 MODIFICATIONS TO LANDSCAPE REQUIREMENTS, LANDSCAPING WILL BE PROVIDED IF DETERMINED TO BE NECESSARY.



ENLARGED SITE PLAN

0 4' 8' 16' 24'

SCALE: 1/16" = 1'-0"

1

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

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SCHAUMBURG, ILLINOIS 60173
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C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

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SITE NAME
OML06772

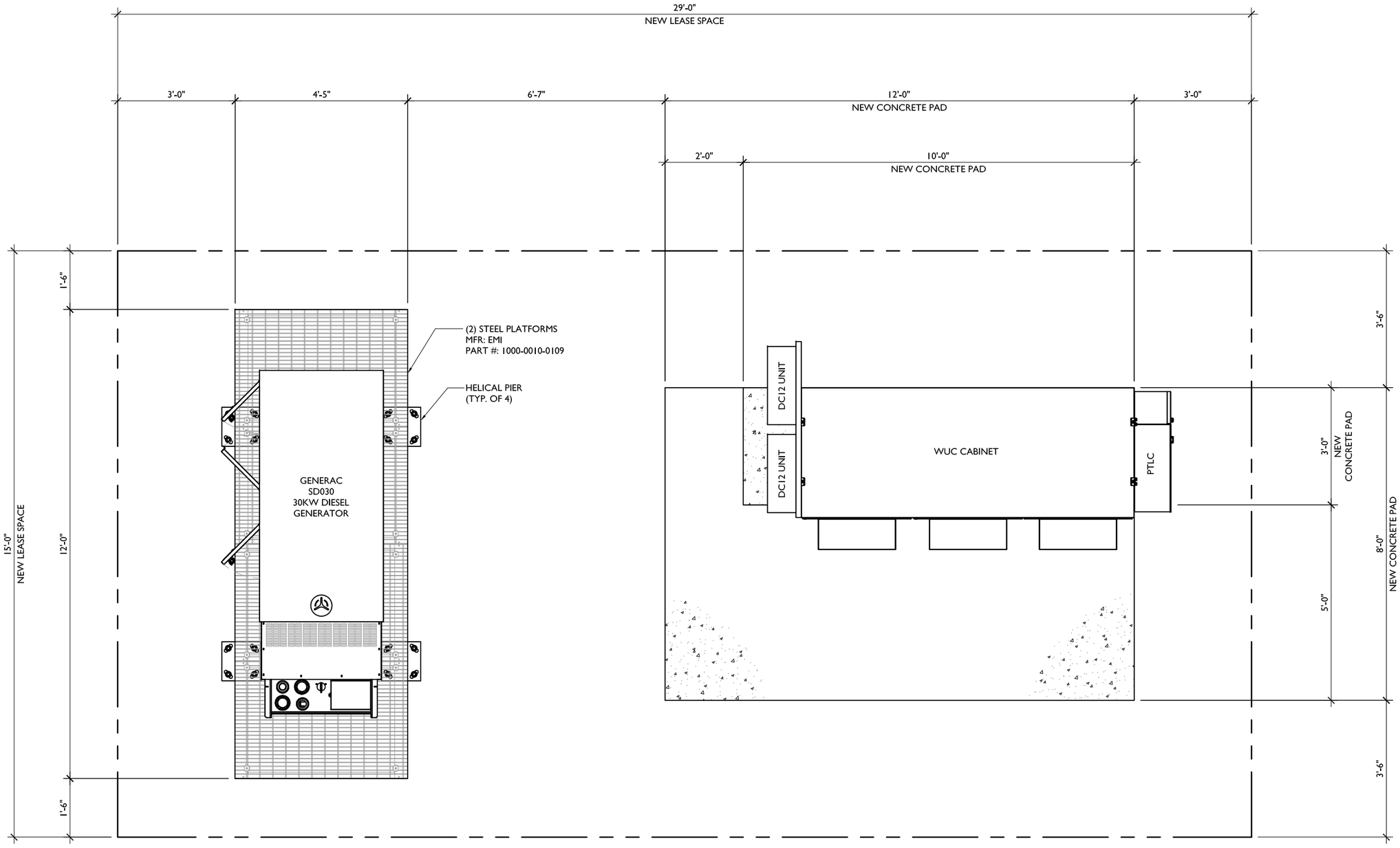
SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
ENLARGED SITE PLAN

SHEET NUMBER
C-2
072

PROJECT# 2020.0198 . 0094



Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
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SITE NAME

OML06772

SITE NUMBER:

PIMI429

SITE ADDRESS

5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

EQUIPMENT LAYOUT

SHEET NUMBER

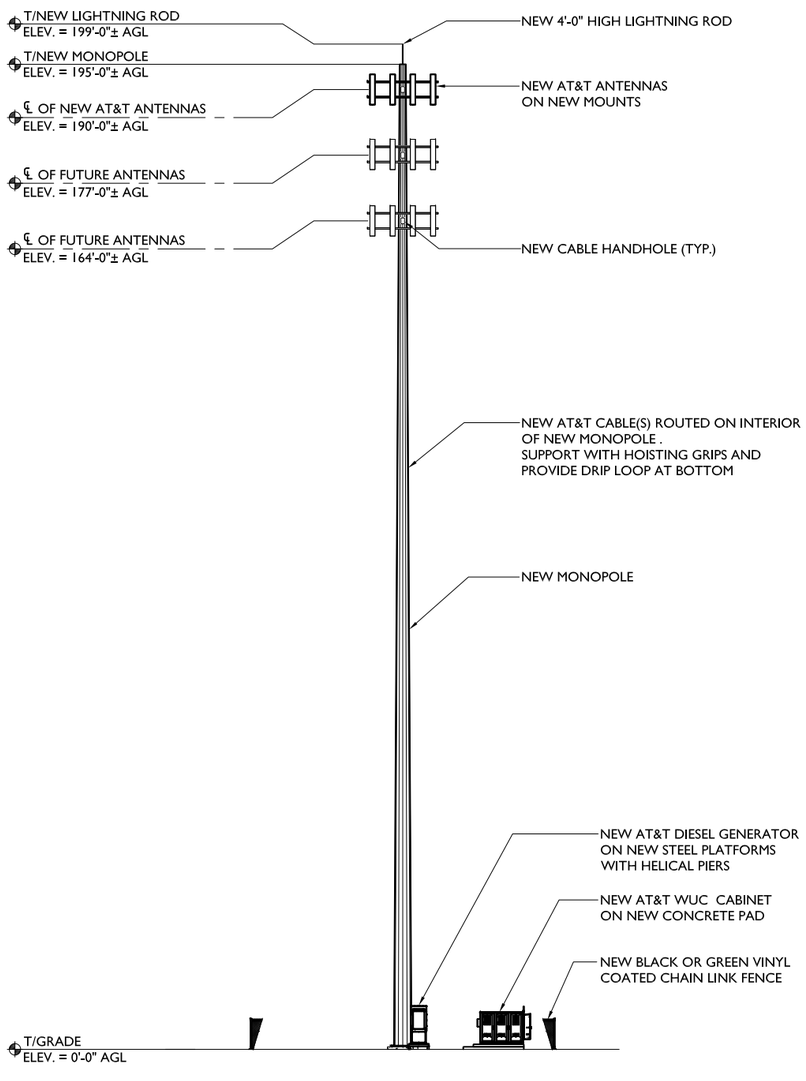
C-2A

073

PROJECT# 2020.0198 . 0094

NOTES:

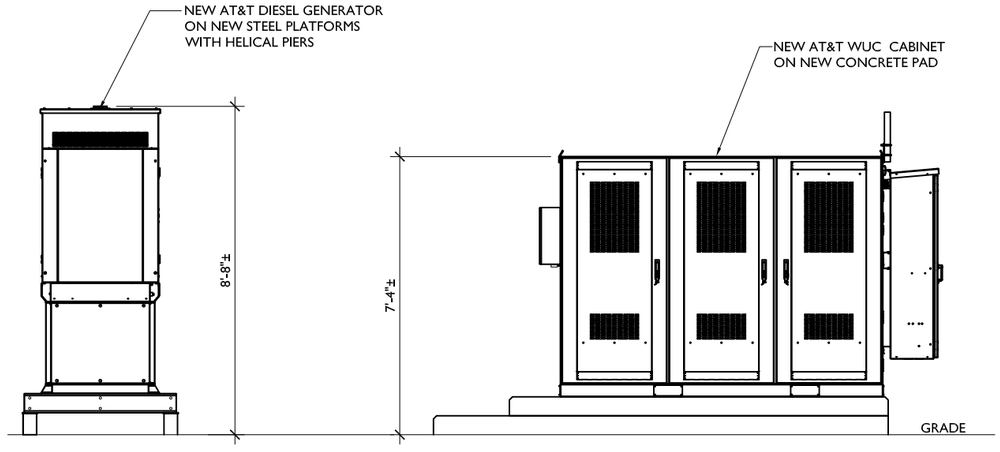
1. CALCULATIONS FOR THE STRUCTURE AND ANTENNA MOUNTS WERE PREPARED BY OTHERS AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT
2. CABLES NOT SHOWN FOR CLARITY
3. SITE DESIGN HAS NOT BEEN COORDINATED WITH FINAL STAMPED TOWER FABRICATION DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ANGLES ON THIS SITE DESIGN WITH FINAL STAMPED TOWER FABRICATION DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED.
4. THERE SHALL BE NO TOWER LIGHTING INSTALLED EXCEPT AS REQUIRED BY THE FAA.
5. MONOPOLE WILL BE UNFINISHED GALVANIZED STEEL GRAY IN COLOR.



ELEVATION

0 15 30 45

SCALE: 1" = 30'-0" | 1



ENLARGED EQUIPMENT ELEVATION

0 1' 2' 4' 6'

SCALE: 1/4" = 1'-0" | 2

Parallel INFRASTRUCTURE

AT&T mobility corp.

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SITE NAME

OML06772

SITE NUMBER:

PIMI429

SITE ADDRESS

5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

ELEVATION

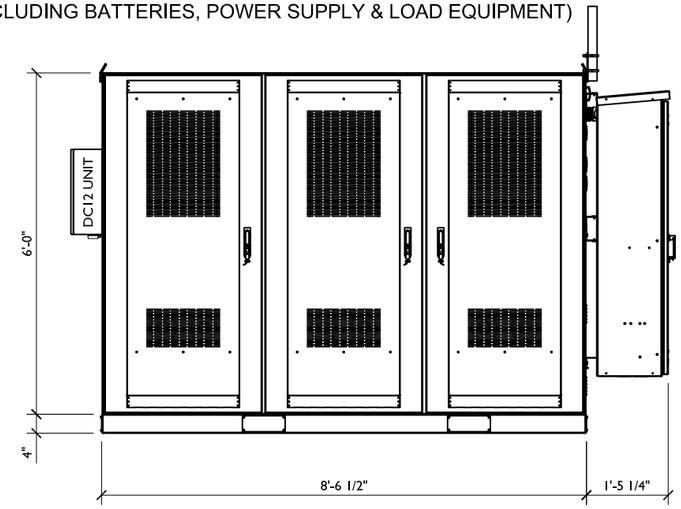
SHEET NUMBER

C-3

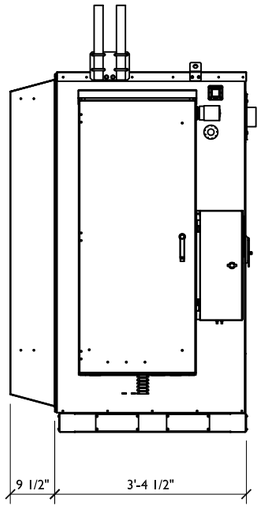
074

PROJECT# 2020.0198 . 0094

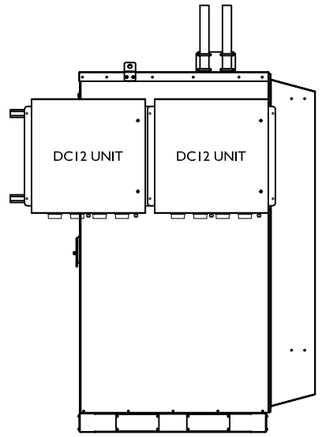
WEIGHT = 2,270 LB
(EXCLUDING BATTERIES, POWER SUPPLY & LOAD EQUIPMENT)



FRONT VIEW



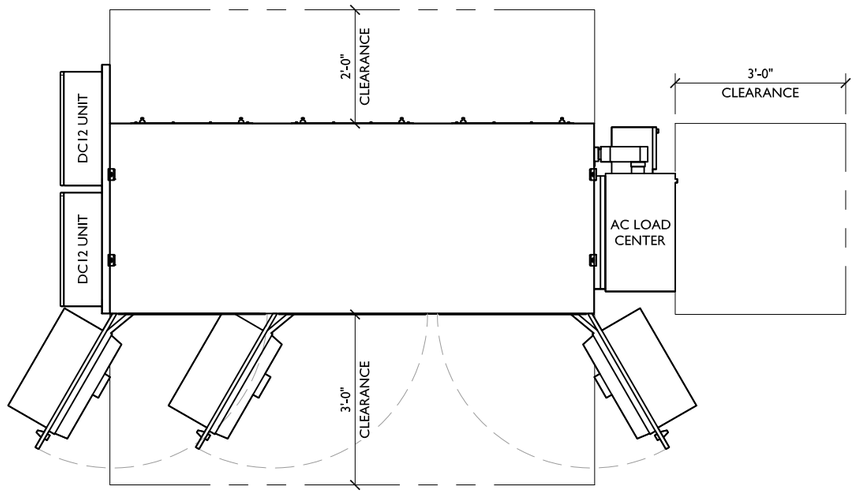
RIGHT VIEW



LEFT VIEW

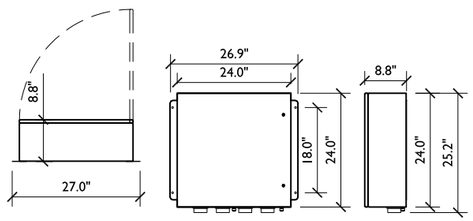
WALK UP CABINET ELEVATIONS

SCALE: N.T.S. | 1



WALK UP CABINET LAYOUT

SCALE: N.T.S. | 2



PLAN VIEW FRONT VIEW SIDE VIEW

RAYCAP - DC12-48-60-0-25E

DC SURGE PROTECTION SOLUTION

SURGE PROTECT	60 kA
MAXIMUM IMPULSE CURRENT	5 kA
ENCLOSURE TYPE (OUTDOOR)	NEMA 4
WEIGHT	56.3 LBS

RAYCAP DC12 SPECIFICATIONS

SCALE: N.T.S. | 3

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

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SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

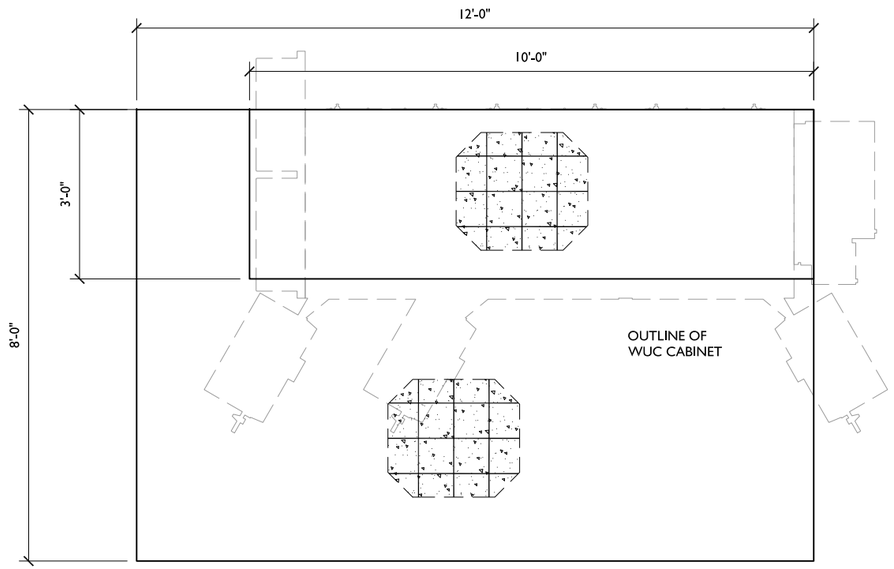
SHEET NAME
EQUIPMENT DETAILS

SHEET NUMBER
C-4
075

PROJECT# 2020.0198 . 0094

NOTE:

1. SLAB TO BE LEVEL ±1/4".



WUC - CONCRETE FOUNDATION PLAN SCALE: N.T.S. 1

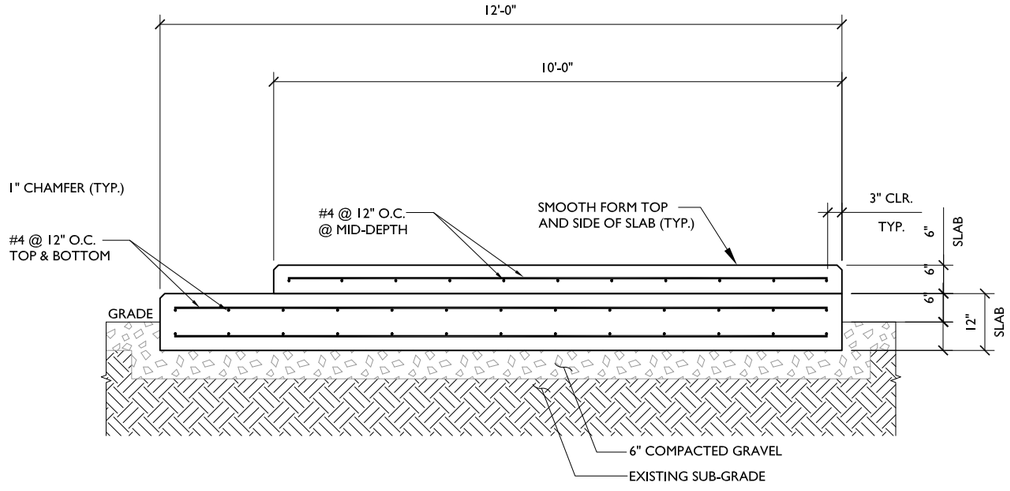
CONCRETE NOTES:

1. MEET OR EXCEED THE FOLLOWING CODES AND STANDARDS:

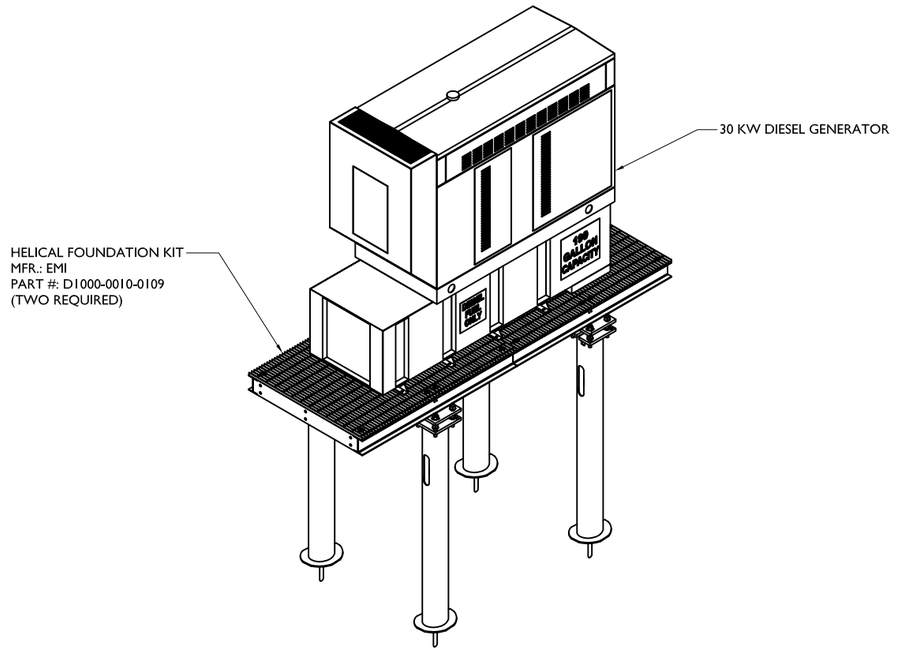
DESIGN	ACI 318
CONSTRUCTION	ACI 301
HOT WEATHER PLACEMENT	ACI 305
COLD WEATHER PLACEMENT	ACI 306
CEMENT	ASTM C-150 (TYPE I)
REINFORCING BARS	ASTM A-615
WIRE MESH	ASTM A-185
NORMAL WT AGGREGATE	ASTM C-33
MIXING	ASTM C-94
ADMIXTURES	ASTM C-494
AIR ENTRAINMENT	ASTM C-260
WATER	POTABLE
DETAILING	CRSI MANUAL OF STANDARD PRACTICE

2. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
3. PROVIDE AIR ENTRAINED CONCRETE WITH AIR CONTENT OF 4% TO 7%. FOR ALL CONCRETE EXPOSED TO EARTH OR WEATHER
4. ALL REINFORCING STEEL SHALL BE GRADE 60.
5. MINIMUM CONCRETE COVER FOR REINFORCING BARS:
   A. CAST AGAINST AND EXPOSED TO EARTH: 3"
   B. EXPOSED TO EARTH OR WEATHER (NO 5 AND SMALLER): 1 1/2"
   C. EXPOSED TO EARTH OR WEATHER (NO 6 AND LARGER): 2"
6. NO ADMIXTURE SHALL CONTAIN CALCIUM CHLORIDE.
7. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT.

NOTES SCALE: N.T.S. 2



SECTION "A-A" SCALE: N.T.S. 3



GENERATOR PLATFORM DETAILS SCALE: N.T.S. 4

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
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C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

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SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

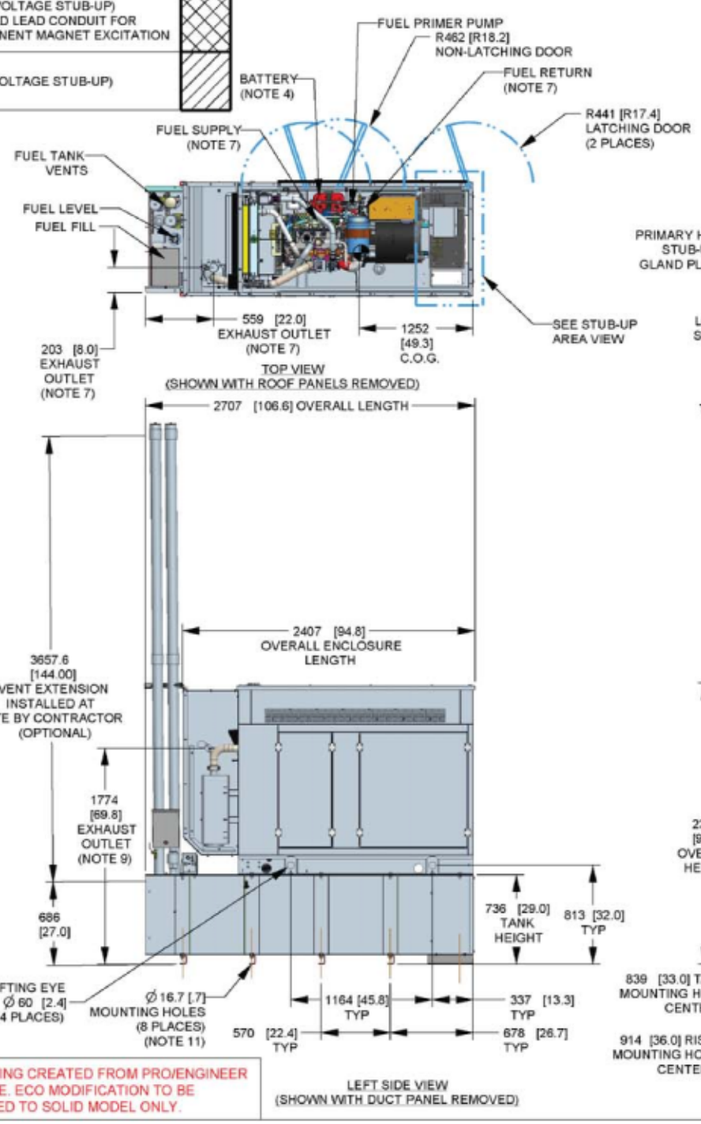
SHEET NAME
CONCRETE FOUNDATION AND DETAILS

