BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

# NORTH DAKOTA
# PARKS AND RECREATION DEPARTMENT

# ELECTRICAL UPGRADES
# GRAHAMS ISLAND STATE PARK
# 2023


## PROJECT CONTACTS

CLIENT

NORTH DAKOTA PARKS AND RECREATION DEPARTMENT
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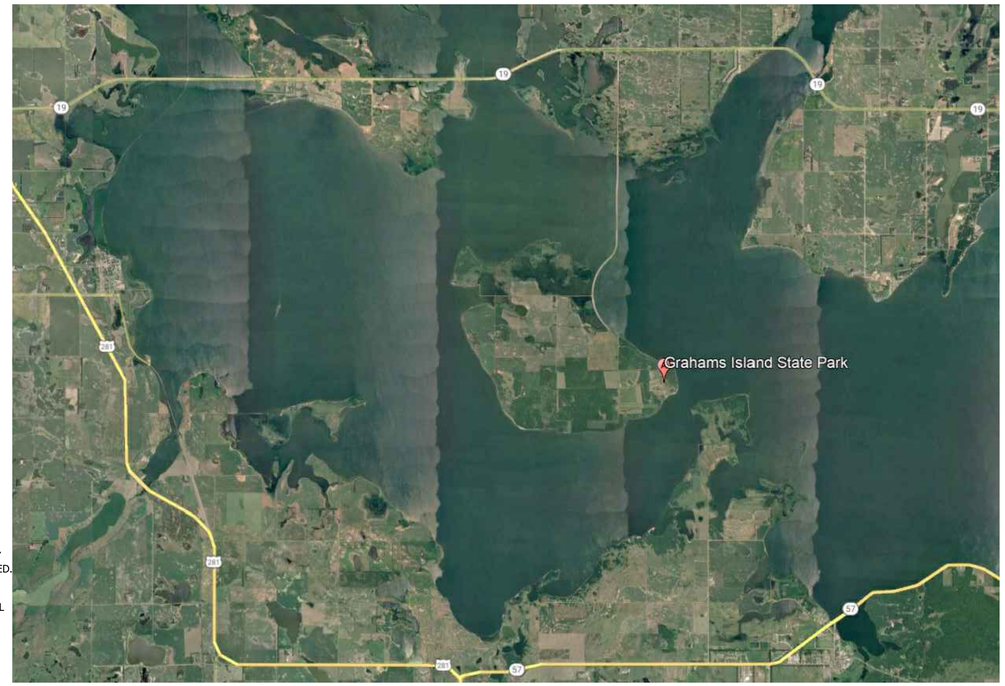


GENERAL NOTES:

1. IT IS UNDERSTOOD THAT THESE PLANS WERE DESIGNED IN ACCORDANCE WITH STANDARD PRACTICES WIDELY ACCEPTED THROUGH THE FIELD OF ELECTRICAL ENGINEERING AND SURVEYING AT THE TIME THEY WERE ISSUED. ALTHOUGH THE PLANS REPRESENTED HERE HAVE BEEN DESIGN BY, OR UNDER THE DIRECT SUPERVISION OF, A REGISTERED PROFESSIONAL ENGINEER, BARTLETT & WEST WILL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY PHYSICAL WORK THAT IS NOT CONSTRUCTED UNDER THE DIRECT FULL TIME OBSERVATION OF PERSONNEL EMPLOYED BY BARTLETT & WEST.

2. LOCATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE AND BASED UPON INFORMATION PROVIDED TO BARTLETT & WEST AND/OR FIELD OBSERVED. ACCURACY OF LOCATIONS OF ALL UNDERGROUND UTILITIES IS NEITHER GUARANTEED NOR WARRANTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