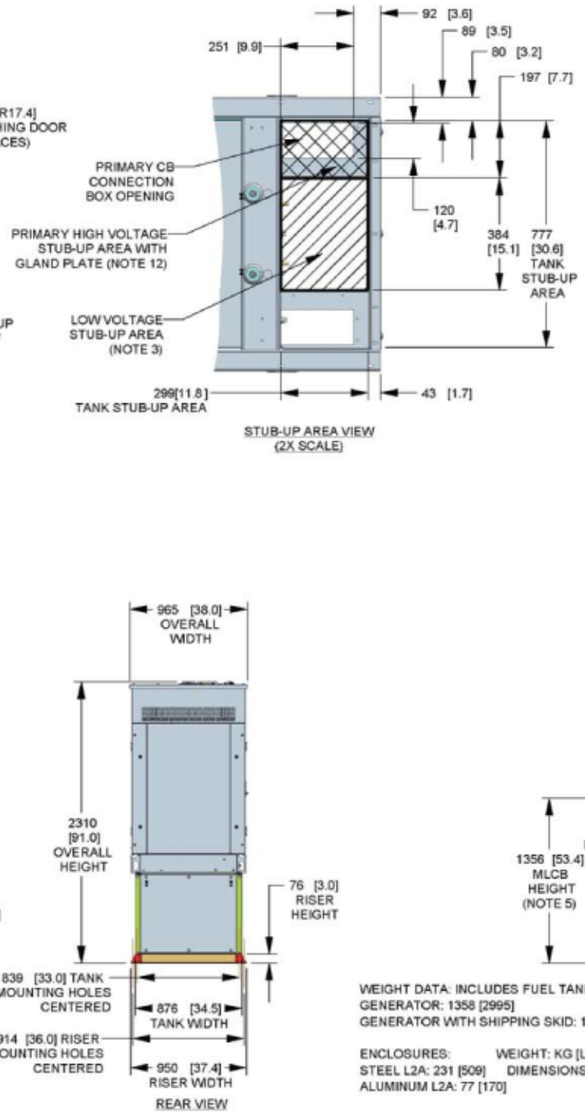
SHEET NUMBER
C-4A
076

PROJECT# 2020.0198 . 0094

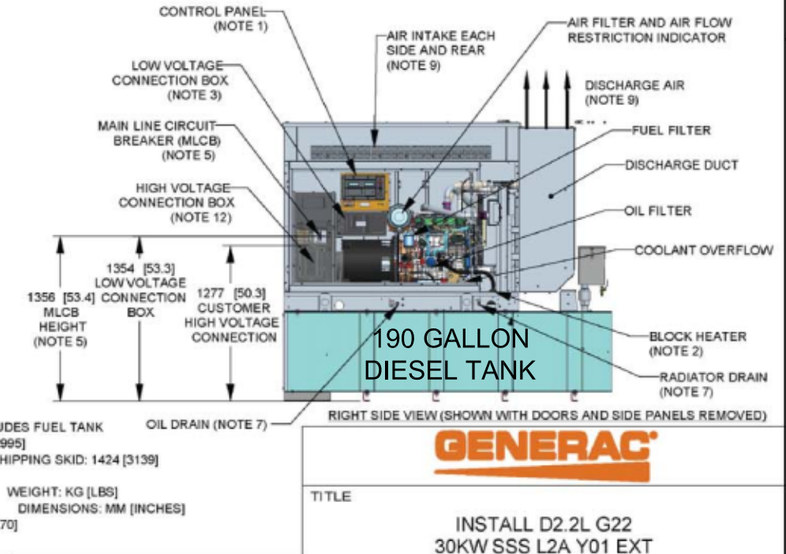
SH 1/1 | REV C | WINDCHILL VERSION C.3

RECOMMENDED ELECTRICAL STUB-UPS
(HIGH VOLTAGE STUB-UP)
AC LOAD LEAD CONDUIT FOR PERMANENT MAGNET EXCITATION
(LOW VOLTAGE STUB-UP)





NOTES:
1. CONTROL PANEL (10A BATTERY CHARGER INSIDE)
2. 120V, 20A GFCI & 250V, 15A OUTLET
3. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN THE LOW VOLTAGE CONNECTION BOX (USE LOW VOLTAGE STUB-UP AREA)
4. BATTERY (12 VOLT NEGATIVE GROUND SYSTEM).
5. MAIN LINE CIRCUIT BREAKER (MLCB) (MLCB HEIGHT MAY VARY WITH CB SELECTION). AC LOAD LEADS CONNECT DIRECTLY TO BOTTOM OF BREAKER.
6. CENTER OF GRAVITY AND WEIGHT MAY SHIFT SLIGHTLY DUE TO UNIT OPTIONS
7. ENGINE SERVICE CONNECTIONS:
   FUEL SUPPLY = 3/8" NPT
   FUEL RETURN = 3/8" NPT
   OIL DRAIN = 1/2" NPT
   RADIATOR DRAIN = 1/2" NPT
   EXHAUST OUTLET = 2.5" I.D.
8. STUB-UPS: BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
9. GENERATOR SET MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND DISCHARGE AIR IS NOT RECIRCULATED. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
10. BOTTOM OF GENERATOR SET MUST BE CLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
11. BOLTS OR STUDS USED TO MOUNT UNIT TO PAD SHALL BE 5/8-11 GRADE 5. USE STANDARD SAE TORQUE SPECS.
12. HIGH VOLTAGE STUB-UP AREA INCLUDES THE AC LOAD LEAD CONNECTIONS TO MLCB, NEUTRAL CONNECTION AND AUXILIARY 120/240V CONNECTION.
13. 190 GALLON USEABLE CAPACITY BASETANK STANDARD WITH GENERATOR
14. 1500W 120 VAC ENGINE BLOCK HEATER WITH THREE PRONG CORD.
15. FUEL LINES ARE PLUMBED DIRECTLY TO BASE TANK
16. DOORS MUST BE ABLE TO OPEN AT LEAST 90° TO BE REMOVED.
17. GENERATOR MUST BE GROUNDED



WEIGHT DATA: INCLUDES FUEL TANK
GENERATOR: 1358 [2995]
GENERATOR WITH SHIPPING SKID: 1424 [3139]

ENCLOSURES: WEIGHT: KG [LBS]
STEEL L2A: 231 [509] DIMENSIONS: MM [INCHES]
ALUMINUM L2A: 77 [170]

DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

INSTALLATION DRAWING

ELECTRONICALLY APPROVED
INSIDE WINDCHILL

GENERAC

TITLE
INSTALL D2.2L G22
30KW SSS L2A Y01 EXT

ISSUE DATE: 12/18/17

SIZE	CAGE NO	DWG NO	REV
B	N/A	10000019290	C

SCALE 0.025 | WT-KG SEE ABOVE | SHEET 1 of 1

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
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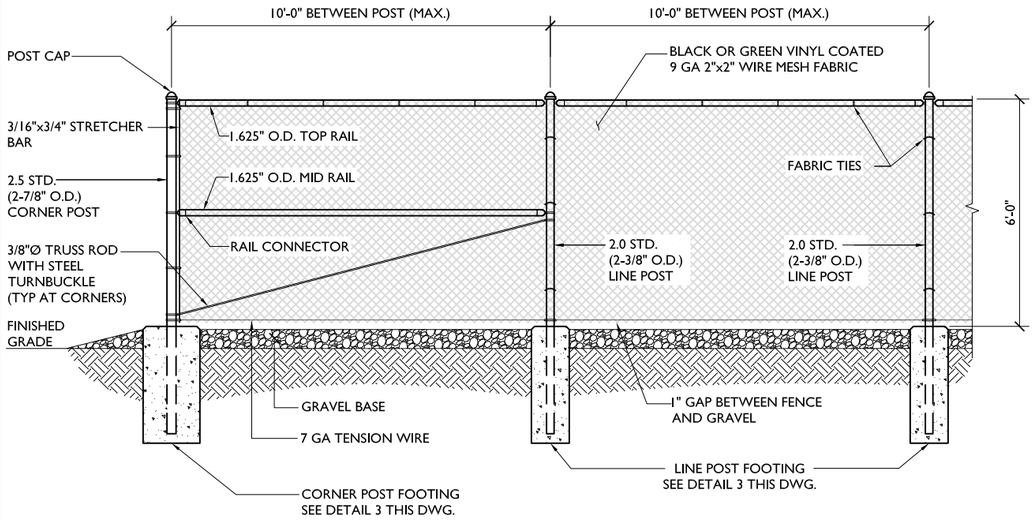
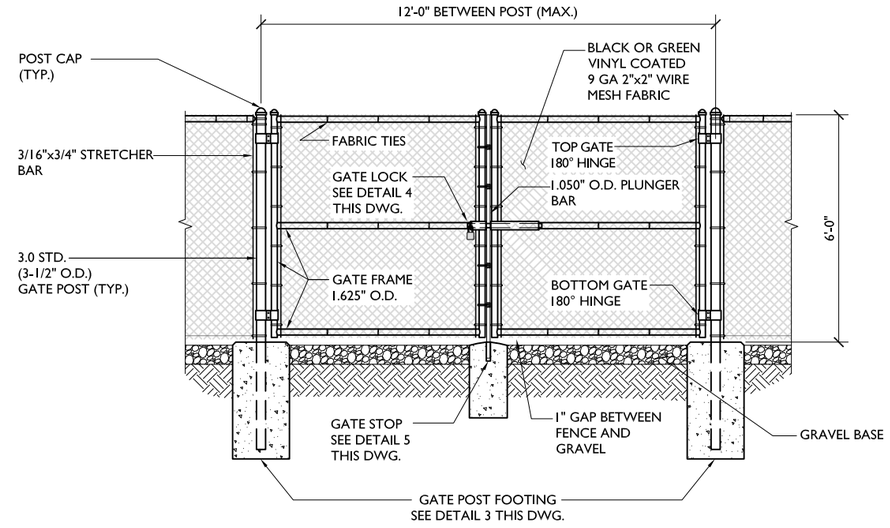
SHEET NAME
GENERATOR DETAILS

SHEET NUMBER
C-5
077

PROJECT# 2020.0198 . 0094



FENCING ELEVATION — SCALE: N.T.S. — 1



DOUBLE SWING GATE DETAIL — SCALE: N.T.S. — 2

POST FOOTING DETAIL — SCALE: N.T.S. — 3

GATE LOCK DETAIL — SCALE: N.T.S. — 4

GATE STOP DETAIL — SCALE: N.T.S. — 5

NOT USED — SCALE: N.T.S. — 6

1. ALL POSTS AND RAILS SHALL BE SCHEDULE 40 PIPE AND SHALL MEET THE REQUIREMENTS OF ASTM-F1083
2. WIRE MESH FABRIC SHALL MEET THE REQUIREMENTS OF ASTM-392
3. ALL FENCE MATERIALS SHALL BE HOT DIP GALVANIZED. ANY DAMAGED FENCE COMPONENTS SHALL BE REPAIRED WITH COLD GALVANIZING SPRAY
4. ALL POST MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES
5. CORNERS AND GATE POST SHALL EXTEND ABOVE THE TOP STRAND OF BARBED WIRE TO PROVIDE TENSIONING FOR THE BARBED WIRE
6. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES
7. ALL CONCRETE FOOTINGS SHALL BE MINIMUM 2500 PSI AT 28 DAYS

NOTES — SCALE: N.T.S. — 7

NOT USED — SCALE: N.T.S. — 8

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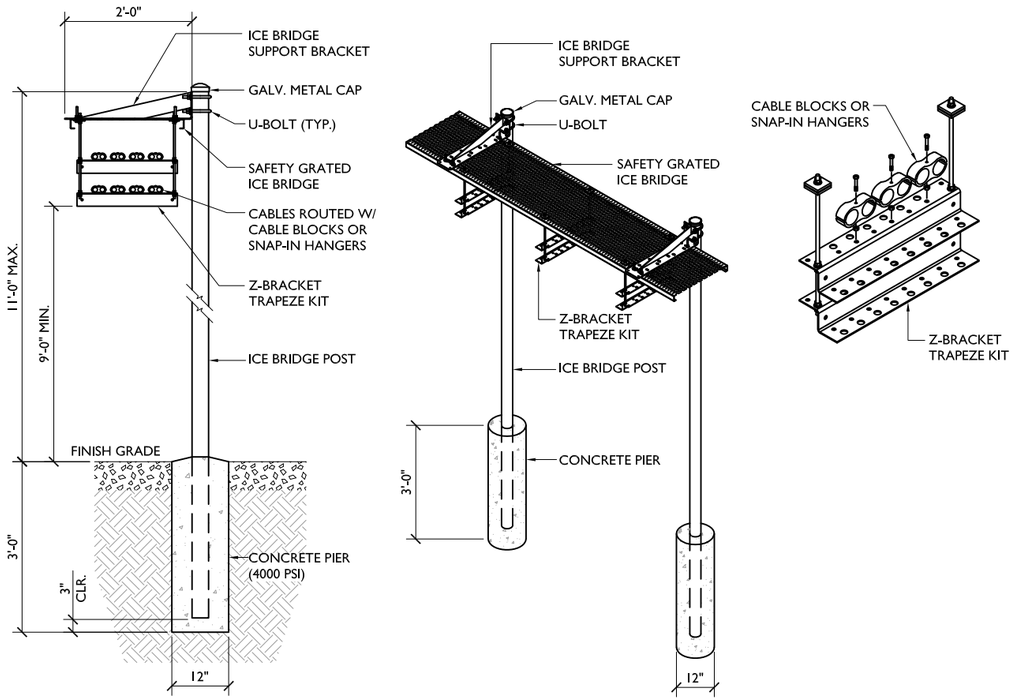
SHEET NAME
FENCE DETAILS

SHEET NUMBER
C-6
078

PROJECT# 2020.0198 . 0094

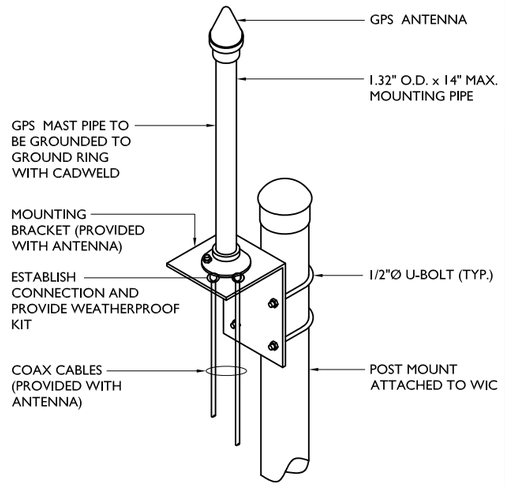
ICE BRIDGE DETAILS

SCALE: N.T.S. | 1



GPS ANTENNA MOUNTING DETAILS

SCALE: N.T.S. | 2



NOTES:

1. LOCATION OF GPS MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF 40UR (4) SATELLITES. VERIFY WITH HANDHELD PPS BEFORE FINAL LOCATION OF GPS ANTENNA

NOT USED

SCALE: N.T.S. | 3

NOT USED

SCALE: N.T.S. | 4

NOT USED

SCALE: N.T.S. | 5

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SHEET NAME

SITE DETAILS

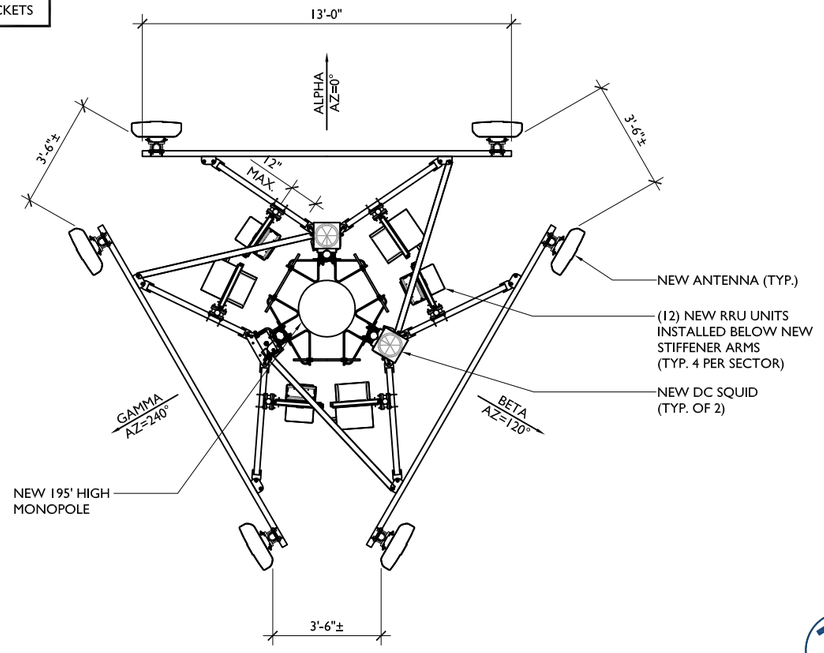
SHEET NUMBER

C-7

079

PROJECT# 2020.0198 . 0094

NOTE:
RRUS WILL BE MOUNTED
ON PIM-FRIENDLY BRACKETS



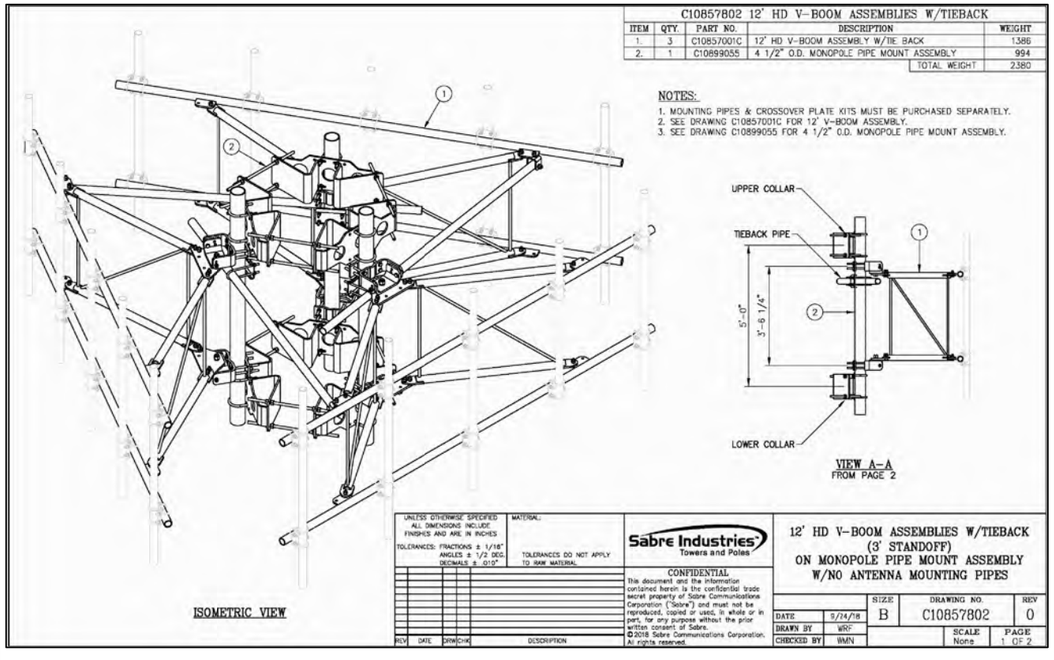
ANTENNA LAYOUT @ ELEV. = 190'-0' AGL

0 1' 2' 4' 8'

SCALE: 3/16" = 1'-0" | 1

NOT USED

SCALE: N.T.S. | 2



ANTENNA MOUNT SPECIFICATIONS

SCALE: N.T.S. | 3

NOT USED

SCALE: N.T.S. | 4

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SHEET NAME

ANTENNA PLAN AND DETAILS

SHEET NUMBER

C-8
080

PROJECT# 2020.0198 . 0094

RF EQUIPMENT SCHEDULE

SECTOR/ POSITION		FREQUENCY BAND	ANTENNA MAKE / MODEL	RAD CENTER	AZIMUTH	ELECTRICAL TILT	MECHANICAL TILT	(QTY.) RADIO	(QTY.) TMA	(QTY.) SURGE PROTECTION	(QTY.) CABLES	CABLE LENGTH
ALPHA	A1	5G 850 LTE WCS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	0°	-	-	(1) 4T4R B5 160W AHCA (1) 4T4R B30 100W AHNA	-	(2) DC9-48060-24-8C-EV	(4) 1"Ø DC TRUNKS (PWRT-604-S) (2) 24 PR 10MM FIBER (RFFT-48SM-001)	220'-0"±
	A2	-	-	-	-	-	-	-	-	-	-	-
	A3	-	-	-	-	-	-	-	-	-	-	-
	A4	LTE 700 LTE 1900 LTE AWS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	0°	-	-	(1) 4T4R B12/14/29 370W AHLBBA (1) 4T4R B25/66 320W AHFIB	-	-	-	-
BETA	B1	5G 850 LTE WCS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	120°	-	-	(1) 4T4R B5 160W AHCA (1) 4T4R B30 100W AHNA	-	-	-	-
	B2	-	-	-	-	-	-	-	-	-	-	-
	B3	-	-	-	-	-	-	-	-	-	-	-
	B4	LTE 700 LTE 1900 LTE AWS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	120°	-	-	(1) 4T4R B12/14/29 370W AHLBBA (1) 4T4R B25/66 320W AHFIB	-	-	-	-
GAMMA	C1	5G 850 LTE WCS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	240°	-	-	(1) 4T4R B5 160W AHCA (1) 4T4R B30 100W AHNA	-	-	-	-
	C2	-	-	-	-	-	-	-	-	-	-	-
	C3	-	-	-	-	-	-	-	-	-	-	-
	C4	LTE 700 LTE 1900 LTE AWS	KMW EPBQ-654L8H8-L2-EPI-0T	190'±	240°	-	-	(1) 4T4R B12/14/29 370W AHLBBA (1) 4T4R B25/66 320W AHFIB	-	-	-	-
TOTALS			(6) ANTENNAS	N/A				(12) RRUs	(0) TMAs	(2) SPDs	(6) CABLES	N/A

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RF EQUIPMENT SCHEDULE

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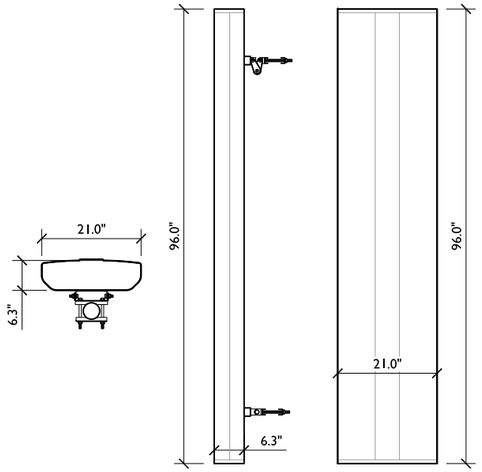


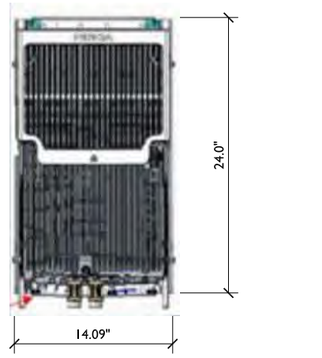
PLAN VIEW SIDE VIEW FRONT VIEW

KMW - EPBQ-654L8H8-L2

12-PORT MULTI-BAND ANTENNA

FREQUENCY RANGE	698-806 MHz 806-894 MHz 1695-1850 MHz 1850-1910 MHz 1910-2180 MHz 2300-2400 MHz
ANTENNA	86.0 Lbs
BRACKET	7.5 Lbs
TOTAL WEIGHT	93.5 Lbs

ANTENNA SPECS SCALE: N.T.S. 1



PLAN VIEW SIDE VIEW FRONT VIEW

NOKIA - AHLBBA-TRIBAND RRH B14/12/29

SUPPORTS 3 LOW BANDS IN 1 RRH

FREQUENCY RANGE	B12: DL 729-744 MHz, UL 699-714 MHz B14: DL 758-768 MHz, UL 788-798 MHz B29: DL 718-728 MHz
WEIGHT	94.8 Lbs

RRU SPECS SCALE: N.T.S. 2

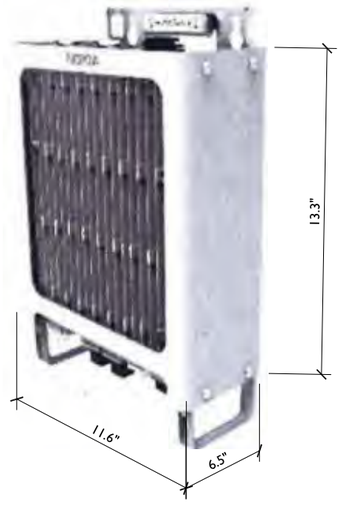
NSN

AIRSCALE DUAL RRH 4T4R B25/B66 320W AHFIB

FREQUENCY RANGE	BAND B25: DL 1930-1995 MHz UL 1850-1915 MHz BAND B66: DL 2110-2200 MHz UL 1710-1780 MHz
UNIT WEIGHT	88 Lbs

RRU SPECS SCALE: N.T.S. 3

NOT USED SCALE: N.T.S. 4

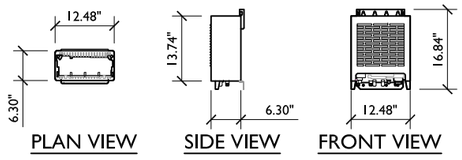


NSN - AIRSCALE RRH 4T4R B5 160W AHCA

CAPACITY, PERFORMANCE, RADIO-INTERGRATED PASSIVE INTERMODULATION (PIM)

FREQUENCY RANGE	DL 869-894 MHz UL 824-849 MHz
TOTAL WEIGHT	35.3 Lbs

RRU SPECS SCALE: N.T.S. 5



PLAN VIEW SIDE VIEW FRONT VIEW

NSN

AHNA AirScale RRH 4T4R B30 100W

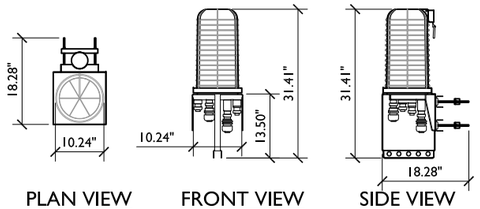
FREQUENCY RANGE	DL 2350-2360 MHz UL 2305-2315 MHz
CORE	34.17 Lbs
CORE w/SOLAR COVER & BRACKET	39.02 Lbs

RRU SPECS SCALE: N.T.S. 6

NOT USED SCALE: N.T.S. 7

NOT USED SCALE: N.T.S. 8

NOT USED SCALE: N.T.S. 9



PLAN VIEW FRONT VIEW SIDE VIEW

RAYCAP - DC9-48-60-24-8C-EV

SYSTEM WEIGHT	16.0 Lbs
MOUNT WEIGHT	10.2 Lbs
TOTAL WEIGHT	26.2 Lbs
DIMENSIONS (LxWxH)	18.28"x10.24"x31.4"

RAYCAP SPECS SCALE: N.T.S. 10

NOT USED SCALE: N.T.S. 11

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EQUIPMENT SPECIFICATIONS

SHEET NUMBER

C-8B

082

PROJECT# 2020.0198 . 0094

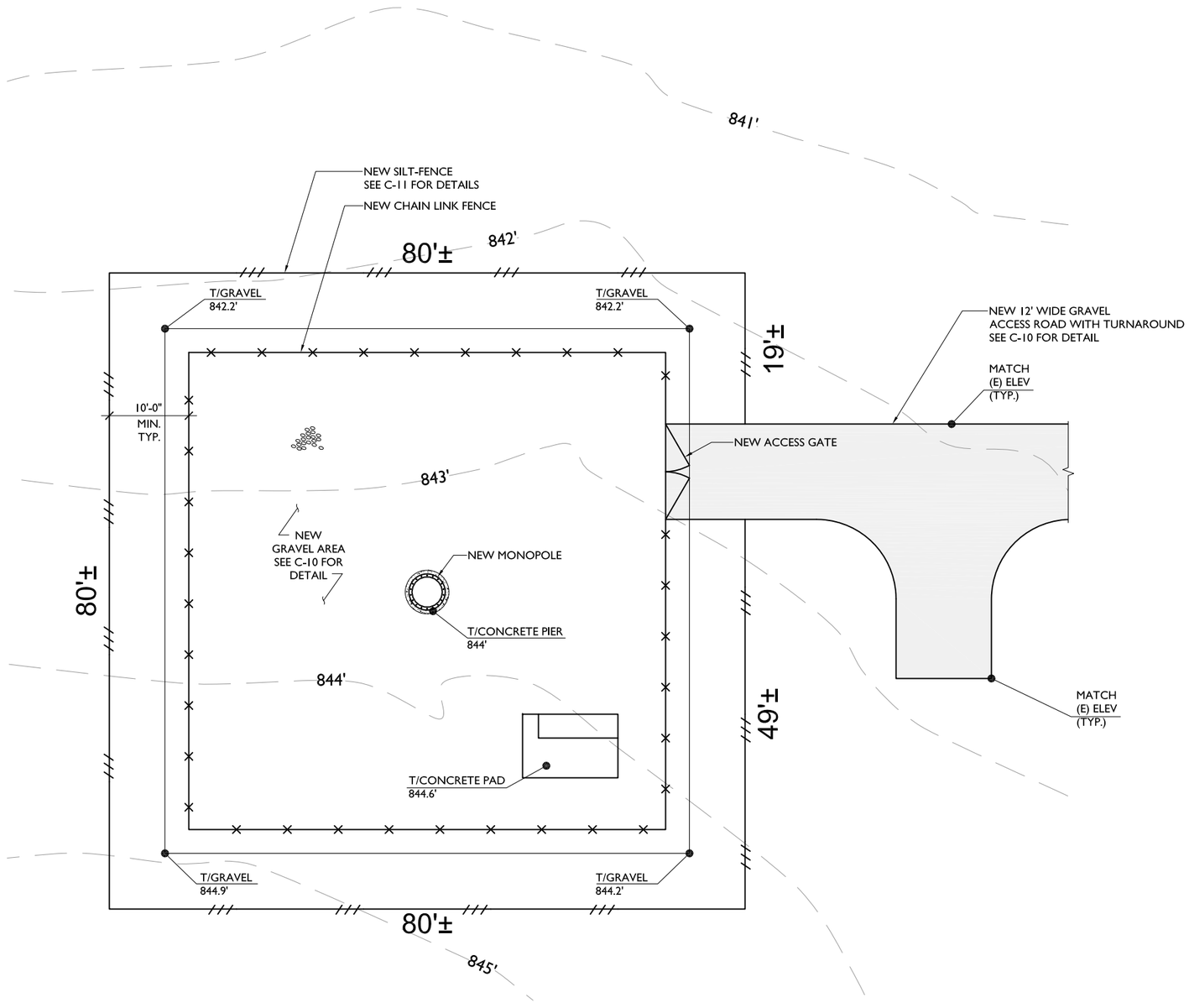
LEGEND

EXISTING CONTOURS

SILT FENCE

NOTES:

1. CIVIL ENGINEERING DESIGN AND CALCULATIONS NOT PERFORMED.
2. CONTRACTOR TO CLEAR AND GRUB EXISTING VEGETATION AS NEEDED WITHIN LEASE AREA, ACCESS ROAD AND TURNAROUND AREA.



GRADING PLAN

0 4' 8' 16' 24'

SCALE: 1/16" = 1'-0"

1

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SHEET NAME

SITE GRADING PLAN

SHEET NUMBER

C-9

083

PROJECT# 2020.0198 . 0094

1. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE WELL DRAINED AT ALL TIMES.

2. PERFORM ALL SURVEY, LAYOUT, STAKING AND MARKING TO ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.

3. LOCATE AND CLEARLY FLAG TREES, VEGETATION AND EXISTING SITE CONDITIONS TO REMAIN UNDISTURBED DURING CONSTRUCTION.

4. THE CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO ESTABLISH INSPECTIONS AND APPROVAL PROCESS FOR ALL SITE WORK.

5. EXCAVATION AND STRUCTURAL BACKFILL FOR TOWER AND EQUIPMENT FOUNDATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. CONTRACTOR IS REQUIRED TO OBTAIN A COPY OF THE REPORT PRIOR TO CONSTRUCTION.

6. SUITABLE NON-STRUCTURAL BACKFILL: EXCAVATED INORGANIC MATERIAL, COHESIVE AND NON-COHESIVE MATERIALS, INCLUDING GRAVEL, SAND, SILT, CLAY, AND COMBINATIONS THEREOF FREE FROM REFUSE, FROZEN LUMPS, STONES OR ROCKS LARGER THAN 3 INCHES.

7. UNSUITABLE BACKFILL: TOP SOIL, HIGH AND MODERATELY PLASTIC SILTS AND CLAY, MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES.

8. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE AND ONLY THE IMMEDIATE SURROUNDINGS NECESSARY TO COMPLETE THE WORK. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: TREES, BRUSH, ROOTS, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA.

9. CLEAR, GRUB, STRIP AND EXCAVATE FOR THE ACCESS ROAD AND TOWER COMPOUND TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. SCARIFY TO A DEPTH OF 6 INCHES AND PROOF-ROLL. ALL DEPRESSIONS, SOFT PLACES AND OTHER DEFECTS SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL.

10. ALL MATERIALS AND DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS SHALL BE REMOVED FROM THE SITE AND DISPOSED PROPERLY. BURNING IS NOT PERMITTED.

11. GEOTEXTILE FABRIC SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.

12. REMOVE ALL FORMWORK RESULTING FROM CONCRETE CONSTRUCTION PRIOR TO BACKFILL.

13. UNDISTURBED SUBGRADE SHALL BE COMPACTED TO A DENSITY EQUAL TO ADJACENT GROUND.

14. ALL SUITABLE FILL MATERIAL SHALL BE INSTALLED IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 9 INCHES AND SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY PER THE MODIFIED PROCTOR TEST, ASTM D1557.

15. WHEN SOFT, YIELDING OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED AT THE REQUIRED TRENCH BOTTOM ELEVATION, OVER-EXCAVATE THE TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

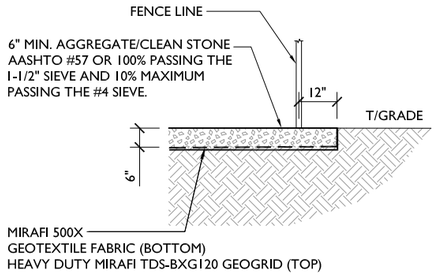
16. COMPACT FINAL BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO EXCAVATION BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D1557.

17. UTILIZE SUITABLE FILL MATERIALS RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILL, ACCESS ROAD, SITE GRADING AND FOR THE REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.

18. SITE AND ACCESS ROAD AGGREGATE SUB-BASE, BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 6 INCHES LOOSE THICKNESS AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D1557.

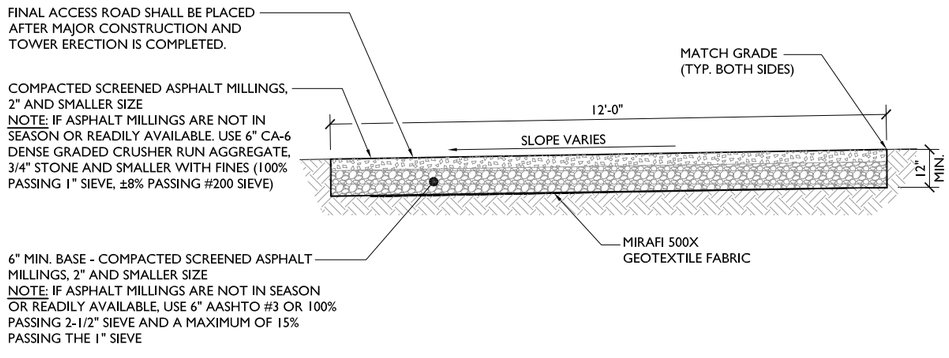
19. PERFORM ALL FINISHED GRADING TO PROVIDE SMOOTH, EVEN SURFACE AND SUBSURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.

SITE NOTES SCALE: N.T.S. | 1



YARD DETAIL SCALE: N.T.S. | 2

NOT USED SCALE: N.T.S. | 3



GRAVEL DRIVEWAY TYPICAL SECTION SCALE: N.T.S. | 4

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
A	02/24/22	90% REVIEW	LA
B	03/24/22	REVISION	LA
C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

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SITE NAME

OML06772

SITE NUMBER:

PIMI429

SITE ADDRESS

5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

SITE DETAILS AND NOTES

SHEET NUMBER

C-10

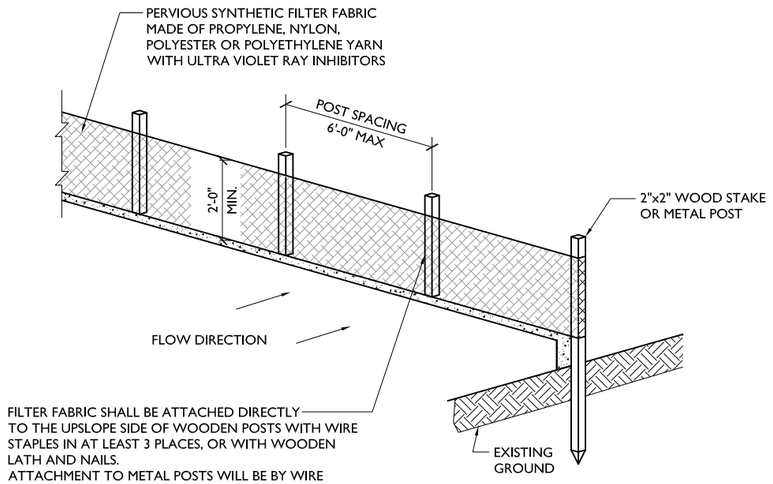
084

PROJECT# 2020.0198 . 0094

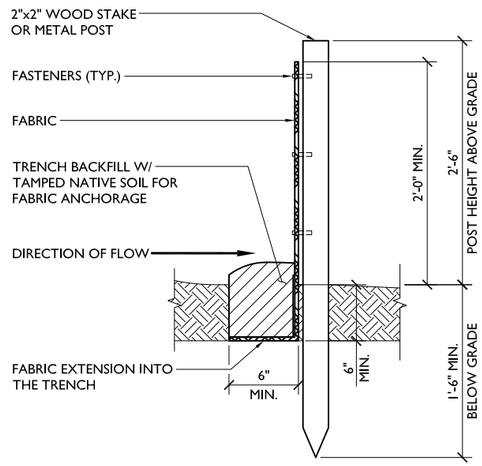
NOTES:

1. ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE APPLICABLE STATE ADOPTED "PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL" AND THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" OF THE STATE ENVIRONMENTAL PROTECTION AGENCY.
2. A SOIL EROSION CONTROL FENCE SHALL BE INSTALLED BEFORE DISTURBING THE GROUND AND SHALL BE PROVIDED AS SHOWN ON THE PLAN. THE CONDITION OF THE FENCE SHALL BE INSPECTED REGULARLY AND AFTER EVERY RAINSTORM THAT MIGHT PRODUCE RUNOFF. DAMAGED OR DETERIORATED ITEMS SHALL BE REPLACED AND MAINTAINED IN AN EFFECTIVE CONDITION
3. SOIL EROSION CONTROL MEASURES SHALL BE INCLUDED IN CONTRACTOR BID AND PRICING
4. THE ENTIRE SITE SHALL BE GRADED SO THAT NO STORM WATER RUNOFF AND LIKEWISE SOIL SEDIMENT CAN FLOW UNRESTRICTED FROM THE SITE
5. ALL INLETS, STRUCTURES, PIPES, SWALES, AND ROADS SHALL BE KEPT CLEAN AND FREE OF DIRT AND SILT
6. MAINTAIN SOIL EROSION CONTROL MEASURES THROUGH THE DURATION OF THIS PROJECT
7. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN REACHING ONE HALF THE HEIGHT OF THE BARRIER
8. ALL SOIL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED EARTH HAS BEEN PAVED OR VEGETATED
9. ANY EXCESS TOPSOIL THAT IS TO BE STOCKPILED FOR A PERIOD LONGER THAN 2 WEEKS SHALL BE PROTECTED BY EXCAVATING A TRENCH COMPLETELY AROUND THE STOCKPILE TO PREVENT THE ESCAPE OF SOIL MATERIAL THROUGH STORM WATER RUNOFF. STOCKPILES THAT ARE TO REMAIN LONGER THAN 14 DAYS SHALL BE SEEDED WITH AN APPROPRIATE GROUND COVER
10. TO PREVENT SOIL FROM LEAVING THE SITE ON CONSTRUCTION VEHICLE WHEELS, TEMPORARY GRAVEL ROADS AT WORK ENTRANCES SHALL BE CONSTRUCTED AND SHALL EXTEND INTO JOB SITE. THE EXISTING PAVEMENT SURFACES SHALL BE INSPECTED DAILY FOR SOIL DEBRIS AND SHALL BE CLEANED WHEN NECESSARY
11. REPLACE SOIL EROSION CONTROL MEASURES WITH SEED, SOD AND TOPSOIL AT THE COMPLETION OF THE PROJECT
12. SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN PROJECT IS COMPLETED

SOIL EROSION AND SEDIMENT CONTROL NOTES SCALE: N.T.S. | 1

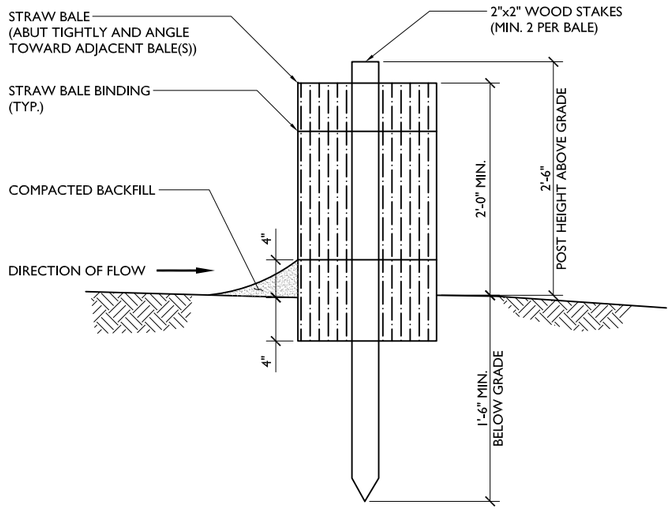


ISOMETRIC VIEW



SECTION VIEW

EROSION CONTROL - SILT FENCE SCALE: N.T.S. | 2



SECTION VIEW

EROSION CONTROL - STRAW BALE (OPTIONAL) SCALE: N.T.S. | 3

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SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

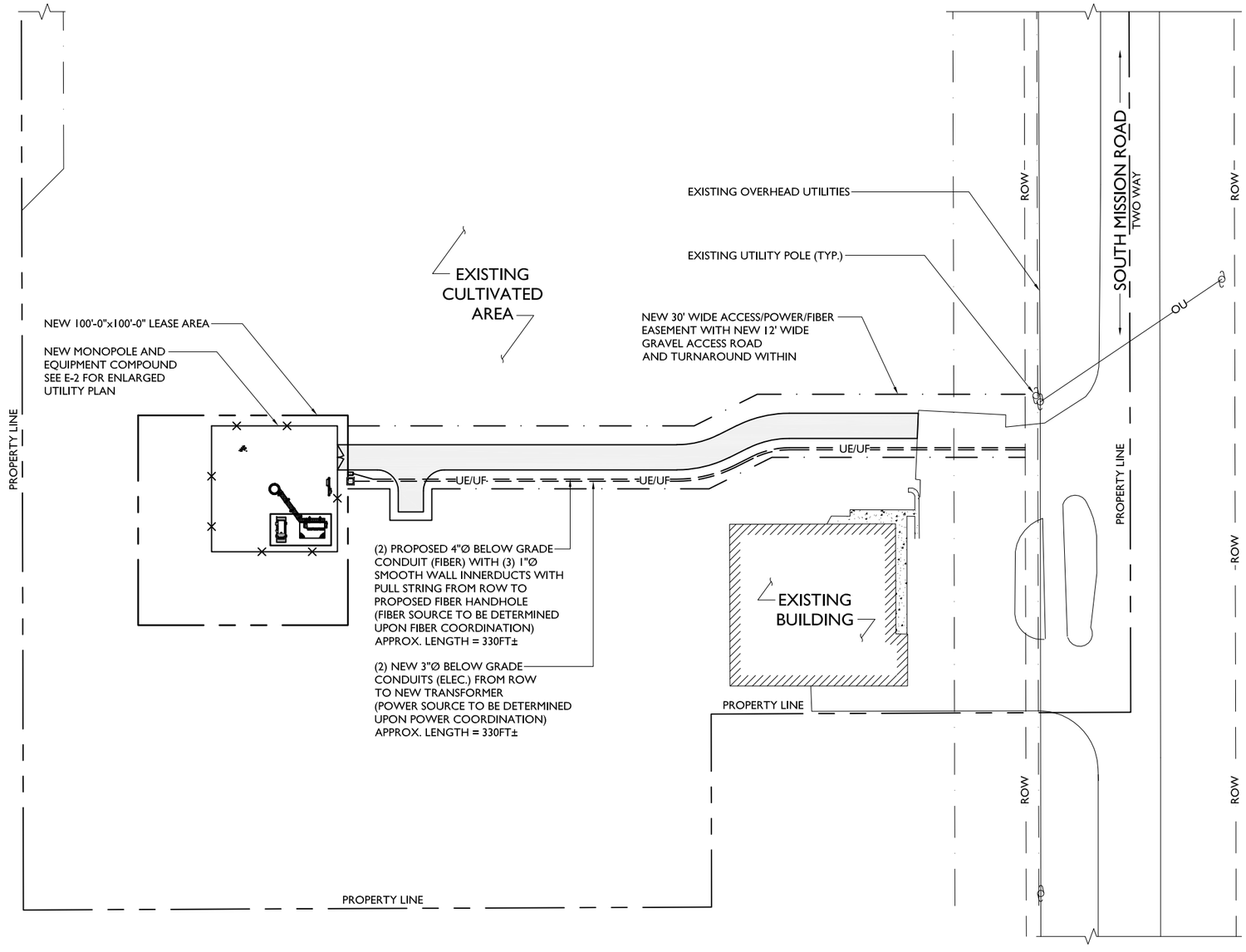
SHEET NAME
EROSION CONTROL DETAILS

SHEET NUMBER
C-11
085

PROJECT# 2020.0198 . 0094

NOTE:

EXACT SOURCE AND ROUTING OF POWER AND FIBER TO BE DETERMINED UPON COORDINATION WITH POWER AND FIBER COMPANIES.



UTILITY PLAN

0 30 60 90

SCALE: 1" = 60'-0"

1

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5450 S. MISSION ROAD
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SHEET NAME

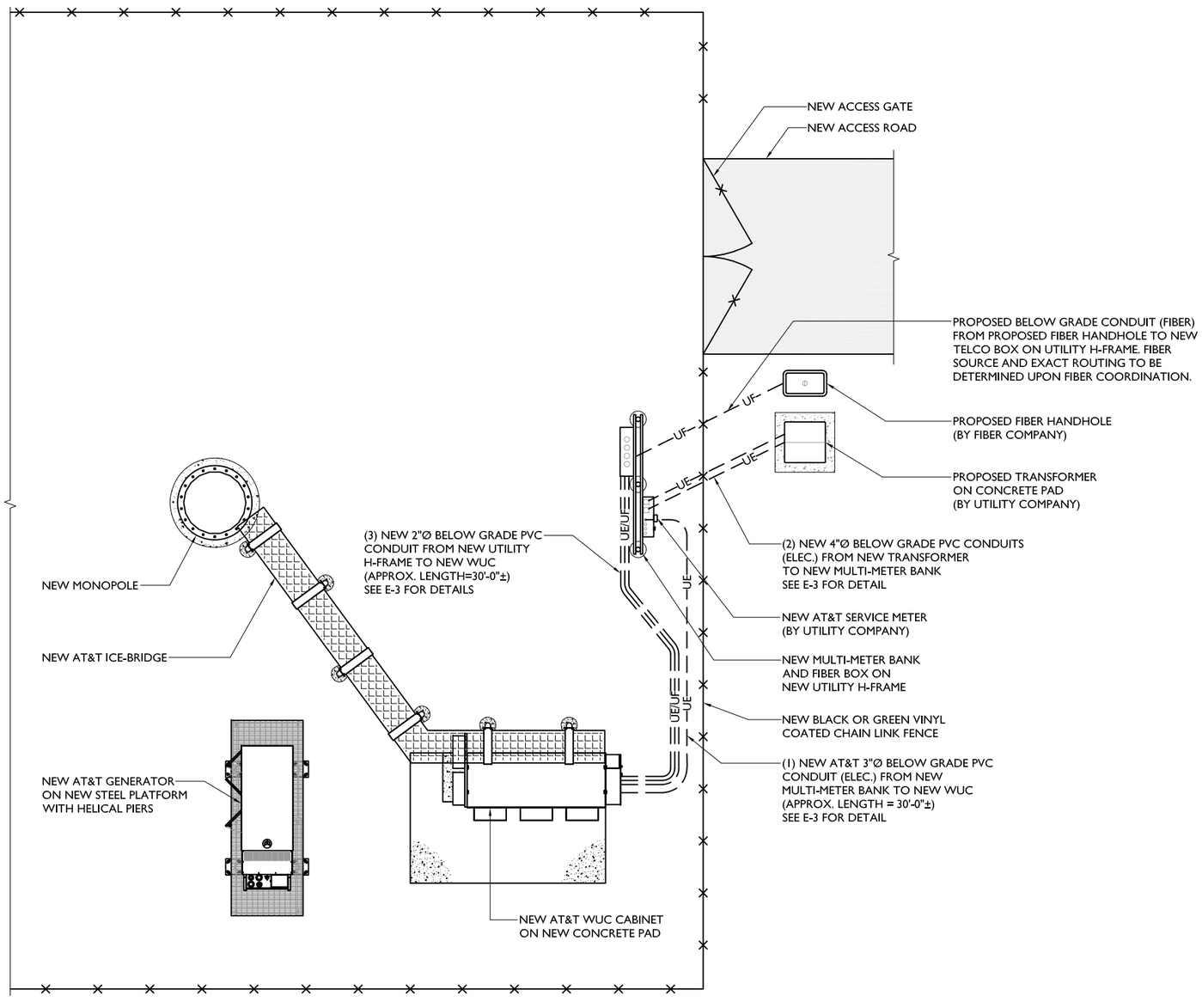
UTILITY PLAN

SHEET NUMBER

E-1

086

PROJECT# 2020.0198 . 0094



ENLARGED UTILITY PLAN

0 2' 4' 8' 12'

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

1

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5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME

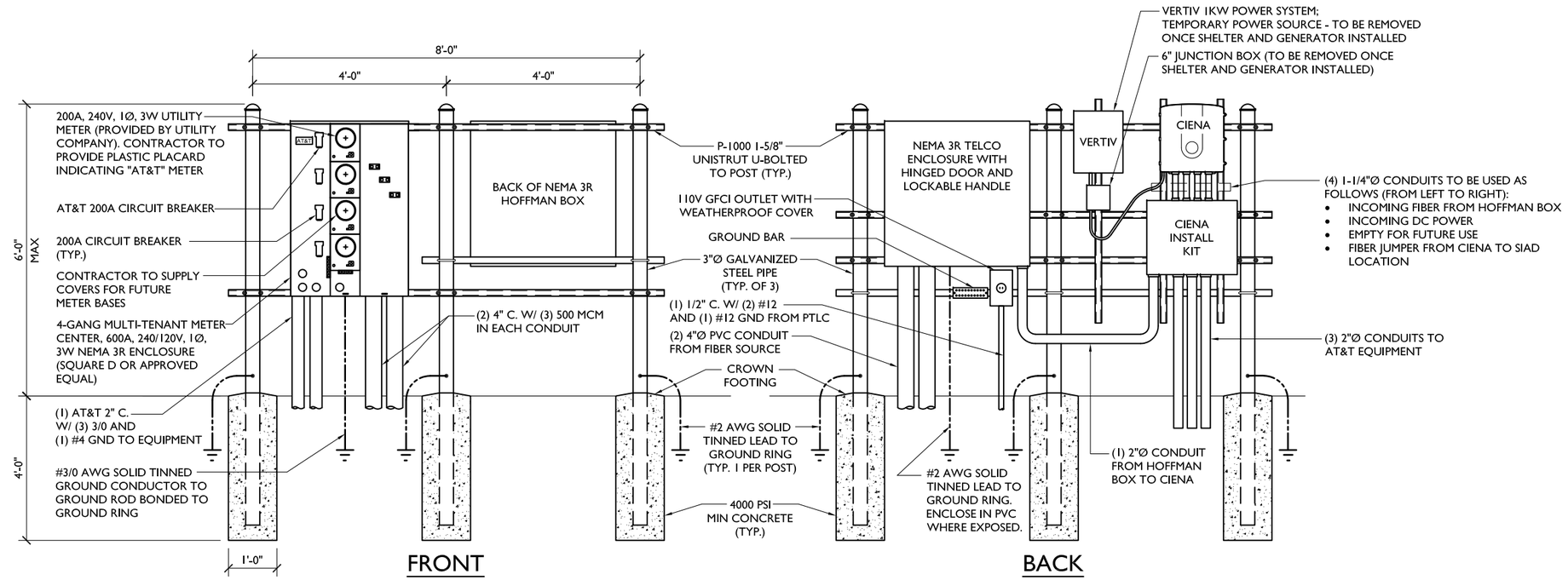
ENLARGED UTILITY PLAN

SHEET NUMBER

E-2

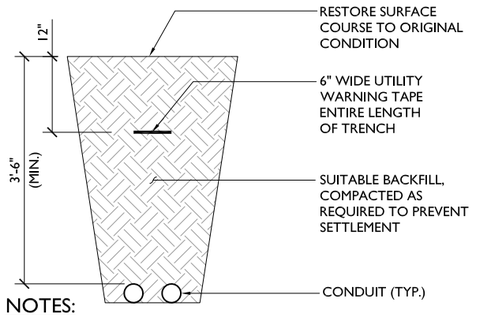
087

PROJECT# 2020.0198 . 0094



UTILITY BACKBOARD H-FRAME

SCALE: N.T.S. | 1



NOTES:

1. CONTRACTOR TO VERIFY LOCAL UTILITY REQUIREMENTS FOR DEPTH, SIZE & SEPARATION OF CONDUITS PRIOR TO INSTALLATION. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR TO CALL 811, 48 HRS PRIOR TO EXCAVATING FOR UNDERGROUND UTILITY LOCATIONS. LOCATION SURROUNDING EXCAVATED AREA MUST BE PRIVATELY LOCATED FOR NON-PUBLIC UTILITIES.

811. Know what's below. Call before you dig.

TRENCH DETAIL

SCALE: N.T.S. | 2

NOT USED

SCALE: N.T.S. | 3

NOT USED

SCALE: N.T.S. | 4

NOT USED

SCALE: N.T.S. | 5

Parallel INFRASTRUCTURE

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OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

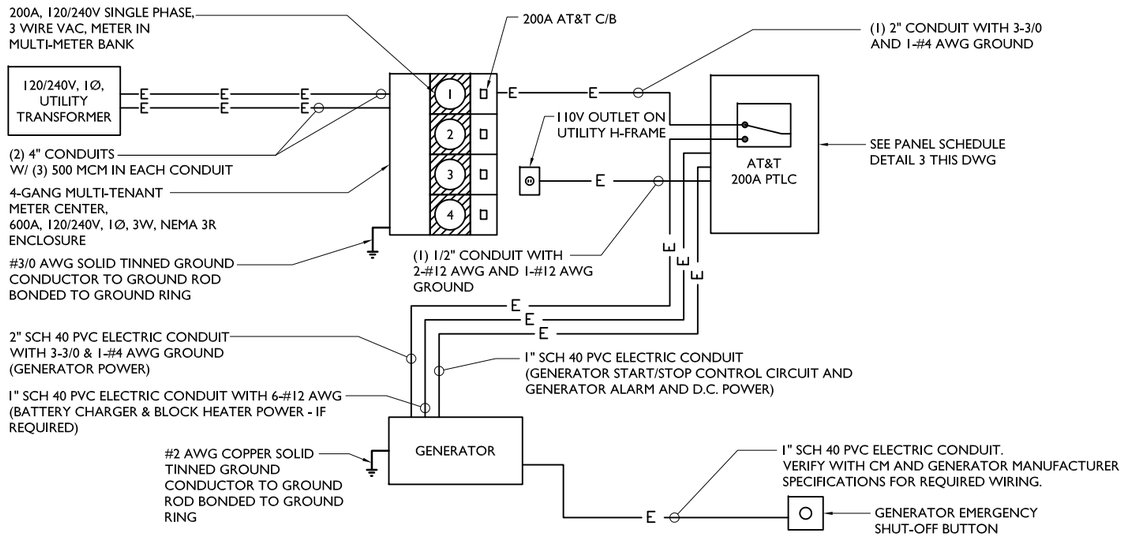
SHEET NAME
UTILITY DETAILS

SHEET NUMBER
E-3
088

PROJECT# 2020.0198 . 0094

1. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND OSHA REQUIREMENTS.
2. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
3. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS AND TRANSPORTATION FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS.
4. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY PERMIT AND INSPECTION FEES, AND BE RESPONSIBLE FOR SCHEDULING INSPECTIONS WITH THE AUTHORITY HAVING JURISDICTION.
5. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, IEEE, NEMA AND NFPA.
6. ALL MATERIALS SHALL BE U.L. LISTED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT.
8. MATERIALS SHALL MEET WITH APPROVAL OF THE AUTHORITY HAVING JURISDICTION.
9. THE CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATIONS TEST, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND STARTING CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
10. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF THE TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.
11. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUND TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO THE PROJECT MANAGER.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE PROJECT MANAGER AT JOB COMPLETION.
13. POST-INSTALLATION, ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
14. PROVIDE THE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS-INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS AND CIRCUITS.
15. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS NOTING USE FUNCTION.
16. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, PULL BOX, J-BOX, SWITCH BOX, ETC.
17. ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED OR DIRECT BURIAL UNLESS OTHERWISE NOTED.
18. ALL CONDUIT SHALL HAVE A PULL WIRE OR ROPE.
19. ALL CONDUCTORS SHALL BE COPPER.
20. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
21. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
22. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED TO MATCH ORIGINAL RATING.
23. BX OR ROMEX CABLE IS NOT PERMITTED.
24. ALL ELECTRICAL/FIBER ENCLOSURES, JUNCTION BOXES, CONDUIT KNOCKOUTS, RACEWAYS, ETC. SHALL BE RODENT-PROOF.
25. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.

ELECTRICAL NOTES — SCALE: N.T.S. | 1



POWER DIAGRAM — SCALE: N.T.S. | 2

INTEGRATED LOAD CENTER

LOAD DESCRIPTION	QTY.	UNIT V.A.	LOAD PER PHASE (VA) A	LOAD PER PHASE (VA) B	WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP		TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS SUB-PANEL	LOADS NON-CONTINUOUS	LOADS CONTINUOUS	WIRE COLOR	LOAD PER PHASE (VA) A	LOAD PER PHASE (VA) B	UNIT V.A.	QTY.	LOAD DESCRIPTION
1 RECTIFIER #1	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #5 2
3	1	1400		1400	RED														RED		1400	1400	1	4
5 RECTIFIER #2	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #6 6
7	1	1400		1400	RED														RED		1400	1400	1	8
9 RECTIFIER #3	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #7 10
12	1	1400		1400	RED														RED		1400	1400	1	12
13 RECTIFIER #4	1	1400	1400		BLK	X			8	(10)	40		40	(10)	8			X	BLK	1400		1400	1	RECTIFIER #8 14
15	1	1400		1400	RED														RED		1400	1400	1	16
17					BLK														BLK					18
19					RED	X			12	12	20								RED					20
21 GFCI RECEPTACLES	2	180	360		BLK	X			12	(12)	20								BLK					22
23 OPTIONAL FIBER BOX RECEPTACLE	1	180		180	RED	X			12	12	20								RED					24
25 BATTERY CHARGER / BLOCK HEATER (IF REQIRED)	1	240	480		BLK	X			12	12	20								BLK					26
27					RED														RED					28
29 OIL HEATER (IF REQUIRED)	1	180	180		BLK	X			12	12	20								BLK					30
		SUBTOTAL CONTINUOUS	6,380	7,280																5,600	5,600	SUBTOTAL CONTINUOUS		
		SUBTOTAL NON-CONTINUOUS	–	–																-	-	SUBTOTAL NON-CONTINUOUS		
		SUBTOTAL SUB-PANEL	–	–																-	-	SUBTOTAL SUB-PANEL		

PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)						
MAIN LUGS: N/A	MAIN BREAKER: 200 AMP			BRANCH BREAKER TYPE: SIEMENS - BL		
VOLTAGE: 120/240	CYCLE: 60	PHASE: 1	WIRES: 3	MAIN COPPER BUS: 200 AMPS	NEUTRAL: 200 AMPS	

TOTAL KVA CONTINUOUS x 1.25	31.075
TOTAL KVA NON-CONTINUOUS	-
TOTAL KVA SUB-PANEL	-
TOTAL KVA	31.075
TOTAL AMPS	129.48

PANEL SCHEDULE — SCALE: N.T.S. | 3

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SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
ELECTRICAL PANEL SCHEDULE, DIAGRAM AND NOTES

SHEET NUMBER
E-4
089

PROJECT# 2020.0198 . 0094

1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
7. ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
8. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
9. REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
10. THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"X10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
11. IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
12. EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
13. CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE CARRIER CONSTRUCTION MANAGER.
14. ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
15. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
16. ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A CARRIER REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
17. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
18. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
19. ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

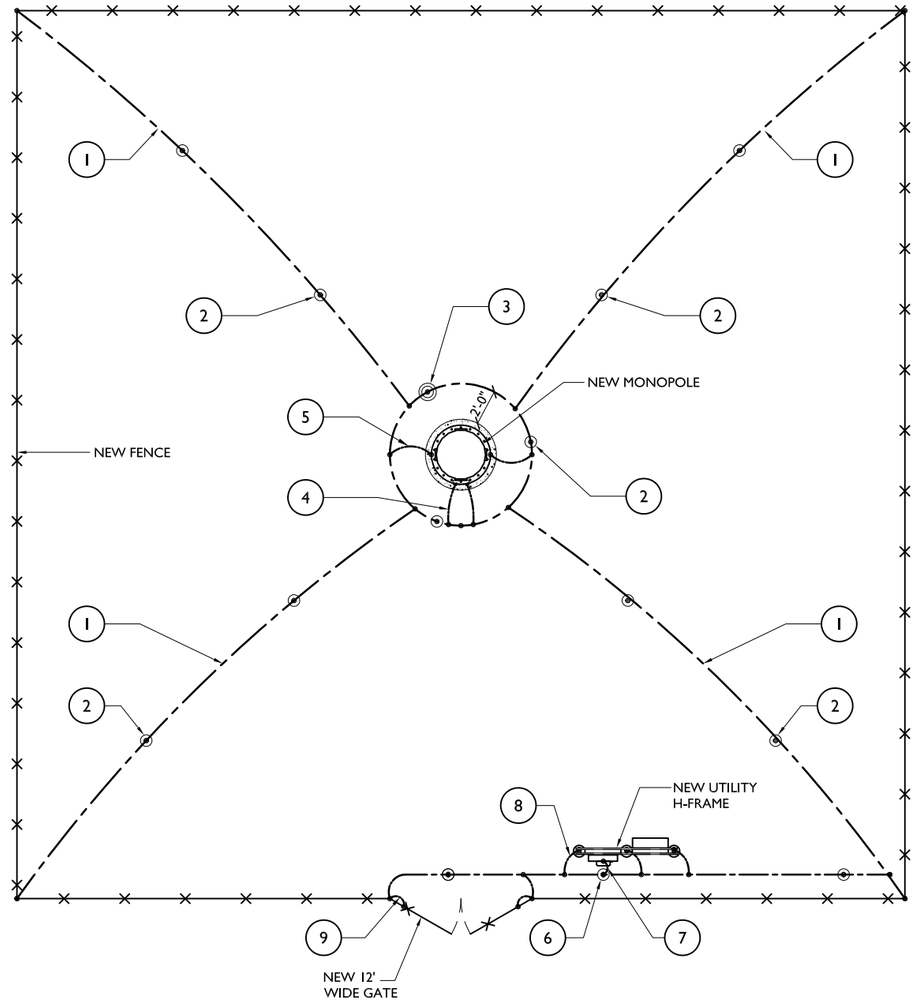
GROUNDING NOTES SCALE: N.T.S. | 1

GROUNDING LEGEND

- EXOTHERMIC WELD CONNECTION
- COMPRESSION FITTING CONNECTION
- 5/8"X10' COPPER-CLAD STEEL GROUND ROD
- 5/8"X10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
- PROPOSED GROUND WIRING
- TINNED COPPER GROUND BAR I/4"X4"X12" OR I/4"X4"X20"

NOTE:
SEE COMPOUND PLAN FOR TOWER AND COMPOUND ORIENTATION, UTILITY H-FRAME, GATE AND TOWER LOCATION.

1. GROUND RING, #2 SOLID TINNED, BARE COPPER WIRE
2. 5/8"Ø x 10'-0" COPPER CLAD STEEL GROUND ROD SPACED MIN. 10'-0", MAX 15'-0" APART
3. GROUND SYSTEM TEST WELL
4. #2 SOLID TINNED, BARE COPPER GROUND WIRE FROM LOWER TOWER GROUND BAR TO NEW GROUND RING (2 REQ'D)
5. #2 SOLID TINNED, BARE COPPER GROUND WIRE FROM TOWER BASE PLATE TO NEW GROUND RING
6. 5/8"Ø x 10'-0" COPPER CLAD GROUND ROD FOR ELECTRICAL SERVICE GROUND
7. #3/0 AWG GREEN STRANDED INSULATED GROUND CONDUCTOR TO GROUND ROD BONDED TO GROUND RING
8. #2 SOLID TINNED, BARE COPPER GROUND WIRE, BOND UTILITY POST W/ VS TYPE CADWELD. (1 PER POST REQ'D)
9. A.L.T. OR EQUAL 2/0 GROUNDING CONDUCTOR W/BLACK NEOPRENE INSULATION & PRE-CAPPED ENDS ATTACHED TO GATE POST AND GATE FRAME W/ VS TYPE EXOTHERMIC. INSTALL W/ WELDS 18" ABOVE FINISH GRADE
10. IN THE EVENT A PAD/PIER FOUNDATION IS INSTALLED, THE BURIED GROUND RING SHALL BE INSTALLED A MINIMUM 2 FT. FROM THE EDGE OF CONCRETE



COMPOUND GROUNDING PLAN SCALE: N.T.S. | 2

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com

REV	DATE	DESCRIPTION	BY
A	02/24/22	90% REVIEW	LA
B	03/24/22	REVISION	LA
C	05/26/22	REVISION	LA
D	06/20/22	REVISION	LA

I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
COMPOUND GROUNDING PLAN AND NOTES

SHEET NUMBER
G-1
090

PROJECT# 2020.0198 . 0094

SYMBOL LEGEND:

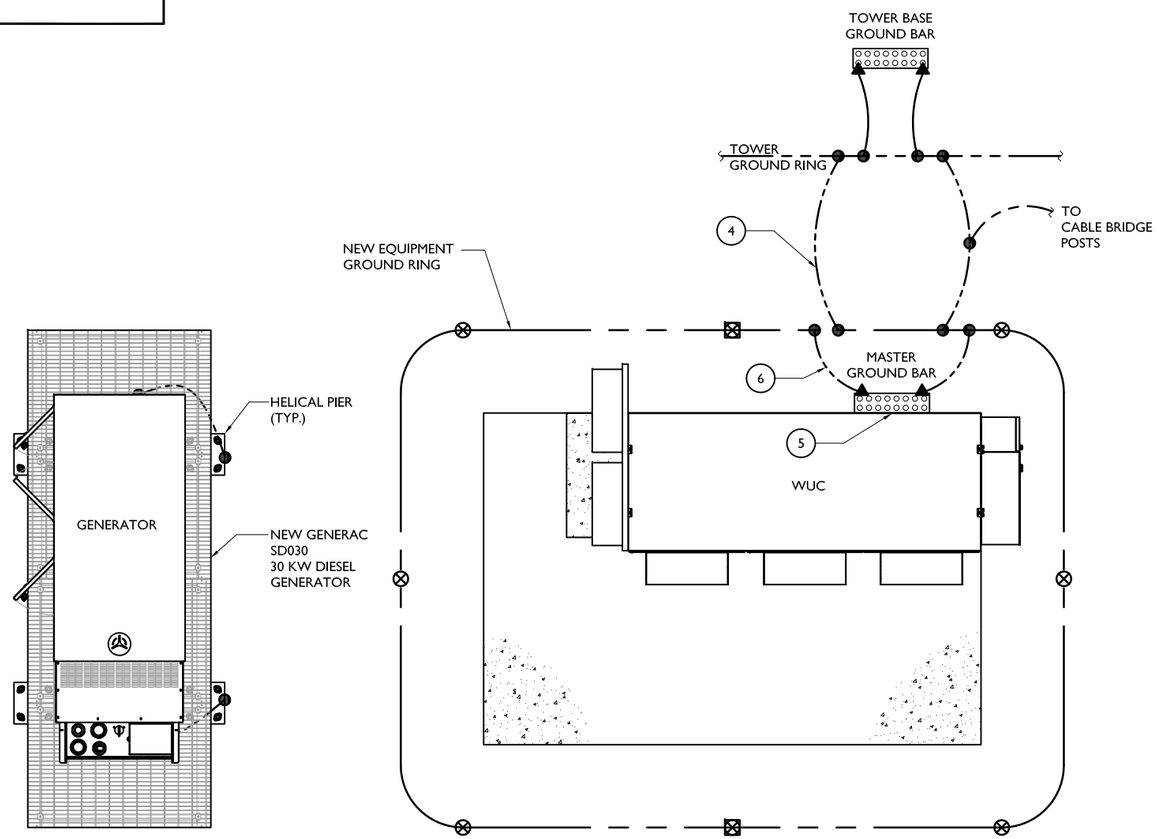
- GROUND ROD
- GROUND TEST WELL
- GROUND WIRE
- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION

NOTES:

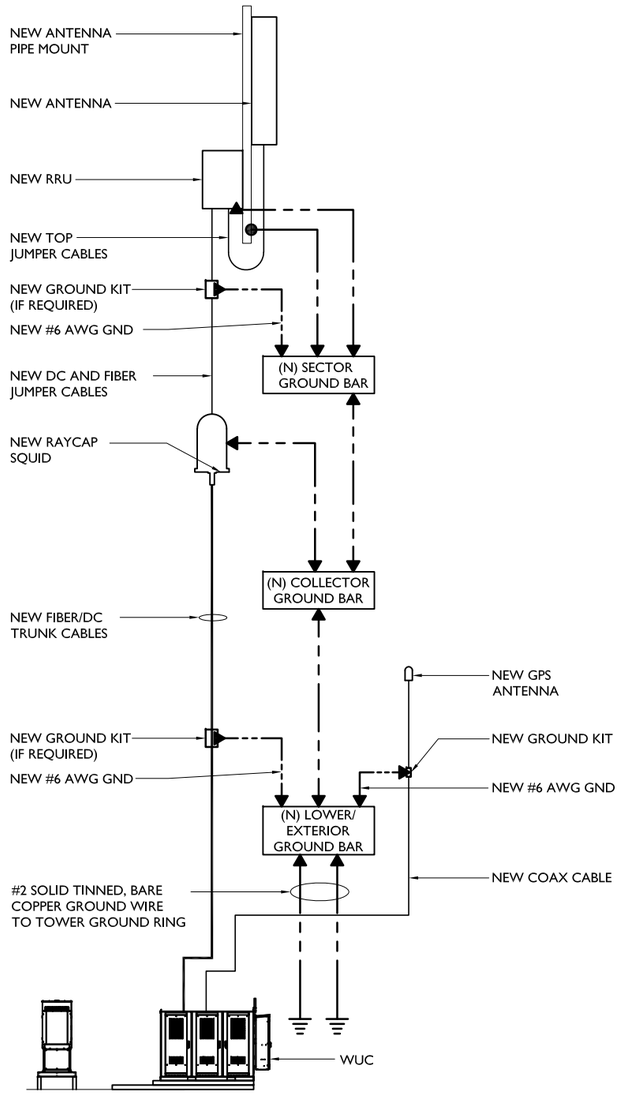
1. ALL ABOVE GRADE GROUND LEADS SHALL BE INSTALLED IN 3/4" PVC
2. ALL GROUND WIRES SHALL BE INSTALLED IN A NEAT ORDERLY MANNER
3. SEE ENLARGED SITE PLAN FOR EQUIPMENT ORIENTATION AND LOCATION
4. HELICAL PIERS DO NOT REQUIRE GROUND RINGS

GROUNDING NOTES:

1. GROUND RING IS TO BE CONSTRUCTED OF #2 SOLID TINNED BARE COPPER WIRE IN ONE CONTINUOUS PIECE
2. GROUND RODS WILL BE 5/8"x10'-0" COPPER CLAD, NOT LESS THAN 10' OR MORE THAN 15' APART
3. GROUND TEST WELL
4. CONNECT NEW EQUIPMENT GROUND RING TO TOWER GROUND RING (TYP. OF 2)
5. EXTERIOR GROUND BAR PROVIDED BY EQUIPMENT MANUFACTURER
6. #2 SOLID TINNED, BARE COPPER GROUND WIRE FROM GROUND BAR TO GROUND RING



EQUIPMENT GROUNDING PLAN — SCALE: N.T.S. — 1



NOTE:

1. (1) ANTENNA/RRU/ RAYCAP SHOWN FOR CLARITY. GROUNDING IS TYPICAL FOR EACH ADDITIONAL
2. ADDITIONAL CABLE GROUND KIT REQUIRED AT MIDPOINT FOR CABLE LENGTHS GREATER THAN 200 FT.

LEGEND:

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND KIT
- #2 GREEN STRANDED INSULATED COPPER GND WIRE (SUNLIGHT RESISTANT) U.N.O.

TYPICAL RISER DIAGRAM — SCALE: N.T.S. — 2

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
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SITE NAME
OML06772

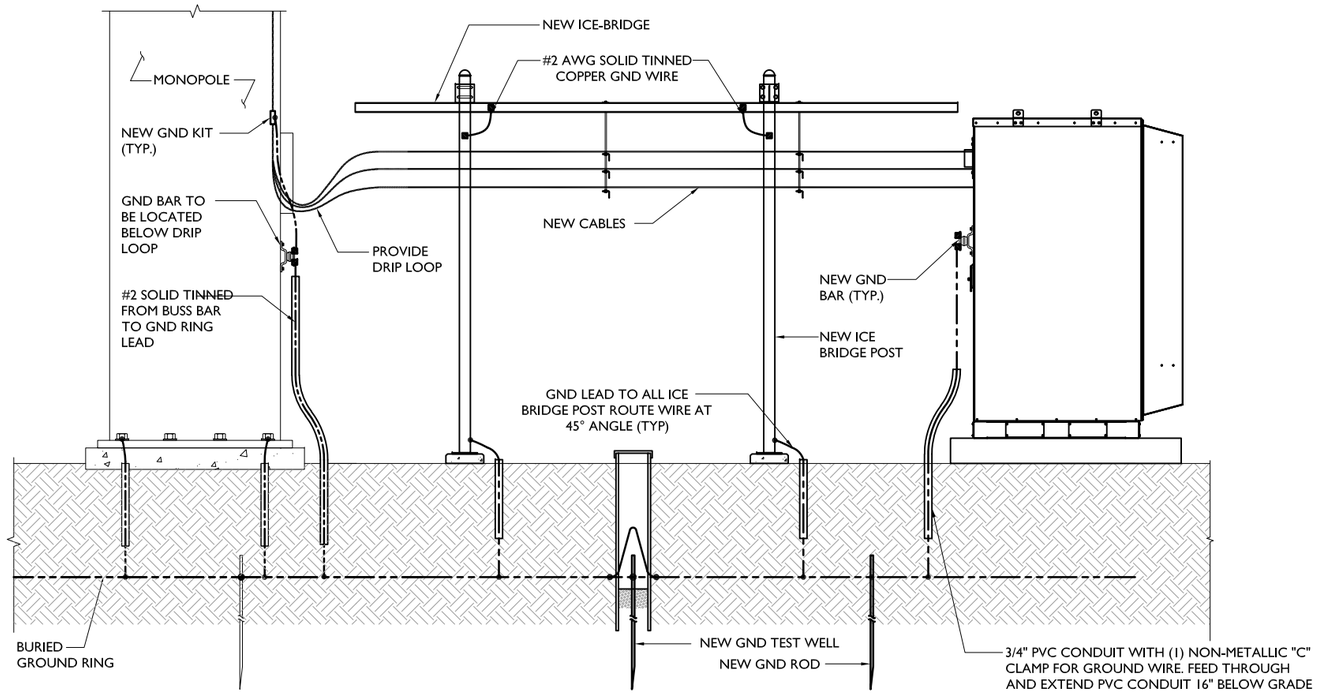
SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

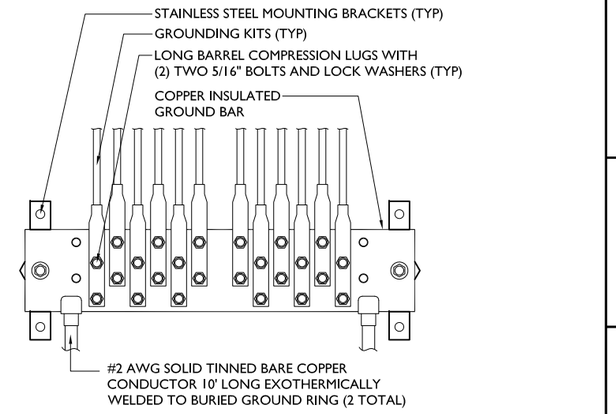
SHEET NAME
EQUIPMENT GROUNDING PLAN AND RISER DIAGRAM

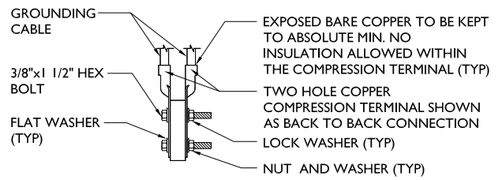
SHEET NUMBER
G-2
091

PROJECT# 2020.0198 . 0094

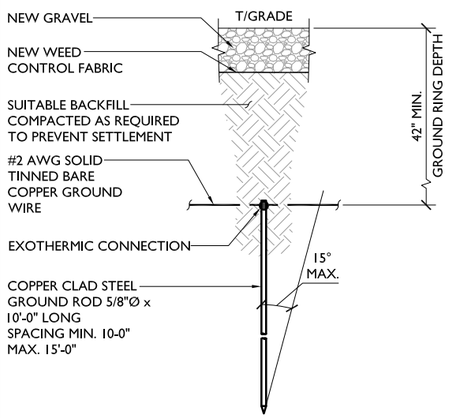


GROUNDING AT ICE BRIDGE — SCALE: N.T.S. — 1

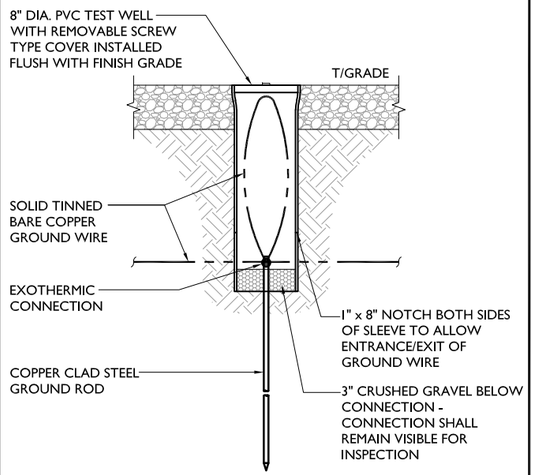




EXTERIOR GROUND BAR — SCALE: N.T.S. — 2



GROUND ROD DETAIL — SCALE: N.T.S. — 3



GROUND TEST WELL DETAIL — SCALE: N.T.S. — 4

NOT USED — SCALE: N.T.S. — 5

Parallel INFRASTRUCTURE

AT&T mobility corp.

FULLERTON

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SITE NAME
OML06772

SITE NUMBER:
PIMI429

SITE ADDRESS
5450 S. MISSION ROAD
MT. PLEASANT, MI 48858

SHEET NAME
GROUNDING DETAILS

SHEET NUMBER
G-3
092

PROJECT# 2020.0198 . 0094

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 232

WIRELESS COMMUNICATION FACILITY FINAL SITE PLAN REPORT

TO:	Planning Commission	**DATE:**	July 7, 2022
FROM:	Rodney C. Nanney, AICP Community and Economic Development Director	**ZONING:**	B-4, General Business

PROJECT: PSPR 22-09 Final Site Plan Application from Fullerton Engineering with Parallel/AT&T for a new wireless communications facility (cell tower).

PARCEL(S): PID 14-034-20-005-00

OWNER(S): Klumpp Management LLC

LOCATION: Approximately 7.58 acres of land at 5450 S. Mission Road in the NE 1/4 of Section 34 and in the B-4 (General Business) zoning district.

EXISTING USE: Existing commercial building, farmland **ADJACENT ZONING:** AG, B-4, R-4

FUTURE LAND USE DESIGNATION: *Neighborhood Service*: Located primarily along corridors adjoining lower intensity land uses, the intent of this district is to limit future retail and focus on small-scale personal service and office uses. This district accommodates shallow lots, providing a good buffer and transition to residential uses and limiting heavy commercial and general retail uses so they can be focused on other areas of the township. Rear yards adjoining residential areas should be well-screened to limit impacts of higher intensity uses. These areas should be accessible and comfortable for the pedestrian and should create a sense of place along the roadway.

ACTIONS REQUESTED: To review the PSPR22-09 Final Site Plan Application from Fullerton Engineering with Parallel/AT&T for a new wireless communications facility located on 7.58 acres of land at 5450 S. Mission Road (PID 14-034-20-005-00) in the NE 1/4 of Section 34 and in the B-4 (General Business) zoning district.

Background Information

This application is for development of a new cell tower at a location approximately 285 feet east of an existing cell tower on the adjacent parcel to the west (5420 E. Mission Rd.; PID 14-034-20-006-00) owned by SBA Infrastructure LLC. AT&T intends to establish a new cellular telephone and data antennae cluster on the proposed tower, which would replace and cause the removal of an older AT&T antennae cluster and associated ground equipment from the existing tower site.

Compliance with Special Use Permit Conditions of Approval

The final site plan dated 6/20/2022 fully conforms to all conditions imposed by the Planning Commission as part of the special use permit approval granted on 5/17/2022.

Final Site Plan Review Comments

Per Section 14.2.C. of the Zoning Ordinance, both preliminary site plan approval and final site plan approval are required for this project**.** Planning Commission approval of a final site plan "*constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction,* provided *all other construction and engineering requirements have been met*" (Section 14.2.L.). Township regulation of new cell towers is predominantly governed by the requirements of Section 5.5 (Wireless Communications Facilities of the Zoning Ordinance. The following comments are based on the standards for final site plan approval and specific elements of the proposed site plan:

1. **Section 5.5.C., Requirements.** As part of our review of the special use permit and preliminary site plan applications for this project, staff noted some deficiencies related to compliance with the following subsections of Section 5.5.C. (Requirements). As noted below, the updated details of the proposed wireless communications facility on the final site plan are now in full compliance with these requirements:

Section 5.5.C. (Requirements)		Status
1	**Public Health and Safety. Facilities and/or support structures shall not be detrimental to the public health, safety and welfare.**	**Conforms**
	Documentation on the site plan of the tower's anticipated fall zone in the event of a catastrophic failure has been provided with the final site plan, which fully conforms to this standard.	
5	**Minimum Setbacks. The setback of a new or modified support structure from any residential-zoned district or existing or proposed right-of-way or other publicly traveled road shall be no less than the total height of the structure and attachments thereto. Where the proposed new or modified support structure abuts a parcel of land zoned for a use other than residential, the support structure shall comply with the required setbacks for principal buildings specified in the Schedule of Regulations for the zoning district in which the facility is located. Buildings and facilities accessory to the wireless communication facility (other than the support structure) shall be set back a minimum distance of fifty (50) feet from all property lines.**	**Conforms**
	The final site plan and proposed tower location fully conform to this standard.	
9 (a)	**Design Objectives. The support structure and all accessory buildings shall be designed to minimize distraction, reduce visibility, maximize aesthetic appearance, and ensure compatibility with surroundings. Accordingly, support structures shall be grey or white and shall not have lights unless required otherwise by the Federal Aviation Administration (FAA). Only monopole towers are permitted; lattice towers and towers with guy wires are prohibited. …**	**Conforms**
	The revised tower on the final site plan will have a galvanized steel finish as accepted by the Planning Commission as part of preliminary site plan approval.	

Section 5.5.C. (Requirements)		Status
9 (b)	**Design Objectives. … Equipment buildings shall have a brick exterior. ...**	**Not Applicable**
	No equipment buildings are proposed within the ground equipment enclosure on the final site plan, so this requirement no longer applies to this project.	
10	**Fencing. Wireless communication facilities shall be enclosed by an open weave, green or black vinyl-coated, chain link fence having a maximum height of six (6) feet. Barbed wire may be permitted.**	**Conforms**
	Notes on sheet C-6 confirm that the ground equipment area will be enclosed by "green or black vinyl coated chain-link fence" as required.	
12	**Maintenance. A plan for the long term, continuous maintenance of the facility shall be submitted. The plan shall identify who will be responsible for maintenance and shall include a method of notifying the Township if maintenance responsibilities change.**	**Conforms**
	The required site maintenance plan has been added to sheet GN-1 of the final site plan as required.	

2. **Section 5.5.E.2, Landscape Plan.** Per the Planning Commission determination that additional ground equipment enclosure screening is not required for this project, no new landscaping is proposed on the final site plan.

3. **Section 5.5.E.3, Structural Specifications.** A Structural Design Report dated 6/8/2022 and signed by a licensed professional engineer in the State of Michigan has been provided with the final site plan application consistent with Section 5.5.E.3. requirements.

4. **Section 5.5.E.4, Security.** The applicant previously acknowledged this standard but did not provide the required documentation as part of the final site plan application. In a conversation with staff at the time of final site plan submittal, the applicant confirmed their commitment to fully satisfy this requirement while also indicating that additional time would be needed.

   - Staff would have no objection to a Planning Commission action to approve the final site plan subject to the applicant providing all documentation required by Section 5.5.E.4 (Security) to the Zoning Administrator for review and acceptance prior to issuance of a building permit for this project.

5. **Outside agency approvals.** The applicant shall be responsible for obtaining all necessary permits or approvals from applicable outside agencies, prior to final site plan approval. Based on the scope of work on the final site plan, no approvals are needed from the Isabella County Road Commission, Isabella County Transportation Commission, or the Township Public Services Department. Storm Water approval from the Isabella County Drain office is also not required. The only applicable outside agency approval needed for this project is from the:

   ❑ Mt. Pleasant Fire Department

Objectives

The Planning Commission shall review the application materials and site plan, together with any reports and recommendations. The Planning Commission shall identify and evaluate all relevant factors and shall then take action by motion to approve the site plan, to approve the site plan with conditions, to deny the site plan application, or to postpone further consideration of the site plan to a date certain in accordance with Section 14.2.H. of the Zoning Ordinance.

Key Findings

1. The final site plan dated 6/20/2022 substantially conforms to the informational requirements of the Zoning Ordinance that apply to a final site plan for a wireless communications facility, including Section 5.5.E. (Application Requirements) and Section 14.2.P (Required Site Plan Information).
2. All conditions imposed by the Planning Commission on the special use permit approval for this facility have been satisfied on the final site plan.
3. With the exception of the documentation required for compliance with Section 5.5.E.4, Security and any requirements of the Mt. Pleasant Fire Department's approval for this project, the final site plan conforms to all applicable Zoning Ordinance requirements for a wireless communications facility and is ready for Planning Commission review and action.

Recommendations

Based on the above findings, I would recommend that the Planning Commission approve the PSPR22-09 Final Site Plan dated June 20, 2022 for a new wireless communications facility at 5450 S. Mission Road (PID 14-034-20-005-00) in the NE 1/4 of Section 34 and in the B-4 (General Business) zoning district, subject to the following conditions:

1. Applicant shall provide all documentation required by Section 5.5.E.4 (Security) to the Zoning Administrator for review and acceptance prior to issuance of a building permit for this project.
2. Applicant shall provide documentation of compliance with all requirements of the Mt. Pleasant Fire Department's approval for this project to the Zoning Administrator prior to issuance of a building permit for this project.

Please contact me at (989) 772-4600 ext. 232, or via email at rnanney@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,

Rodney C. Nanney, AICP
Community and Economic Development Director

Draft Motions: PSPR 22-09 Final Site Plan Application for a new wireless communications facility at 5450 S. Mission Road

MOTION TO APPROVE THE FINAL SITE PLAN:

Motion by _____, supported by _____, to approve the PSPR22-09 final site plan dated June 20, 2022 for a new wireless communications facility at 5450 S. Mission Road (PID 14-034-20-005-00) in the northeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it fully complies with the requirements for a wireless communications facility found in Section 5.5 of the Zoning Ordinance.

MOTION TO APPROVE THE FINAL SITE PLAN WITH CONDITIONS:

Motion by _____, supported by _____, to approve the PSPR22-09 final site plan dated June 20, 2022 for a new wireless communications facility at 5450 S. Mission Road (PID 14-034-20-005-00) in the northeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it can comply with the requirements for a wireless communications facility found in Section 5.5 of the Zoning Ordinance, subject to the following conditions:

1. Applicant shall provide all documentation required by Section 5.5.E.4 (Security) to the Zoning Administrator for review and acceptance prior to issuance of a building permit for this project.
2. Applicant shall provide documentation of compliance with all requirements of the Mt. Pleasant Fire Department's approval for this project to the Zoning Administrator prior to issuance of a building permit for this project.

_____

MOTION TO POSTPONE ACTION ON THE FINAL SITE PLAN:

Motion by _____, supported by _____, to postpone action on the PSPR22-09 Final Site Plan Application for a new wireless communications facility at 5450 S. Mission Road until _____ _____, 2022 for the following reasons:

_____

MOTION TO DENY THE FINAL SITE PLAN:

Motion by _____, supported by _____, to deny the PSPR22-09 Final Site Plan Application for a new wireless communications facility at 5450 S. Mission Road (PID 14-034-20-005-00) in the northeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that the final site plan dated June 20, 2022 does not comply with the requirements for a wireless communications facility found in Section 5.5 of the Zoning Ordinance, for the following reasons:

_____

RECEIVED
JUN 2 8 2022

Charter Township of Union

APPLICATION FOR SITE PLAN REVIEW

☐ Minor Site Plan ☑ Preliminary Site Plan ☐ Final Site Plan

A Completed Application will contain all the information required per the Zoning Ordinance, Section 14.2 (Site Plan Review).

Name of Proposed Development/Project: MICHAEL ENGINEERING
Common Description of Property & Address (if issued): 5625 VENTURE WAY
MT. PLEASANT, 48858
Applicant's Name(s): MICHAEL ENGINEERING
Phone/Fax numbers: 989-772-4073/ 989-772-3500 Email: eric@michaelengineering.com
Address: 5625 VENTURE WAY City: MT. PLEASANT Zip: 48858

Legal Description: ☐ Attached ☑ Included on Site Plan Tax Parcel ID Number(s): 14-152-00-006-01
Existing Zoning: I-2 Land Acreage: 2.77 Existing Use(s): INDUSTRIAL
☑ **ATTACHED: Letter describing the project and how it conforms to Section 14.2.S. (Standards for Site Plan Approval)**

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: CENTRAL MI SURVEYING & DEV. Phone: 989-775-0756 Email: tbebee@cms-d.com 2. Address: 2257 EAST BROOMFIELD ROAD City: MT. PLEASANT State: MI Zip: 48858 Contact Person: TIMOTHY BEBEE Phone 989-775-0756
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application. Attach a separate sheet if more space is needed.	1. Name: REC INVESTMENTS LLC. Phone: 989-772-4073 Address: 5625 VENTURE WAY City: MT. PLEASANT State: MI Zip: 48858 Signature: _____ Interest in Property: _____ 2. Name: _____ Phone: _____ Address: _____ City: _____ State: _____ Zip: _____ Signature: _____ Interest in Property: _____

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and/or removal of work installed. Approval of this plan shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Eric V. Prewett — 6-28-2022

Signature of Applicant — Date

Office Use Only

Application Received By: _____ Fee Paid: $_____

Date Received: _____ Escrow Deposit Paid: $_____

Preliminary Site Plan Review Procedure

Each preliminary site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Preliminary Site Plan Approval

Approval of a preliminary site plan by the Planning Commission shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas in accordance with the standards for preliminary site plan approval specified in subsection 14.2(S). The Planning Commission may, at its discretion and with appropriate conditions attached, authorize limited work to begin for soils exploration, incidental site clearing, and other preliminary site work as specified in the authorization.

Outside Agency Approvals

The applicant shall be responsible for obtaining all necessary permits or approvals from applicable outside agencies, prior to final site plan approval.

Final Site Plan Review Procedure

Each final site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Final Site Plan Approval

Approval of a final site plan by the Planning Commission constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction, provided all other construction and engineering requirements have been met.

Minor Site Plan Review Procedure

A minor site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee, and two (2) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and site plans, at a maximum sheet size of 11 inches by 17 inches, at the Township Hall. The Zoning Administrator shall review the application materials and site plan for completeness, accuracy, and compliance with all applicable requirements and standards of this Ordinance and other Township ordinances.

The minor site plan shall be approved by the Zoning Administrator upon determination that all required information for the type of site plan has been provided per subsection 14.2(P), the site plan satisfies the applicable standards for site plan approval per subsection 14.2(S); and the site plan conforms to all other applicable requirements and standards of this Ordinance and other Township ordinances.

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: MICHAEL ENGINEERING

Name of business owner(s): ERIC PREWETT

Street and mailing address: 5625 VENTURE WAY
MT. PLEASANT, MI 48858

Telephone: 989-772-4073

Fax: 989-772-3500

Email: eric@michaelengineering.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: Eric V. Prewett
Ralph A. Prewett

Information compiled by:

ERIC V. PREWETT
RALPH A. PREWETT

Types and Quantities of Hazardous Substances and Polluting Materials Used, Stored or Generated On-Site

Please list the hazardous substances and polluting materials (including chemicals, hazardous materials, petroleum products, hazardous wastes and other polluting materials) which are expected to be used, stored or generated on -site. Quantities should reflect the maximum volumes on hand at any time. Attach additional pages if necessary to list all hazardous substances and polluting materials.

COMMON NAME	CHEMICAL NAME (components)	FORM	MAX QUANTITY ON HAND AT ONE TIME	TYPE OF STORAGE CONTAINERS
ACETONE	ACETONE	LIQ	20 GAL	5GAL DRUM-DM
USED ACETONE	ACETONE+RESIN	LIQ	55 GAL	DM
HYDRAULIC OIL	PETROLEUM	LIQ	50 GAL	DM
MACHINE OILS	PETROLEUM	LIQ	20 GAL	DM
MESAMOL	AROMATIC ESTER	LIQ	300 GAL	DM
COOLANT CONC.	SEVERELY HYDROTREATED	LIQ	100 GAL	DM
USED COOLANT DILUTE	NAPTHENIC DIST.	LIQ	100 GAL	DM
BATTERY ACID	SULFURIC ACID	LIQ	2GAL	1 GAL JUG
PAINT	ENAMEL	LIQ	5 GAL	PAIL
CABOSIL	FOMED SILICA	POWDER(S)	25 LBS	CW
ACETLYENE		GAS	100 LBS	CM
_____ NONE	KEY: LIQ = liquid P.LIQ = pressurized liquid S = solids G = gas PG = pressurized gas			KEY: AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank

PERMIT INFORMATION CHECKLIST FOR FINAL SITE PLANS

Michigan.gov/EGLEpermits

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has prepared a list of key questions to help identify what EGLE permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from EGLE, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: Michigan.gov/EHSguide. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the EGLE programs noted below. [insertions and edits by Union Township]

How Do I Know that I Need a State of Michigan, County or Local Permit or Approval?	Yes ☐	No ☐
1) Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)? Air Quality Permit to Install, Air Quality Division (AQD), Permit Section	Y☐	N☒
2) Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos. Asbestos Notification, AQD, Asbestos Program, 517-284-6777	Y☐	N☒
3) Please consult the Permitting at the Land and Water Interface Decision Tree document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?). Land and Water Featured Programs (Water Resources Division - WRD) - Joint Permit Application, 517-284-5567:		
a. Does the project involve construction of a building or septic system in a designated Great Lakes high risk erosion area?	Y☐	N☒
b. Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated environmental area?	Y☐	N☒
c. Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y☐	N☒
d. Does the project involve construction of a dam, weir or other structure to impound flow?	Y☐	N☒
4) Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction) or does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? **Union Township and Isabella County**	Y☒	N☐
5) Does the project involve the construction or alteration of a water supply system system? **Union Township Public Services Department** and Drinking Water & Environmental Health Division (DWEHD), 517-284-6524	Y☐	N☒
6) Does the project involve construction or alteration of any sewage collection or treatment facility? **Union Township Public Services Department** and WRD, Part 41 Construction Permit Program (staff), 906-228-4527, or EGLE District Office	Y☐	N☒
7) Public Swimming Pool Construction (Spas/Hot Tubs) Permits: Will your business involve the construction or modification of a public swimming pool, spa or hot tub? **Union Township** and Public Swimming Pool Program, 517-284-6541, or EGLE District Office	Y☐	N☒
8) Does the project involve the construction or modification of a campground? **Union Township** and DWEHD,Campgrounds program, 517-284-6529	Y☐	N☒

9) Does the project involve construction of a facility that landfills, transfers, or processes of any type of solid non-hazardous waste on-site, or places industrial residuals/sludge into or onto the ground? Materials Management Division (MMD), Solid Waste, 517-284-6588, or EGLE District Office	Y☐	N☒
10) Does the project involve the construction of an on-site treatment, storage, or disposal facility for hazardous waste? MMD, Hazardous Waste Section, Treatment, Storage and Disposal, 517-284-6562	Y☐	N☒
Who Regulates My Drinking (Potable) Water Supply?		
11) I am buying water from the municipal water supply system Contact the **Union Township Public Services Dept.**	Y☒	N☐
12) I have a Non-Community Water Supply (Type II) Guide, Contact (District or County) Local Health Department, 517-485-0660	Y☐	N☒
13) I am a community water supply (Type I) Community Water Supply, DWEHD District Office Community Water Supply Program, 517-284-6512	Y☐	N☒
14) Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source including groundwater, inland surface water, or the Great Lakes and their connecting waterways? WRD, Great Lakes Shorelands Unit, Water Use Program, 517-284-5563	Y☐	N☒
Who Regulates My Wastewater Discharge System?		
15) NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water? WRD, EGLE District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program, 517-284-5568	Y☐	N☒
16) Does the facility have industrial activity that comes into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? WRD, Permits Section, or EGLE District Office, 517-284-5588	Y☐	N☒
17) Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)? WRD, Groundwater Permits Program, 517-290-2570	Y☐	N☒
18) Does the project involve the drilling or deepening of wells for waste disposal? Oil, Gas and Minerals Division (OGMD), 517-284-6841	Y☐	N☒
What Operational Permits Are Relevant to My Operation and Air Emissions?		
19) Renewable Operating Permit: Does your facility have the potential to emit any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous air pollutant; or 25 tons per year or more of any combination of hazardous air pollutants? AQD, Permit Section, 517-284-6634	Y☐	N☒
20) Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel? AQD, Acid Rain Permit Program, 517-780-7843	Y☐	N☒
What Operational Permits Are Relevant to My Waste Management?		
21) Does the project involve landfilling, transferring, or processing of any type of solid non-hazardous waste on-site, or placing industrial residuals/sludge into or onto the ground? MMD, 517-284-6588 or EGLE District Office	Y☐	N☐
22) Does the project involve the on-site treatment, storage, or disposal of hazardous waste? MMD, Hazardous and Liquid Waste, 517-284-6562	Y☒	N☒
23) Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (Hazardous Waste Program Forms & License Applications) MMD, EGLE District Office, 517-284-6562	Y☐	N☒

MIK656579612

24) Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form? MMD, Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
25) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
26) Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal? MMD, Medical Waste Regulatory Program, 517-284-6594	Y☐	N☒
What Sector-Specific Permits May be Relevant to My Business?		
Transporters		
27) Does the project involve the *transport* of some other facility's non-hazardous liquid waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
28) Does the project involve the *transport* of hazardous waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
29) Do you engage in the business of transporting bulk water for drinking or household purposes (except for your own household use)? DWEHD, Water Hauler Information, 517-284-6527	Y☐	N☒
30) Does the project involve *transport* of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground? DWEHD, Septage Program, 517-284-6535	Y☐	N☒
31) Do you store, haul, shred or process *scrap tires*? MMD, Scrap Tire Program, 517-284-6586	Y☐	N☒
Sectors		
32) Is the project a *dry cleaning* establishment utilizing perchloroethylene or a flammable solvent in the cleaning process? AQD, Dry Cleaning Program, 517-284-6780	Y☐	N☒
33) Does your *laboratory* test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act? Laboratory Services Certifications, 517-284-5424	Y☐	N☒
34) Does the project involve the operation of a *public swimming pool*? DWEHD, Public Swimming Pools Program, 517-284-6529	Y☐	N☒
35) Does the project involve the operation of a *campground*? **Union Township** and DWEHD, Campgrounds, 517-284-6529	Y☐	N☒
What Permits Do I Need to Add Chemicals to Lakes and Streams?		
36) Are you applying a chemical treatment for the purpose of aquatic nuisance control (pesticide/herbicide etc.) in a water body (i.e. lake, pond or river)? WRD, Aquatic Nuisance Control , 517-284-5593	Y☐	N☒
37) Are you applying materials to a water body for a water resource management project (i.e. mosquito control treatments, dye testing, or fish reclamation projects)? WRD, Surface Water Assessment Section, 517-331-5228	Y☐	N☒

Why would I be subject to Oil, Gas and Mineral Permitting?		
38) Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)? OGMD, Petroleum Geology and Production Unit, 517-284-6826	Y☐	N☒
39) Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline? OGMD, Minerals and Mapping Unit, Sand Dune Mining Program, 517-284-6826	Y☐	N☒
40) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD, Radioactive Protection Programs, 517-284-6581	Y☐	N☒
Petroleum & Mining, OGMD, 517-284-6826		
41) Does the project involve the diversion and control of water for the mining and processing of low-grade iron ore?	Y☐	N☒
42) Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y☐	N☒
43) Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines?	Y☐	N☒
44) Does the project involve mining coal?	Y☐	N☒
45) Does the project involve changing the status or plugging of a mineral well?	Y☐	N☒
46) Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	Y☐	N☒

Contact **Union Township** and EGLE Permits & Bonding, OGMD, 517-284-6841

ROOK METERING/ MICHAEL ENGINEERING

PRELIMINARY SITE PLAN REVIEW LETTER

Project Description

The project consists of two phases of building addition. Phase one consists of a proposed 11,760 sq. ft. building addition and phase two consists of a proposed 8,400 sq. ft. building addition. Both additions will be used by the existing business for expansion of operations.

Standards for Preliminary Site Plan Approval (Section 14.2.S)

1.) The applicant is legally authorized to apply for site plan approval, and all required information has been provided.
The applicant is the legal owner for the property.

2.) The proposed development conforms to the applicable standards and conditions imposed by this Ordinance and other applicable Township ordinances.
Yes, the proposed development conforms to the applicable standards and conditions imposed by this Ordinance and other applicable Township ordinances.

3.) The proposed development will be harmonious with and not harmful, injurious, or objectionable to the environment or land uses in surrounding area.
The proposed development is consistent with the zoned uses for the property which is I-2, so it is harmonious with and not harmful, injurious, or objectionable to the environment or land uses in the surrounding area which is also I-2 properties.

4.) The proposed development respects natural topography, floodways, and floodplains; and minimizes the amount and extent of cutting or filling.
The proposed development respects natural topography. No floodways and floodplains exist on this site.

5.) Organic, wet, or other soils that are not suitable for development will be undisturbed or modified in such fashion as to make development feasible.
The development will disturb only what is necessary to create the proper foundation for the overall site.

6.) The movement of the vehicular and pedestrian traffic within the site and in relation to access streets and sidewalks will safe and convenient.
The proposed development is designed to accommodate traffic flow and parking in accordance with the Township ordinances.

7.) The proposed development is adequately coordinated with improvements serving the area, and with other existing or planned development in the vicinity.
Yes, the proposed development is adequately coordinated with improvements serving the area. The area is already developed for industrial use.

8.) Satisfactory and harmonious relationships will exist between the proposed development and the existing and planned development of contiguous lands and the surrounding area, including provisions for proper extensions of public roads and sidewalks through the development in accordance with the Township ordinances. *The proposed development is surrounded by similarly zoned properties and its nature will be harmonious with the contiguous lands and the surrounding area. The project is adding an addition to an already existing business.*

9.) Development phases are in logical sequence so that any phase will not depend upon a subsequent phase for access, utilities, drainage or erosion control.
The proposed development has two phases and will be built in logical sequence.

ROOK METERING / MICHAEL ENGINEERING

PRELIMINARY SITE PLAN

5625 VENTURE WAY, MT. PLEASANT, MICHIGAN

I-2 – GENERAL INDUSTRIAL DISTRICT	
MINIMUM FRONT YARD SETBACK	25 FT (I)
MINIMUM SIDE YARD SETBACK	20 FT (K)
MINIMUM REAR YARD SETBACK	30 FT (K)
MAXIMUM BUILDING HEIGHT	60 FT
MINIMUM LOT AREA	50,000 SQ. FT.
MINIMUM LOT WIDTH	100 FT.
MINIMUM LOT COVERAGE (%)	60%

I. OFF-STREET PARKING SHALL BE PERMITTED TO OCCUPY A PORTION OF THE REQUIRED FRONT YARD, SUBJECT TO COMPLIANCE WITH SECTION 10 (LANDSCAPING AND SCREENING) STANDARDS AND PROVIDED THAT THERE SHALL BE MAINTAINED A MINIMUM SETBACK OF 20.0 FEET BETWEEN THE NEAREST POINT OF THE OFF-STREET PARKING AND THE NEAREST ROAD RIGHT-OF-WAY LINE.

K. AN ADDITIONAL 30.0 FEET OF SIDE AND REAR YARD SETBACK SHALL BE PROVIDED WHEN ABUTTING THE AG (AGRICULTURAL) DISTRICT, ANY RESDIENTIAL DISTRICT, OR AN EXISTING AGRICULTURAL OR RESIDENTIAL USE.

MISS DIG:
FOR PROTECTION OF UNDERGROUND UTILITIES,THE CONTRACTOR SHALL CALL "MISS DIG" 1-800-482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY EXCAVATION. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE APPROPRIATELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

UTILITY NOTE:

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY COMPANY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE LOCATION AND DEPTH OF UNDERGROUND UTILITIES WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" (1-800-282-7171) PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL MAKE EVERY EFFORT TO PROTECT AND OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND.
UNDERGROUND SERVICE LEADS FOR GAS, ELECTRIC, TELEPHONE AND CABLE MAY BE ACROSS PROPERTY, NO INFORMATION AVAILABLE PLEASE CALL MISS DIG.

LEGEND

SYMBOLS

BOLLARD	GAS RISER	SOIL BORING
CATCH BASIN (CURB INLET)	GUY ANCHOR	STORM SEWER MANHOLE
CATCH BASIN (ROUND)	HYDRANT – EXISTING	TELEPHONE RISER
CATCH BASIN (SQUARE)	HYDRANT – PROPOSED	TREE – CONIFEROUS
CLEAN OUT	LIGHT POLE	TREE – DECIDUOUS
DRAINAGE FLOW	MAILBOX	UTILITY POLE
ELECTRICAL BOX	MONITORING WELL	WATER MAIN VALVE
FOUND CONC. MONUMENT	SANITARY SEWER MANHOLE	WATER SHUT-OFF
FOUND IRON	SET IRON	FLOOD LIGHT
GAS MAIN VALVE	SIGN	GAS METER

LINETYPES

ELEC	BURIED ELECTRICAL CABLE
PHONE	BURIED TELEPHONE CABLE
DITCH-CL	CENTERLINE OF DITCH
FM	FORCE MAIN
GAS	GAS MAIN
RD-CL	ROAD CENTERLINE
8" SAN	SANITARY SEWER
12" SS	STORM SEWER
EX-TOS	TOE OF SLOPE
EX-TOB	TOP OF BANK
OHE	UTILITIES – OVERHEAD
UTL	UTILITIES – UNDERGROUND
12" WM	WATER MAIN

HATCH PATTERNS

	ASPHALT – EXISTING
	ASPHALT – PROPOSED
	CONCRETE
	GRAVEL
	LANDSCAPING
	RIP-RAP
	EXISTING BUILDING

LOCATION SKETCH

NOT TO SCALE

PROOF OF OWNERSHIP:

WARRANTY DEED, LIBER 1009, PAGE 192, ISABELLA COUNTY RECORDS

GRANTED BY ROGER R. CARD DEVELOPMENT CORPORATION, A MICHIGAN CORPORATION, OF 1931 COMMERCIAL DRIVE, MT. PLEASANT, MI 48858,
TO REC INVESTMENTS LLC, A MICHIGAN LIMITED LIABILITY COMPANY, OF 4997 S. CRAWFORD ROAD, MT. PLEASANT, MI 48858.

DATED FEBRUARY 26, 2001

PARCEL DESCRIPTION:
THE SOUTH 377.96 FEET OF LOT 6, ENTERPRISE PARK SUBDIVISION, A PART OF SECTION 13, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

SHEET INDEX

SHEET 1.....COVER SHEET
SHEET 2.....EXISTING TOPOGRAPHY & DEMOLITION
SHEET 3.....SITE & HORIZONTAL PLAN
SHEET 4.....EXISTING SITE ELEVATIONS
SHEET 5.....CONSTRUCTION DETAILS
SHEET A2....PROPOSED ELEVATIONS

BEARING BASIS:

PER THE RECORDED PLAT OF ENTERPRISE PARK WITH A BEARING OF N.89°-57'-50"W. FOR THE SOUTH LINE OF LOT 6.

BENCHMARKS:

BM#1: NW BOLT TOP FLANGE ("x" IN BOLT) OF FIRE HYDRANT AT NE CORNER OF INTERSECTION OF VENTURE WAY AND NORTHWAY DRIVE
ELEV. = 638.89

BM#2: NW BOLT TOP FLANGE ("x" IN BOLT) OF FIRE HYDRANT 500'± EAST OF INTERSECTION OF VENTURE WAY AND NORTHWAY DRIVE ON THE NORTH SIDE OF THE ROAD
ELEV. = 637.63

SITE: 5625 VENTURE WAY
MT. PLEASANT, MI 48858

CLIENT: ROOK METERING/MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858
CONTACT: ERIC
PHONE: (989) 944-2993
EMAIL: eric@michaelengineering.com

CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MI 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

CHARTER COMMUNICATIONS
915 E. BROOMFIELD STREET
MT. PLEASANT, MI 48858
(989) 621-4932
RANDY BUNKER
rbunker@chartercom.com

CONSUMERS ENERGY
1325 WRIGHT AVENUE
ALMA, MI 48801
(989) 466-4282
KIM STUDT
kimberly.studt@cmsenergy.com

FRONTIER
345 PINE AVENUE
ALMA, MI 48801
(989) 463-0392
MARK A. MARSHALL
Mark.Marshall@ftr.com

DTE ENERGY
4420 44TH STREET S.E., SUITE B
KENTWOOD, MI 49512
(616) 954-4623
MARY JO MCKERSIE
mckersiem@dteenergy.com

MT. PLEASANT FIRE DEPARTMENT
804 E. HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
LT. BRAD DOEPKER
bdoepker@mt-pleasant.org

CHARTER TOWNSHIP OF UNION
PUBLIC WATER/PUBLIC SEWER
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 24
KIM SMITH
ksmith@uniontownshipmi.com

CHARTER TOWNSHIP OF UNION
PLANNING & ZONING
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 241
PETER GALLINAT
pgallinat@uniontownshipmi.com

DRAIN COMMISSIONERS OFFICE
ISABELLA COUNTY BUILDING
200 N. MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 317-4072
ROBERT WILLOUGHBY
drain@isabellacounty.org

ISABELLA COUNTY ROAD COMMISSION
2261 E. REMUS ROAD
MT. PLEASANT, MI 48858
(989) 773-7131 EXT 115
PATRICK GAFFNEY
PGaffney@isabellaroads.com

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

COVER SHEET
ROOK METERING / MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS: PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22

JOB NUMBER:	DESIGNED BY:
2203-042	TELB
DRAWN BY:	CHECKED BY:
CDS	TELB

SCALE: 1" = 20'

SHEET NUMBER: 1 OF 6

SAGINAW CHIPPEWA INDIAN TRIBE
7070 E. BROADWAY ROAD
MT. PLEASANT, MI 48858
14-013-20-024-00
ZONED: SCIT

PROUT CRAIG A
4021 E. WILDCAT DRIVE
CAVE CREEK, AZ 85331
14-152-00-007-00
ZONED: I2

LOT 7

LOT 6

N00°-02'-10"E 377.96'(R) N00°-05'-28"E 377.76'(M)

N89°-57-50"W 319.00'(M)

20' PUBLIC UTILITY EASEMENT

20' SIDE YARD SETBACK

30' REAR YARD SETBACK

25' FRONT YARD SETBACK

667.94'(R) 668.11'(M)

N89°-57'-50"W 947.67'(M)

N89°-57'-50"W 947.43'(R)

N89°-57'-50"W 279.56'(M)

279.48'(R)

379.78'(M)

N05°-55'-10"W 557.24'(R) N05°-52'-09"W 557.17'(M)

S00°-22'-26"E 490.32'(R)
S00°-19'-25"E 490.26'(M)

ASPLUNDH TREE CO.
708 BLAIR MILL ROAD
WILLOW GROVE, PA 19090
14-152-00-006-00
ZONED: I2

REC INVESTMENTS LLC
5625 VENTURE WAY
MT. PLEASANT, MI 48858
14-152-00-006-01
ZONED: I2

PLEASANT PLAZA #1 LLC
5500 VENTURE WAY
MT. PLEASANT, MI 48858
14-152-00-022-01
ZONED: I2

HD DEVELOPMENT OF MARYLAND, IN
PO BOX 105842
ATLANTA, GA 30348-5842
14-013-20-033-02
ZONED: B7 & I2

AVENUE A PROPERTIES LLC
325 ENTERPRISE DRIVE
BRECKENRIDGE, MI 48615
14-152-00-005-02
ZONED: I2

CUDD PRESSURE CONTROL INC.
2801 BUFORD HIGHWAY STE 520
ATLANTA, GA 30329
14-152-00-004-00
ZONED: I2

30'x30.5' CHAIN LINK FENCE W/ 3-STAND BARBED WIRE ENCLOSURE W/ GATE TO BE REMOVED

10' X 20' CONC. DUMPSTER PAD W/ 6' X 6' DUMPSTER TO BE REMOVED
DUMPSTER TO BE RELOCATED

4" METAL POST

4" METAL POST TO BE REMOVED

GATE AND EAST FACE OF FENCED ENCLOSURE TO BE REMOVED

GRAVEL DRIVEWAY

ONE STORY 50'x150' STEEL COMMERCIAL BUILDING ADDITION
7,500 SQ. FT.
F.F.: 637.50

14'x14' OH DOOR

ONE STORY STEEL COMMERCIAL BUILDING
F.F.: 637.50
7,200 SQ. FT. MANUFACTURING SPACE
1,800 SQ. FT OFFICE SPACE

4" THICK x 4' HIGH STACKED STONE VENEER

CONCRETE

ASPHALT PARKING AND DRIVEWAY

CONCRETE DUMPSTER PAD TO BE REMOVED

40'x20' CONC. TO BE REMOVED

BOLLARD (TYP.) TO BE REMOVED

DOWNSPOUT (TYP.)

12'x7' CONC. PAD W/ 6' PRIV. FENCE ENCLOSURE

GAS METER

ELEC METER

AC UNIT

4" PVC

4" PVC INV: 636.24

GAS MARKER & TELEPHONE RISER

BM#1

BM#2

BASE POINT 1
N: 768367.4511
E: 13025797.2405
ELEV.: 636.58

TRANSFORMER PAD

TRANSFORMER PAD

18" CMP INV: 634.18

RIM: 635.02

18" CMP INV: 634.09

18" CMP INV: 634.03

18" CMP INV: 634.39

18" CMP INV: 633.36

18" CMP INV: 635.00

18" CMP INV: 633.80

VENTURE WAY
(26' ASPHALT, 66' R-O-W)

NORTHWAY DRIVE
(PRIVATE ROAD, 26' ASPHALT, 66' R-O-W)
(PLATTED AS 66' INGRESS-EGRESS & UTILITY EASEMENT)

CURB & GUTTER

R-O-W

1 inch = 20 ft.

CMS & D

SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

TOPOGRAPHIC SURVEY

ROOK METERING / MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS: PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22

JOB NUMBER:	DRAWN BY:	DESIGNED BY:	CHECKED BY:
2203-042	CDS	TELB	TELB

SCALE: 1" = 20'

SHEET NUMBER: 2 OF 6

SELLING/LEASING NOTE: THE OWNER DOES NOT INTEND TO SELL OR LEASE ANY PART OF THE PROPERTY PRIOR TO OR AFTER THE PROPOSED ADDITION IS CONSTRUCTED.

USE STATEMENT: THE CURRENT USE OF THE PROPERTY IS AN INDUSTRIAL USE FOR THE MANUFACTURE AND SUPPLY OF METER MIXING AND DESPENSING EQUIPMENT FOR ONE, TWO, AND THREE PART MATERIALS MADE OF EPOXY, ACRYLIC, URETHANE, UREA FORMALDEHYDE, AND PVA. THE PROPOSED SITE PLAN IS AN ADDITION MEANT TO FACILITATE AND EXPANSION OF OPERATIONS, AND THUS THE STATED USE OF THE PROPERTY WILL REMAIN UNCHANGED.

DEVELOPMENT SCEHDULE: PROPOSED PHASE ONE WILL OCCUR DURING 2022 AND 2023. PHASE TWO WILL OCCUR BASED ON THE NEED FOR EXPANSION. ESTIMATED TIMING 2024–2025.

EXISTING NATURAL FEATURES: THE UNIMPROVED AREAS OF THE EXISTING SITE ARE CURRENTLY LAWN AREAS AND DRAINAGE SWALES.

PROPOSED WATER/SEWER SERVICE: THE EXISTING WATER SERVICE WILL BE UTILIZED TO PROVIDE SERVICE TO THE PROPOSED EXPANSION. THE EXISTING SEWER SERVICE WILL BE UTILIZED TO PROVIDE SERVICE TO THE PROPOSED EXPANSION.

PARKING TABLE:

EXISTING OFFICE AREA:
OFFICE GFA: 1,800 SQ. FT.
REQUIRED: 1 SPACE FOR EACH 300 SQ. FT. OF UFA.

UFA = 80% GFA = 1,440 SQ. FT.
1,440 SQ. FT. / 300 SQ. FT. = **5 SPACES**

MANUFACTURING:
EX. MANUFACTURING GFA: 14,700 SQ. FT.
PROP. ADDITIONAL GFA: 20,160 SQ. FT.
TOTAL MANUFACTURING GFA: 34,860 SQ, FT,
REQUIRED: 1 SPACE FOR EACH 2,000 SQ. FT. OF UFA

UFA = 90% GFA = 31,374 SQ. FT.
31,374 SQ. FT. / 2,000 SQ. FT. = **15 SPACES**

TOTAL REQUIRED SPACES: 5 FOR OFFICE SPACE
15 FOR MANUFACTURING
20 TOTAL REQUIRED (1 REQ. ADA SPACE)

PLANNED PARKING:

GRAVEL PARKING:	37 SPACES
REG. PAVED PARKING:	3 SPACES
ADA PAVED PARKING:	2 SPACES
TOTAL PLANNED PARKING:	**42 SPACES (2 REQ. ADA SPACES)**

NOTE: CONCRETE SIDEWALK IS INCLUDED PER TOWNSHIP REQUIREMENTS. A TEMPORARY RELIEF IS BEING REQUESTED, WITH THE REASONING THAT LESS THAN 50% OF THE SURVEYED SECTIONS OF THE TOWNSHIP ALONG THE ROAD FRONTING THE PROPOSED DEVELOPMENT HAS SIDEWALKS. NORTHWAY DRIVE AND VENTURE WAY DO NOT HAVE SIDEWALKS ALONG THEIR ENTIRE LENGTHS.

STREET PLANTING – NORTHWAY DRIVE

9 DECIDUOUS TREES
4 ORNAMENTAL TREES
76 SHRUBS

STREET PLANTING – VENTURE WAY

7 DECIDUOUS TREES
3 ORNAMENTAL TREES
56 SHRUBS

BERMS

BERMS REQUIRED IF PARKING IS 40 FEET OR CLOSER TO RIGHT–OF–WAY LINE. PROPOSED PARKING IS WITHIN 40 FEET OF BOTH VENTURE WAY AND NORTHWAY DRIVE.

PARKING LOT PLANTING

30 SQ FT OF INTERIOR LANDSCAPING PER SPACE
42 SPACES X 30 = 1,260 SQ. FT.

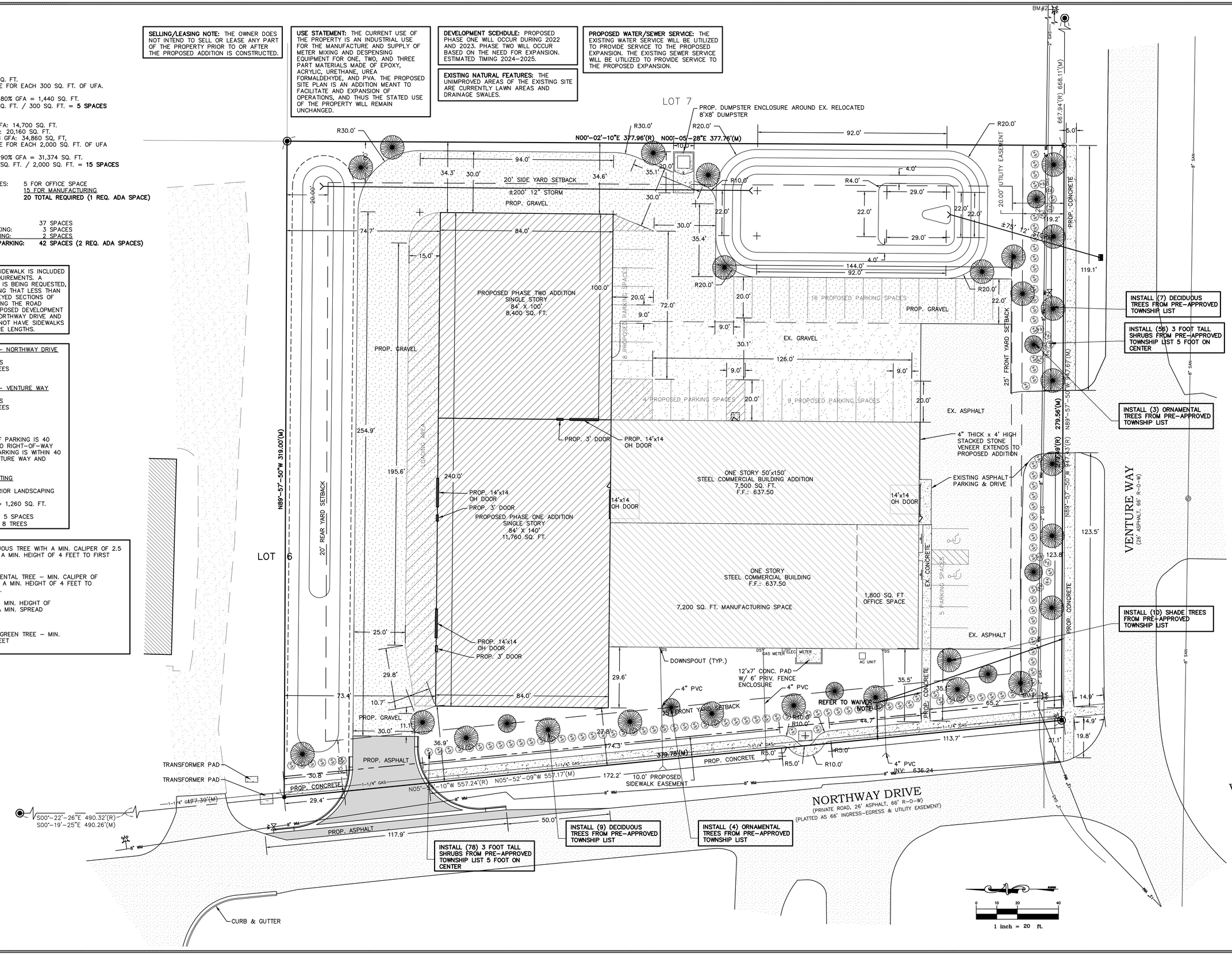
1 SHADE TREE PER 5 SPACES
42 SPACES / 5 = 8 TREES

PROP DECIDUOUS TREE WITH A MIN. CALIPER OF 2.5 INCHES AND A MIN. HEIGHT OF 4 FEET TO FIRST BRANCH.

PROP ORNATMENTAL TREE – MIN. CALIPER OF 2.0 INCHES & A MIN. HEIGHT OF 4 FEET TO FIRST BRANCH.

PROP SHRUB– MIN. HEIGHT OF 3 FEET AND A MIN. SPREAD OF 2 FEET.

PROP. EVERGREEN TREE – MIN. HEIGHT 8 FEET



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FAX: (989) 775–5012
EMAIL: info@cms–d.com

SITE HORIZONTAL PLAN

ROOK METERING / MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6–28–22

JOB NUMBER: 2203–042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 3 OF 6

EXISTING WEST ELEVATION
NOT TO SCALE

EXISTING SOUTH ELEVATION
NOT TO SCALE

EXISTING EAST ELEVATION
NOT TO SCALE

CMS & D
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MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

EXISTING SITE ELEVATIONS

ROOK METERING / MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22

JOB NUMBER: 2203-042
DRAWN BY: RLL
DESIGNED BY: TELB
CHECKED BY: TELB
SCALE: 1" = 20'
SHEET NUMBER: 4 OF 6

GENERAL NOTES:

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY COMPANY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE LOCATION AND DEPTH OF UNDERGROUND UTILITIES WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" (1-800-482-7171) A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION OR PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL MAKE EVERY EFFORT TO PROTECT AND OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR WHERE POSSIBLE CONFLICTS EXIST PRIOR TO BEGINNING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS, EXISTING UTILITIES, LOT AND BUILDING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THE PLANS. ARRANGE TO HAVE UTILITIES IDENTIFIED AND FLAGGED BEFORE STARTING CONSTRUCTION. THE OWNER ASSUMES NO LIABILITY FOR THE LOCATION OF UTILITIES. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONSTRUCTION UNDER EXISTING OR PROPOSED PAVEMENT, EXISTING OR PROPOSED UTILITIES (INCLUDING LEADS), SHALL BE COMPLETELY BACKFILLED WITH SAND IN 9" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF ITS MAXIMUM UNIT WEIGHT, AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE COST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM.

THE CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT PART 91 OF PUBLIC ACT 451 OF 1994, AS AMENDED.

GEOTEXTILE FILTER SHALL BE USED AT ALL CATCH BASINS FOR SOIL AND SEDIMENTATION CONTROL. ALL CATCH BASINS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED PROJECT. COST FOR CLEANING THE CATCH BASINS SHALL BE INCLUDED IN THE COSTS FOR THE DRAINAGE STRUCTURES.

TOPSOIL SHALL BE STOCKPILED ON THE SITE AND USED AS TOPSOIL SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. TOPSOIL WILL NEED TO BE SPREAD TO A MINIMUM DEPTH OF 6 INCHES. THE INTENT IS FOR THE CONTRACTOR AND THE LANDSCAPER TO USE THE EXISTING TOPSOIL TO COMPLETE THE PROJECT PRIOR TO HAULING ANY TOPSOIL ONTO THE SITE. UNSUITABLE TOPSOILS MUST BE DISPOSED OF. DURING THE CLEANUP, ANY REMAINING STOCKPILES WILL NEED TO BE REMOVED. SOIL EROSION MEASURES MUST BE TAKEN TO ASSURE THAT THESE STOCKPILES ARE STABILIZED.

THE CONTRACTOR SHALL SEED AND FERTILIZE DITCH BANKS, SOILS PILES OR BANKS AND ANY OTHER DISTURBED AREAS AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL BACKFILL, COMPACT AND FINE GRADE ALL AREAS BETWEEN THE CURBS AND PAVEMENT AND THE PROPERTY LINES WITH TOPSOIL SUITABLE FOR LANDSCAPING. THE GRADES IN THESE AREAS WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING AS STATED ON THE PLANS. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE STATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL PLAIN RIP-RAP BANK PROTECTION IN AREAS WHERE BANK EROSION WILL MOST LIKELY OCCUR OR AS DIRECTED BY THE ENGINEER.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE TO BE DISPOSED OF BY THE CONTRACTOR.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAWCUT WITH BUTT-JOINTS. THE COST SHALL BE INCLUDED WITH THE PAYMENT FOR EXCAVATION.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. THE COST IS TO BE INCLUDED IN THE LUMP SUM FEE.

ALL WATER VALVE BOXES, ELECTRICAL BOXES, GAS VALVES AND ANY OTHER EXISTING UTILITY STRUCTURES ON THE SITE SHALL BE ADJUSTED TO FINISHED GRADE. THE COST SHALL BE INCLUDED IN THE LUMP SUM FEE.

MICHIGAN UNIFIED KEYING SYSTEM
SOIL EROSION & SEDIMENTATION CONTROL MEASURES

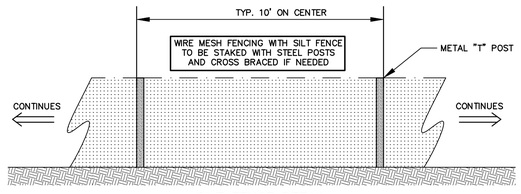
2	Selective Grading & Shaping	Water can be diverted to minimize erosion Flatter slopes ease erosion problems
5	Seeding	Inexpensive and very effective Stabilizes soil, thus minimizing erosion Permits runoff to infiltrate soil, reducing runoff volume Should include prepared topsoil bed
14	Aggregate Cover	Stabilizes soil surface, thus minimizing erosion Permits construction traffic in adverse weather May be used as part of permanent base construction of paved areas
13	Riprap, Rubble, Gabions	Used where vegetation is not easily established Effective for high velocities or high concentration Permits runoff to infiltrate soil Dissipates energy flow at system outlets
15	Paving	Protects areas which cannot otherwise be protected, but increases runoff volume and velocity Irregular surface will help slow velocity
30	Pipe Spillway	Removes sediment and turbidity from runoff May be part of permanent erosion control plan
55	Geotextile Silt Fence	Controls and Contains sediment from sheet flow conditions. Fabric must be "toed" into the soil 6" or more to prevent underflow. Must be constructed of adequate strength filter fabric and stakes.

NOTE: 35P 36P

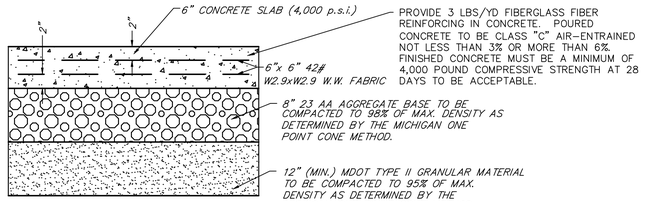
TYPICAL FOR ENTIRE STORM SEWER SYSTEM

NOTE: XXT XXP

T = TEMPORARY P = PERMANENT



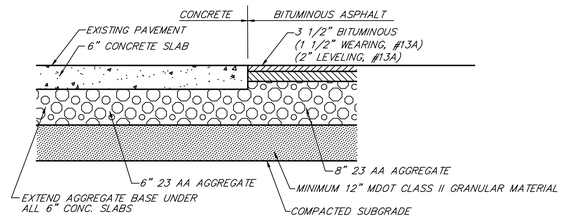
SILT FENCE DETAIL
N.T.S.



PROVIDE 3 LBS/YD FIBERGLASS FIBER REINFORCING IN CONCRETE. POURED CONCRETE TO BE CLASS "C" AIR-ENTRAINED NOT LESS THAN 3% OR MORE THAN 6%. FINISHED CONCRETE MUST BE A MINIMUM OF 4,000 POUND COMPRESSIVE STRENGTH AT 28 DAYS TO BE ACCEPTABLE.

CONCRETE PAD CROSS-SECTION

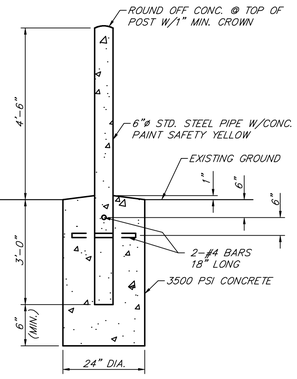
NOT TO SCALE



NOTE: ALL 6" CONC. SLABS TO BE REINFORCED W/ 6x6 W2.9 x W2.9 WWF

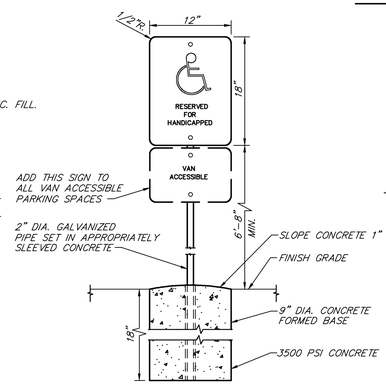
TYPICAL 6" CONCRETE SLAB CROSS-SECTION

NOT TO SCALE



BOLLARD DETAIL

NOT TO SCALE

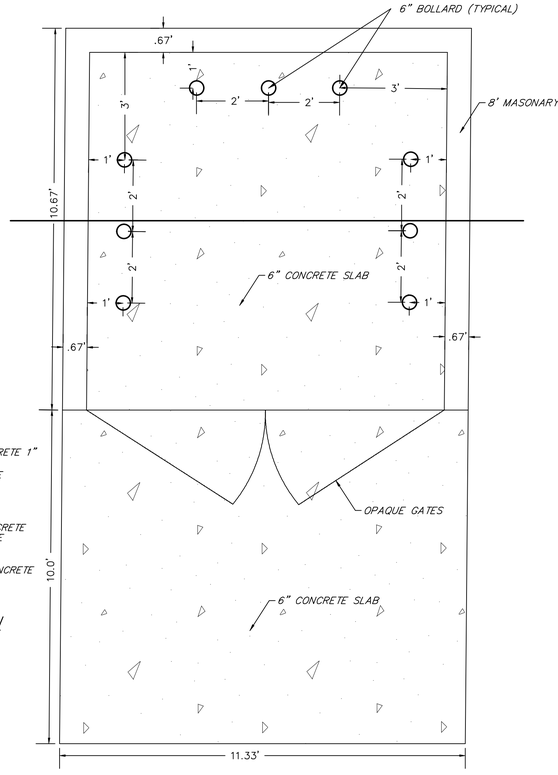


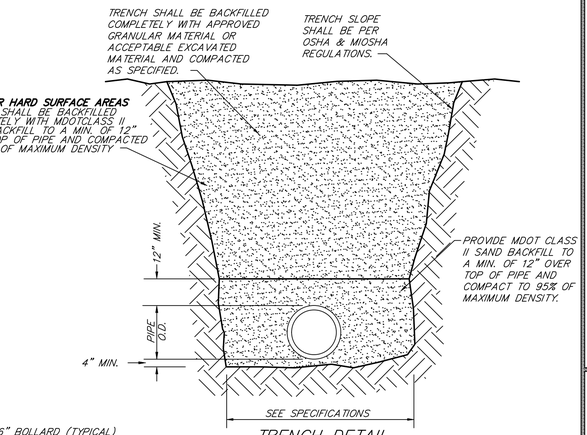
TYP. BARRIER FREE PARKING SIGN

NOT TO SCALE

SOIL EROSION GENERAL NOTES:

1. CONTRACTOR TO INSTALL TEMPORARY SEDIMENTATION COLLECTION BAGS IN EACH CATCH BASIN LOCATED IN THE ROADWAYS OR PARKING LOTS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE & REPLACEMENT OF BAGS AS NEEDED. BAGS TO BE REMOVED ONLY AFTER SITE HAS BEEN STABILIZED AT THE COMPLETION OF CONSTRUCTION.
2. CONTRACTOR TO STOCKPILE SOIL ON SITE AT A MAXIMUM SLOPE OF 1 ON 3. ALL SPOIL PILES ARE TO BE SEEDED TO MAINTAIN SLOPE STABILITY.
3. EXCESS TOPSOIL IS TO BE REMOVED FROM SITE. CONTRACTOR TO COORDINATE THESE ACTIVITIES WITH PROPERTY OWNER. CONTRACTOR TO ENSURE THAT A MINIMUM 50' BUFFER STRIP IS MAINTAINED BETWEEN ALL STOCKPILES & PROPERTY LINE.
4. ALL STOCKPILES THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN 30 DAYS ARE TO BE SEEDED AND STABILIZED.
5. CONTRACTOR IS ENCOURAGED TO WORK WITH LANDSCAPE CONTRACTOR TO PROVIDE SOIL EROSION MEASURES WITH THE USE OF PERMANENT LANDSCAPE.
6. CONTRACTOR WILL TAKE ALL NECESSARY STEPS TO ELIMINATE SOILS/SEDIMENT FROM LEAVING THE PROJECT SITE.
7. THE CONTRACTOR MUST KEEP STREETS FREE OF SEDIMENTATION OR TAKE STEPS TO CLEAN STREETS.
8. SOIL EROSION MAY ALSO OCCUR WHEN SOILS ARE DRY. SOIL EROSION DUE TO BLOWING WINDS MUST BE MINIMIZED BY USE OF WATER TANK TRUCKS.
9. AS SOON AS POSSIBLE SOILS WILL BE COMPACTED TO MINIMIZE SOIL EROSION. IF SOILS ARE LEFT UNCOMPACTED FOR LENGTHY PERIODS THEY MUST BE SEEDED TO MINIMIZE SOIL EROSION.
10. TEMPORARY MEASURES SHALL STAY IN PLACE UNTIL THE CONSTRUCTION ACTIVITIES HAVE ENDED AND/OR THE PERMANENT MEASURES ARE COMPLETED.
11. UPON COMPLETION OF CONSTRUCTION THE CONTRACTOR MUST CLEAN ALL SUMPS AND SEDIMENTATION TRAPS.
12. CONTRACTOR IS TO ENSURE THAT ALL CONTROL MEASURES ARE ADEQUATELY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.



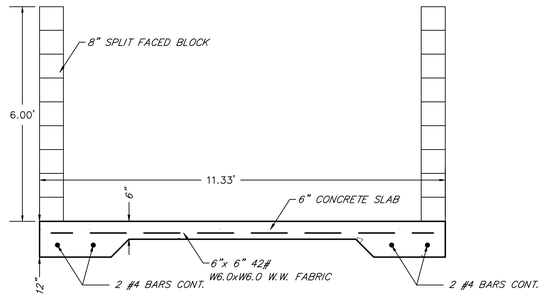


TRENCH DETAIL

NOT TO SCALE

TRENCH WIDTH CHART

PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"



DUMPSTER DETAIL

NOT TO SCALE

CMS & D
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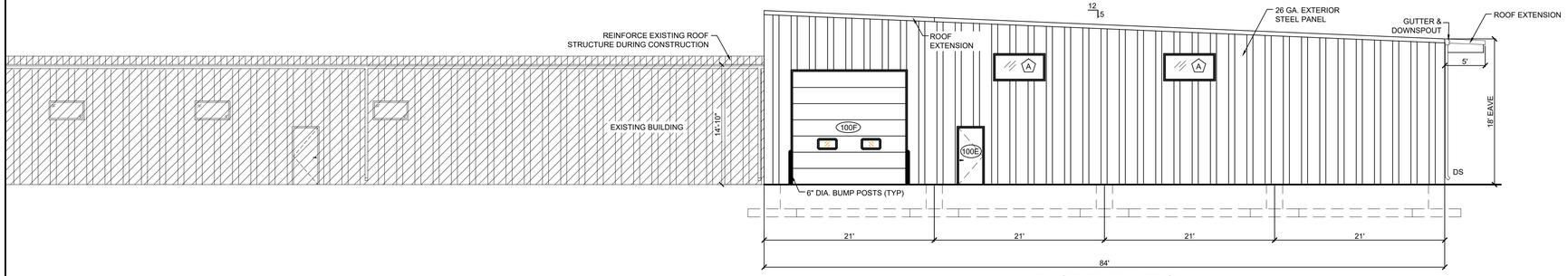
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

DETAILS SHEET
ROOK METERING / MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

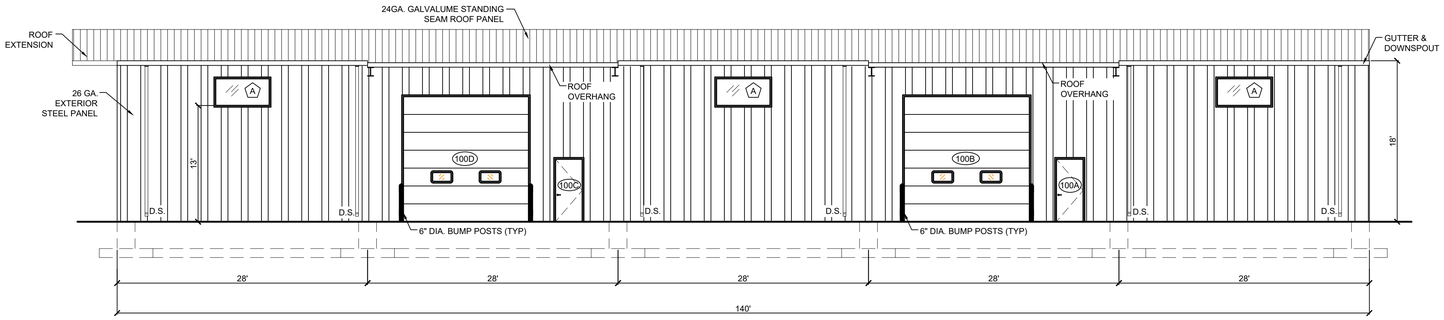
SUBMITTALS: PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB
SCALE: 1" = 20'
SHEET NUMBER: 5 OF 6



EAST ELEVATION

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



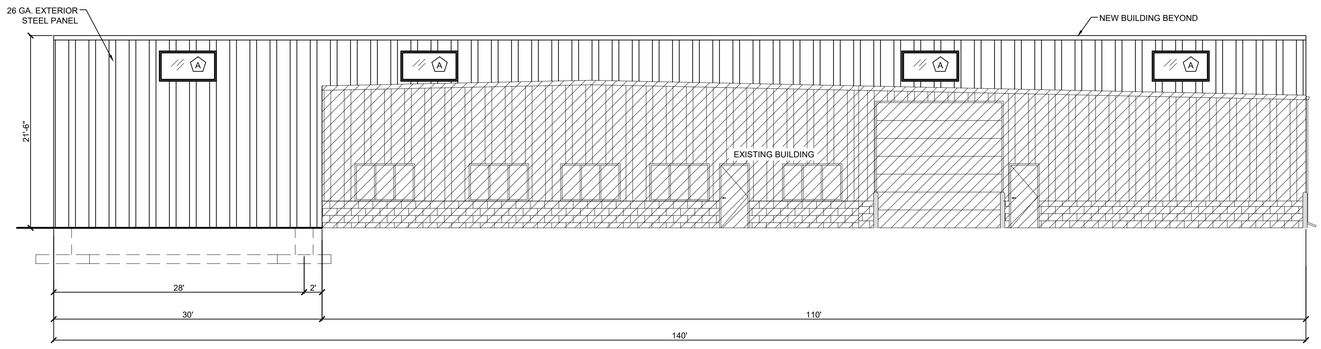
NORTH ELEVATION

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

WEST ELEVATION

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

WINDOWS:
CENTERED IN BAY IT IS LOCATED IN



SOUTH ELEVATION

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

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
FOR THE LOCATION OF UNDERGROUND FACILITIES

REVISIONS

TAG	DATE:	CHANGE:

JBS JOB NUMBER:
DRAWING NAME: ELEVATIONS
DRAWN BY: DKG
REVIEWED BY:
FIELD SUPERVISOR:
DATE: 6/1/2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

JBS Contracting Inc.
COMMERCIAL/INDUSTRIAL CONSTRUCTION
1680 COVER PARKWAY
MT. PLEASANT, MI 48858
(989) 775-0770

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

A2

MICHAEL ENGINEERING

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 241

PRELIMINARY SITE PLAN REPORT

TO:	Planning Commission	**DATE:**	July 11, 2022
FROM:	Peter Gallinat, Zoning Administrator	**ZONING:**	I-2, General Industrial District

PROJECT: PSPR22-10 preliminary site plan approval application – Rook Metering - Michael Engineering building expansion.

PARCEL(S): PID 14-152-00-006-01

OWNER(S): REC Investments LLC

LOCATION: Approximately 2.77 acres located at 5625 Venture Way in the NE 1/4 of Section 13.

EXISTING USE: Michael Engineering **ADJACENT ZONING:** B-4, I-2, and SCIT

FUTURE LAND USE DESIGNATION: *Industrial/Employment*: This category promotes traditional industrial employment. Located near regional nodes with convenient access to interchanges, this district provides an opportunity to diversify the industrial employment base of the township by reserving areas for research, development, technology, and corporate offices or campuses that will have less of an impact than traditional industrial uses. Uses to complement CMU's Smart Zone would include research, design, engineering, testing, laboratories, diagnostics, and experimental product development. Types of industries may include automotive, electronics, alternative energy technologies, computers, communications, information technology, chemical or biomedical engineering.

ACTION: To review the PSPR22-10 preliminary site plan dated 6/28/2022 for an 11,760 square-foot phase one addition and an additional 8,400 square-foot phase two addition to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the NE 1/4 of Section 13 and in the I-2 (General Industrial) zoning district.

Site Plan Approval Process

Per Section 14.2.C. of the Zoning Ordinance, both preliminary site plan approval and final site plan approval are required for this project**.** Per Section 14.2.J., approval of a preliminary site plan by the Planning Commission "*shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas*." Planning Commission approval of a final site plan "*constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction,* provided *all other construction and engineering requirements have been met*" (Section 14.2.L.). Documentation of applicable outside agency permits and approvals will be required as part of a final site plan application.

Background Information

Currently there is an existing 14,700 square-foot building on the lot, which is divided into a 7,200 square-feet of manufacturing space, 1,800 square-feet of office space, and a 7,500 square-foot "commercial building addition." The proposed expansion is divided into two construction

phases. The first phase would be constructed in 2022-2023, and phase two would be constructed in 2024-2025.

Preliminary Site Plan Review Comments

The following comments are based on the standards for preliminary site plan approval and specific elements of the proposed site plan:

1. **Section 14.2.P. (Required Site Plan Information).** With the exception of details noted elsewhere in this report that could be addressed by the applicant on the final site plan for this project, the site plan substantially conforms to the minimum Section 14.2.P. information requirements for a preliminary site plan.

2. **Section 8 (Environmental Performance Standards).** The hazardous substance reporting form and EGLE permit checklist form are included in the application materials.

3. **Section 9 (Off-Street Parking, Loading Requirements).** The parking layout has been provided for both the industrial and office uses of the proposed buildings. The calculations are correct, and the parking proposed exceeds the minimum requirement. However, most of the parking is shown as gravel. Section 9.3.D requires parking areas to be hard surfaced. One loading area is shown in the rear yard and is sufficient in size. However, the loading area is also shown as gravel, which also violates Section 9.5.B requirements for hard surfacing with concrete. For commercial and industrial uses and zoning districts, the Planning Commission can grant a limited waiver related to paving for a gravel surface in a heavy machinery storage area, but not for any parking or loading facilities. <u>The following details will need to be addressed by the applicant on the final site plan</u>:

   - ❑ Revise all parking facilities on the final site plan to be hard-surfaced with asphalt and/or concrete.
   - ❑ Revise the loading area on the final site plan to be hard-surfaced with concrete.
   - ❑ Add one secured/sheltered bicycle parking space. Bicycle parking facilities shall be located at least 3 feet from adjacent walls, poles, landscaping, street furniture, drive aisles, and primary pedestrian routes and at least 6 feet from vehicle parking spaces.

4. **Section 7.10 (Sidewalks and Pathways).** The applicant has proposed a 5-foot-wide sidewalk along both Northway Drive and Venture Way. An existing sidewalk along the south side of the existing building is also shown as extending west to connect to the proposed sidewalk on Northway Drive. A note on sheet 3 of the site plan requests temporary relief from construction of this sidewalk for the stated reason that "*less than 50% of the surveyed sections of the Township along the road fronting the proposed development has sidewalks*."

   However, this exemption does not apply in this case, since the project does not front on a section line roadway. In addition, this property is part of the Enterprise Industrial Park and the East Downtown Development Authority (DDA) District, where there are existing sidewalks nearby along portions of E. Pickard Rd. (M-20), E. Broadway Rd., and S.

Summerton Rd. The Township's Economic Development Authority (EDA) Board, which oversees the East DDA District, has included maintaining and extending the network of pedestrian pathways and sidewalks as a priority in their DDA District development plans. Expanding connections between neighborhoods and pedestrian access to area businesses are also identified in the transportation element of the Township's Master Plan as important priorities.

The applicant could revise their plans to request temporary relief because the "*development is located on property zoned industrial,*" which is listed as a valid reason in the Township's adopted policy for granting temporary relief from required sidewalk construction. However consistent with the above-noted policies in the DDA development plans and Master Plan, staff would not recommend that the relief be granted for this site. <u>The following sidewalk details will need to be addressed by the applicant on a revised final site plan</u>:

- ❑ Staff recommends that a second internal sidewalk connector and painted crosswalk be added to the final site plan from Venture Way north into the site, lining up with the barrier-free access aisle shown on the site plan.
- ❑ Add ADA-compatible barrier-free sidewalk ramps on the final site plan at the corner where the proposed sidewalks intersect with the roadway, along with a detail of the sidewalk and ramp design.
- ❑ If the applicant wishes to pursue consideration of a new request for temporary relief as part the final site plan approval, the site plan note will need to be updated to be consistent with the Township's adopted policy.

5. **Section7.14 (Trash Removal and Collection).** Two existing dumpster location on site will be removed and replaced with one location on the east of the property. The dumpster pad is hard surfaced and of sufficient size. The dumpster is proposed to be screened as required. Details are found on page 5 of 6. <u>The following details need to be addressed by the applicant on the final site plan</u>:

- ❑ The dumpster location needs to be moved further to the northeast of the property to be located in the rear yard area as required.
- ❑ Add a note to indicate how recycling will be implemented on the expanded site.

<u>Looking Ahead for the Final Site Plan</u>

6. **Section 10 (Landscaping and Screening).** Although not required as part of a preliminary plan, the applicant has provided a proposed landscape plan on page 3 of 6. For reference, there is 345 lineal feet of road frontage on Northway Drive, which means a minimum of 8 deciduous trees, 3 ornamental trees, and 64 shrubs are required. There is 267 lineal feet of road frontage on Venture Way, which means a minimum of 7 deciduous trees, 2 ornamental and 48 shrubs are required.

Plan notes the correct formula for number of shrubs, ornamental trees, and deciduous

trees. Plan also notes correct formula for parking lot landscaping. The applicant has provided for more than the minimum required landscaping improvements for this project. A total of 24 deciduous trees are required for the overall site, and 26 are shown. The following details will need to be addressed by the applicant on a revised plan:

- ❑ Plans notes the need for 1,260 square feet of interior landscaping. This interior landscaping needs to be shown or labeled on the final plan.

7. **Section 8.2 (Exterior Lighting).** Exterior lighting details and photometric plan sheet will need to be included with the final site plan. Illumination is not permitted to exceed 10 foot-candles. Lighting needs to be down shielded and no light pole erected may exceed 22-feet in height from grade level to the top of the light fixture. The following additional exterior lighting detail will also need to be addressed by the applicant on the final site plan:

   - ❑ Any existing lighting that will not be disturbed due to new construction can remain in place. However, all new lighting and altered/relocated existing lighting will need to fully conform to Section 8.2 (Exterior Lighting) requirements.

8. **Outside agency approvals.** The applicant is responsible for obtaining all necessary permits or approvals from applicable outside agencies prior to submittal of the final site plan application for approval. The following agencies still need to review the plan and submit their comments to the Zoning Administrator.

   - ❑ Mt. Pleasant Fire Department
   - ❑ Isabella County Road Commission
   - ❑ Isabella County Drain Office for Storm Water Management
   - ❑ Isabella County Transportation Commission
   - ❑ Township Public Services Department

Objective

The Planning Commission shall review the application materials and site plan, together with any reports and recommendations. The Planning Commission shall identify and evaluate all relevant factors and shall then take action by motion to approve the site plan, to approve the site plan with conditions, to deny the site plan application, or to postpone further consideration of the site plan to a date certain in accordance with Section 14.2.H. of the Zoning Ordinance.

Key Findings

- With the exception of some details that can be addressed on the final site plan, the preliminary site plan substantially conforms to the minimum requirements of Section 14.2.P. (Required Site Plan Information).
- The requested temporary relief from sidewalk construction is not consistent with the Township's adopted policy conditions for consideration of such relief, and would not be consistent with the Township's adopted Master Plan and East DDA District Development Plan.
- The requested parking and loading area waivers to allow for gravel surfacing are not within

the limited scope of modifications allowed per Section 9 (Parking, Loading, and Access Management) of the Zoning Ordinance.

- The application and site plan are ready for Planning Commission review and action.

Recommendations

Based on the above findings, I recommend that Planning Commission take action to approve the PSPR22-10 preliminary site plan dated 6/28/2022 for an 11,760 square-foot phase one addition and an additional 8,400 square-foot phase two addition to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the NE 1/4 of Section 13 and in the I-2 (General Industrial) zoning district, subject to the following conditions:

1. The requested temporary relief from sidewalk construction is not granted as part of this preliminary site plan approval because it is not consistent with the adopted policy conditions for consideration of such relief.
2. The requested parking and loading area waivers to allow for gravel surfacing are not granted as part of this preliminary site plan approval because they are not consistent with the limited scope of modifications allowed per Section 9 (Parking, Loading, and Access Management) of the Zoning Ordinance.
3. Revise all parking facilities on the final site plan to be hard-surfaced with asphalt or concrete, and revise the loading area to be hard-surfaced with concrete as required.
4. Revise the sidewalk and trash removal and collection details on the final site plan to be fully consistent with applicable Township ordinances.

Please contact me at (989) 772-4600 ext. 241, or via email at pgallinat@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,

Peter Gallinat, Zoning Administrator
Community and Economic Development Department

Draft Motions: PSPR 22-10 Preliminary Site Plan Application for the Rook Metering - Michael Engineering Building Expansion, 5625 Venture Way

MOTION TO APPROVE THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to approve the PSPR 22-10 preliminary site plan dated June 28, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it fully complies with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval).

MOTION TO APPROVE THE PRELIMINARY SITE PLAN WITH CONDITIONS:

Motion by _____, supported by _____, to approve the PSPR 22-10 preliminary site plan dated June 28, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it fully complies with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), subject to the following conditions:

1. The requested temporary relief from sidewalk construction is not granted as part of this preliminary site plan approval because it is not consistent with the adopted policy conditions for consideration of such relief.
2. The requested parking and loading area waivers to allow for gravel surfacing are not granted as part of this preliminary site plan approval because they are not consistent with the limited scope of modifications allowed per Section 9 (Parking, Loading, and Access Management) of the Zoning Ordinance.
3. Revise all parking facilities on the final site plan to be hard-surfaced with asphalt or concrete, and revise the loading area to be hard-surfaced with concrete as required.
4. Revise the sidewalk and trash removal and collection details on the final site plan to be fully consistent with applicable Township ordinances.

_____

_____

MOTION TO POSTPONE ACTION ON THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to postpone action on the PSPR 22-10 preliminary site plan dated June 28, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way until _____ _____, 2022 for the following reasons:

_____

_____

Draft Motions: PSPR 22-10 Preliminary Site Plan Application for the Rook Metering - Michael Engineering Building Expansion, 5625 Venture Way

MOTION TO DENY THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to deny the PSPR 22-10 preliminary site plan dated June 28, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it does not comply with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), for the following reasons:

_____

_____

_____

_____

_____

_____

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 232

PARKS AND RECREATION MASTER PLAN UPDATE

TO:	Planning Commission	**DATE:**	June 14, 2022
FROM:	Rodney C. Nanney, AICP. Community and Economic Development Director		
PROJECT:	Review and discuss existing and potential parks and outdoor recreation sites.		

Review of Existing and Potential Parks and Outdoor Recreation Sites

The following attached maps provide an overview of existing and potential parks and outdoor recreation sites in the community. :

1. Overview of Existing and Potential Parks and Recreation Sites (City, Township, County, etc.)
2. Detail – Potential Township Park Site "G"
3. Detail – Potential Township Park Site "H"
4. Detail – Potential Township Park Site "I"
5. City of Mt. Pleasant Parks and Recreation Plan Map

The following descriptions of the sites A – I as depicted on the Overview map are intended to assist the Planning Commission with your review of existing and potential parks and outdoor recreation sites in the Township:

A. Meridien Park. An existing county park facility in the southwest corner of the Township.

B. McDonald Park. An existing Township-owned park facility with ballfields, pavilions, and playground equipment located adjacent to the Township Hall.

C. Mission Creek Park. An existing City-owned park facility adjacent to the Township on three sides, which includes the "Hannah's Bark Park" off-leash dog park.

D. Chippewa River Floodplain. Much of the floodplain area of the Chippewa River, especially to the east of Mission Road, is divided up among multiple parcels under private ownership. Some of these parcels include older buildings that have been subject to multiple previous flood events. Preservation and improvement of the floodplain area under public ownership would also benefit the river's water quality and recreational use capacity.

E. Indian Pines Site. This is an undeveloped recreation site owned by the City but located partially within the Township boundaries. There are some rustic trails, but no parking or access amenities. The site is located to the northeast of the City-owned Mt. Pleasant Municipal Airport, which is also located predominantly in the Township. The City's parks and recreation staff are currently pursuing grant applications to develop the site for public accessibility.

F. Jameson Park. An existing Township-owned park facility with a ballfield, a pavilion, playground equipment, and a recently renovated community meeting space in Jameson Hall (the former Township Hall). Phase 2 of the planned park improvements are nearing completion. If you haven't seen Jameson Park lately, it is worth a visit!

G. Jonathan Ln. Site. This 0.22-acre lot at 5243 Jonathan Lane was purchased from the County Treasurer out of a tax foreclosure. The property had been occupied by a dilapidated dwelling and had become an eyesore after the previous owner passed away without active heirs. The lot is encumbered by a 30-foot side Township sanitary sewer main easement that runs along the western third of the lot.

The Township recently completed clean-up of the site, including removal of remaining structures and dilapidated fencing. The site provides a potential connection between the Jonathan Lane neighborhood (Country Squire Estates subdivision) and the adjacent E. Kay St./Third St. neighborhood to the north.

A proposal for the civil engineering work needed to develop a public sidewalk connection through the site as part of a set of Township sidewalk development projects will be considered by the Board of Trustees on 6/22/2022. This site, which is now located in the recently expanded East Downtown Development Authority District, is well-suited for a small neighborhood or "tot lot" park facility.

H. Deerfield/Mission Site. With the exception of a utility facility along a portion of the S. Mission Rd. frontage, this Township-owned 14.03-acre parcel is currently vacant. A portion of the recently developed regional bike path between Mt. Pleasant and Shepherd runs along the north and east sides of the site. The site is well-suited for development of additional athletic fields, a parking/staging area for those using the bike path, a potential recycling collection station, and other Township facilities.

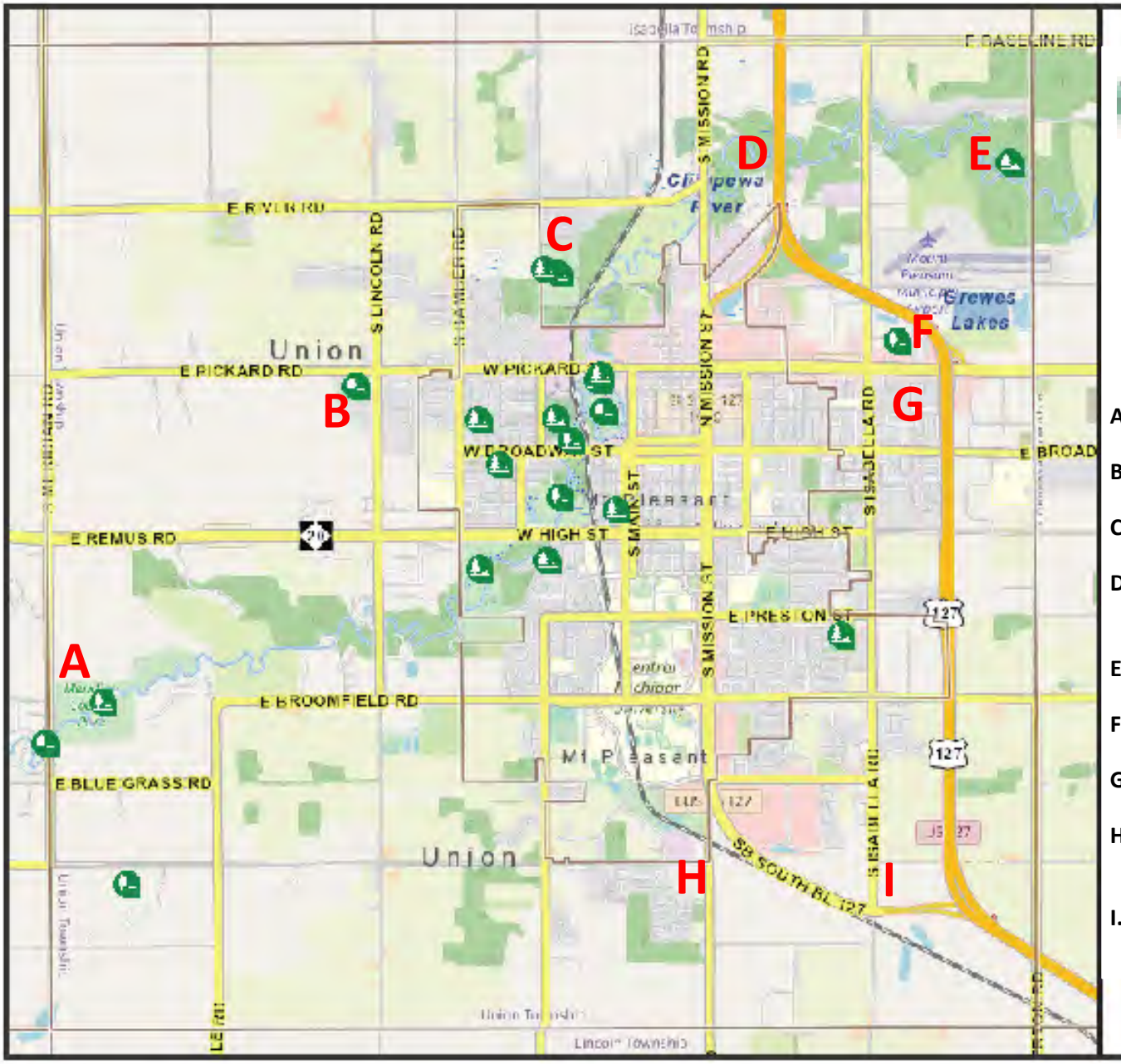
I. Deerfield/Isabella Site. The private landowner of this 43-acre parcel on the southeast corner of E. Deerfield Rd. and S. Isabella Rd. has previously expressed interest in seeking a way to permanently preserve this parcel, which is currently in agricultural use. The site is directly across S. Isabella Rd. from the Township's water plant and Public Services Dept. offices.

Next Steps

I would ask that the Planning Commission consider these sites, and any others that may come up in the meeting, with the intent of potentially identifying priorities for inclusion in an updated plan.

Respectfully submitted,

Rodney C. Nanney, AICP
Community and Economic Development Director



Charter Township Union

Existing and Potential Parks and Outdoor Recreation Sites

A. **Meridien Park** (county)

B. **McDonald Park** (Twp.)

C. **Mission Creek Park** (city)

D. **Chippewa River Floodplain** (various)

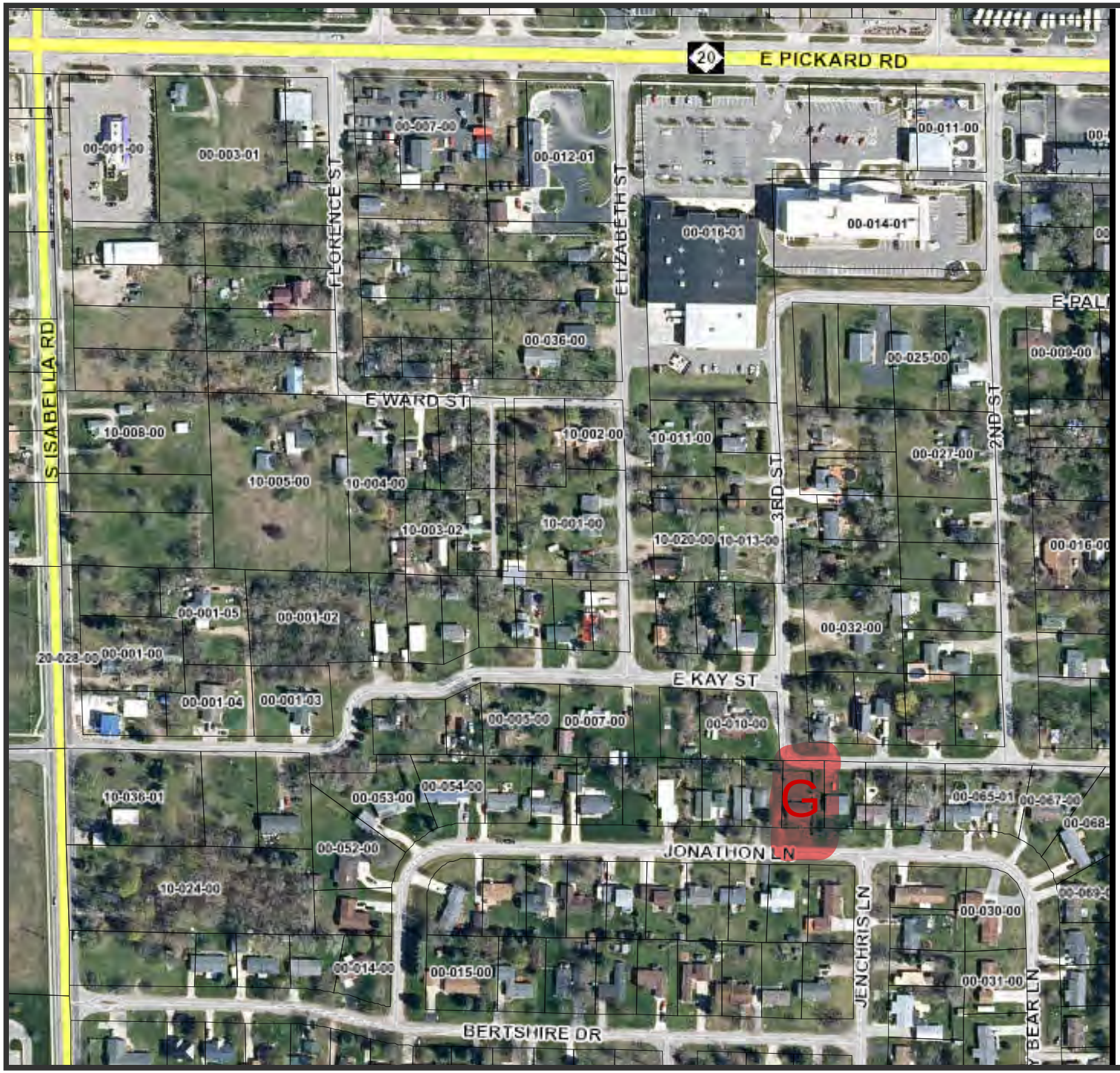
E. **Indian Pines Site** (city)

F. **Jameson Park** (Twp.)

G. **Jonathan Ln. Site** (Twp.)

H. **Deerfield/Mission Site** (Twp.)

I. **Deerfield/Isabella Site** (Twp.)



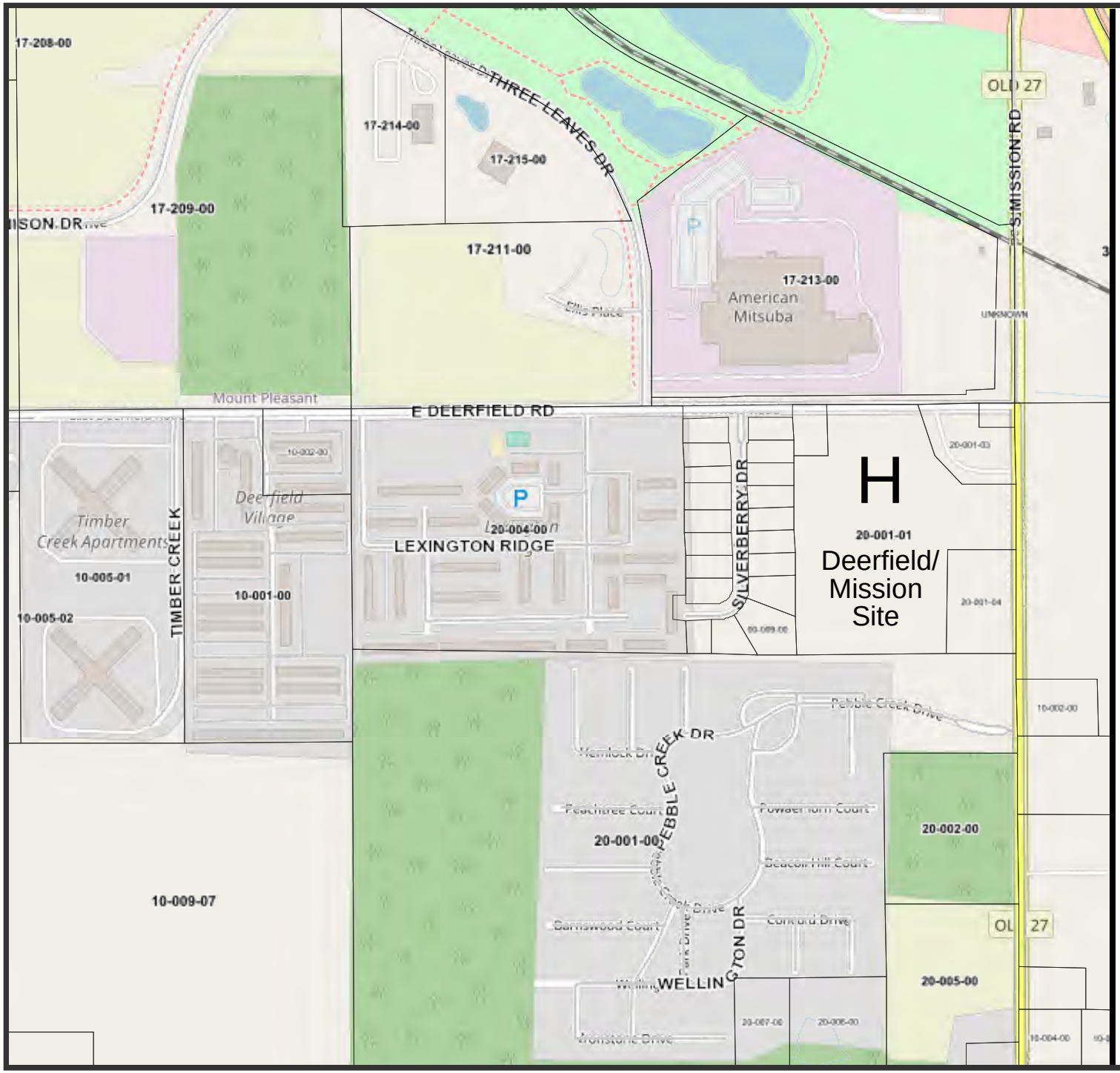
Recreation Sites

Map Publication:
06/14/2022 11:29 AM

100m
300ft

powered by FetchGIS

Disclaimer: This map does not represent a survey or legal document and is provided on an "as is" basis. Isabella County expresses no warranty for the information displayed on this map document.



Recreation Sites

Map Publication:
06/14/2022 11:10 AM

200m
600ft

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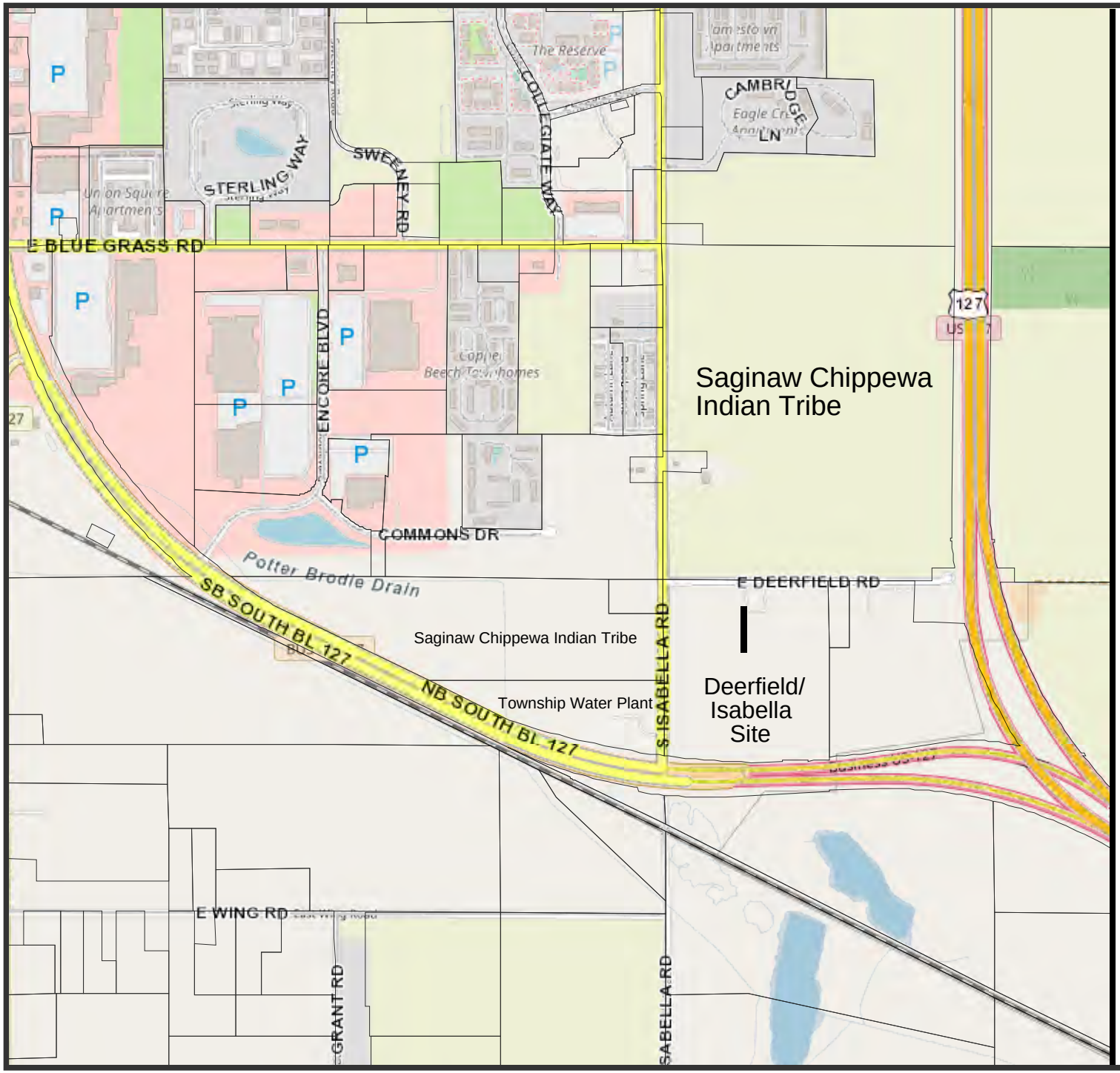

Recreation Sites

Map Publication:
06/14/2022 11:11 AM

0.4km
0.2mi

powered by FetchGIS

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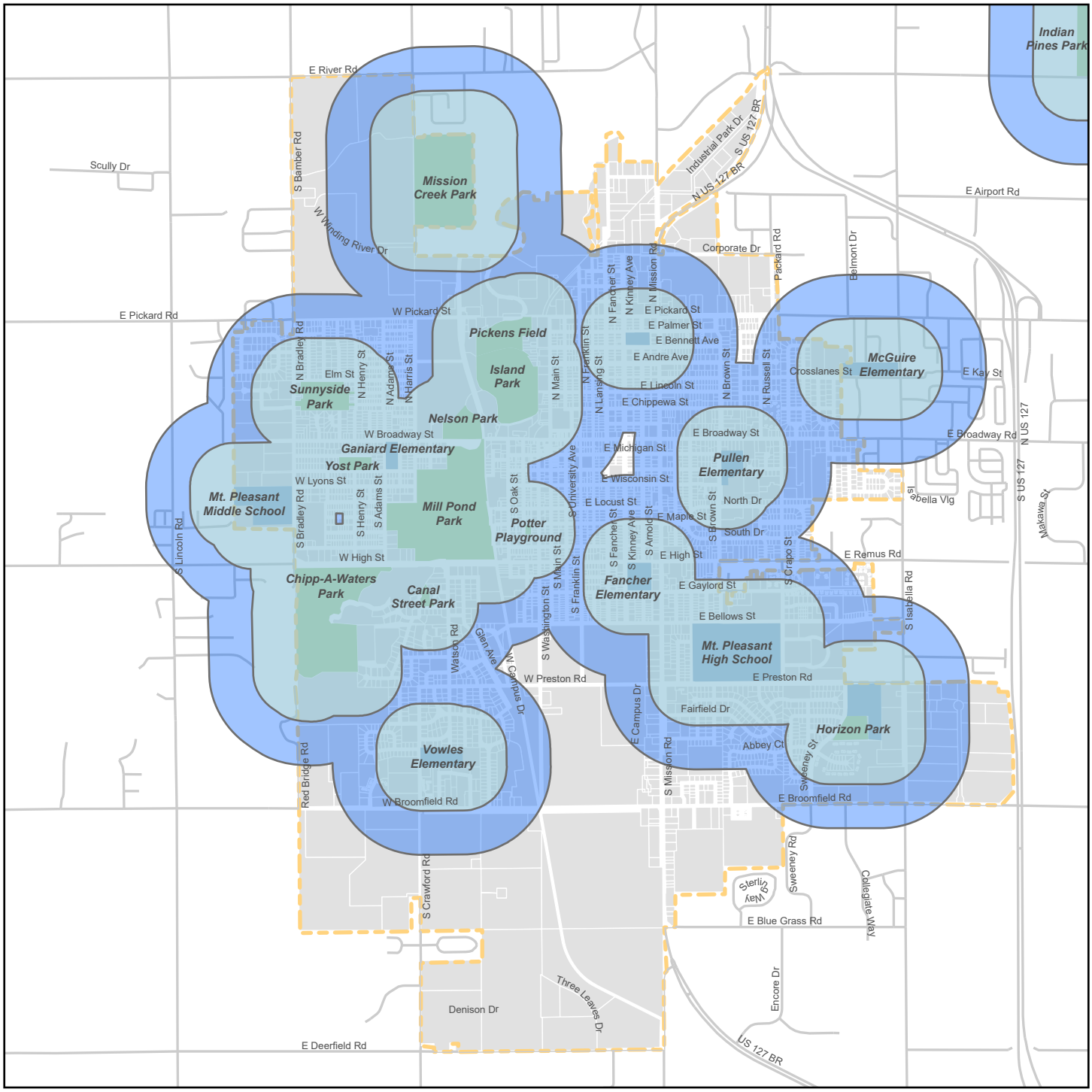

City Parks Service Radii

City of Mt. Pleasant, MI

January 30, 2020

LEGEND

- 1/4 Mile Service Radii
- 1/2 Mile Service Map
- Roads
- Mt. Pleasant Boundary
- School Facilities
- City Parks
- City Parcels

0 0.25 0.5

Miles

SOURCES
Basemap Source: Michigan Center for Geographic Information, Version 17a.
Data Source: City of Mt. Pleasant. McKenna 2019.

MCKENNA