3. ALL CONSTRUCTION SHALL CONFORM WITH LOCAL AND STATE BUILDING, PLUMBING, AND ELECTRICAL CODES.

| INDEX OF SHEETS | |
|---|---|
| DRAWING NO. | DESCRIPTION |
| GI-CS | COVER SHEET - GISP |
| GI-E-000 | ELECTRICAL SYMBOLS |
| GI-UC-101 | UTILITY COORDINATION SITE PLAN - NORTH HOWARD CAMPGROUND |
| GI-UC-102 | UTILITY COORDINATION SITE PLAN - WEST HOWARD CAMPGROUND |
| GI-UC-103 | UTILITY COORDINATION SITE PLAN - EAST HOWARD CAMPGROUND |
| GI-UC-104 | UTILITY COORDINATION SITE PLAN - SOUTH HOWARD CAMPGROUND |
| GI-UC-105 | UTILITY COORDINATION SITE PLAN - NORTH ZIEBACH CAMPGROUND |
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| GI-E-101 | ELECTRICAL DEMO SITE PLAN - NORTH HOWARD CAMPGROUND |
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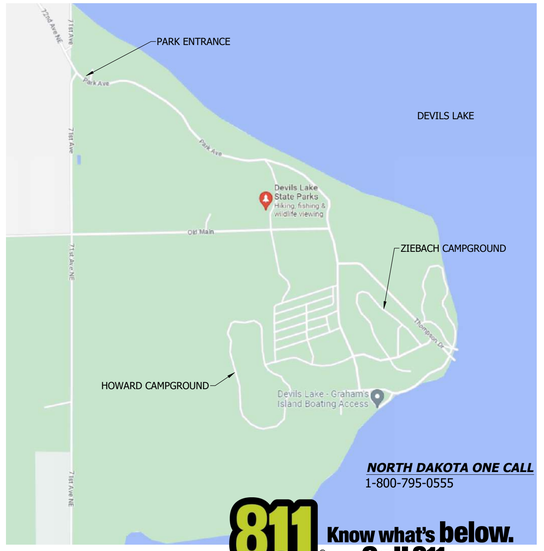
| GI-E-501 | ELECTRICAL SITE DETAILS |
| GI-E-502 | ELECTRICAL DETAILS |
| GI-E-503 | ELECTRICAL DETAILS |
| GI-E-504 | ELECTRICAL DETAILS |
| GI-E-505 | ELECTRICAL DETAILS |
| GI-E-506 | ELECTRICAL DETAILS |
| GI-E-507 | ELECTRICAL DETAILS |
| GI-E-508 | ELECTRICAL DETAILS |
| GI-E-509 | ELECTRICAL DETAILS |
| GI-E-601 | ELECTRICAL SCHEDULES |
| GI-E-602 | ELECTRICAL SCHEDULES |
| GI-E-603 | ELECTRICAL RISER DIAGRAMS |

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GRAHAMS ISLAND STATE PARK
COVER SHEET
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04-24-2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-CS |
| SHEET NO: | 1 of 32 |



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## LIGHTING / ELECTRICAL

- "A" — POLE MOUNTED LIGHTING FIXTURE WITH TENNON ARM
- "A" — POLE MOUNTED LIGHTING FIXTURE
- "A" — CEILING MOUNTED LIGHTING FIXTURE 1x4 AND ID TAG
- "A" — CEILING MOUNTED LIGHTING FIXTURE 2x2 AND ID TAG
- "A" — CEILING MOUNTED LIGHTING FIXTURE 2x4 AND ID TAG
- "A" — EMERGENCY LIGHTING FIXTURE
- "A" — CEILING MOUNTED DAYLIGHT CONTROLLED
- "A" — CEILING MOUNTED WITH EMERGENCY BALLAST
- "A" "NL" — CEILING MOUNTED LIGHT FIXTURE WITH NIGHT LIGHT
- PADDLE CEILING FAN
- CEILING MOUNTED EXIT LIGHT
- EXIT LIGHT (WALL MOUNTED)
- CEILING MOUNT
- WALL MOUNT
- "D" "E" "F" — LIGHT TRACK WITH LIGHT TYPES AS INDICATED
- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
- FOURPLEX RECEPTACLE
- RECESSED FLOOR MOUNTED JUNCTION BOX
- SURFACE MOUNTED JUNCTION BOX
- CEILING MOUNTED JUNCTION BOX
- PC — PHOTOCELL
- P — ELECTRICAL POWER PEDESTAL
- J — JUNCTION BOX
- TYPE 1 JUNCTION BOX
- TYPE 2 JUNCTION BOX
- PLUGMOLD - OUTLETS AT 12" O.C. UNLESS OTHERWISE NOTED
- T — TIME SWITCH
- L — LIGHTING CONTACTOR
- $OT — SPRING WOUND TIMER
- $HOA — HAND-OFF-AUTO SELECTOR SWITCH
- $TO — MANUAL STARTER WITH THERMAL OVERLOADS
- LIGHTING PANEL
- DISTRIBUTION PANEL
- TELEPHONE TERMINAL PANEL
- T — THERMOSTAT
- H — HUMIDISTAT
- 2 — (1) RJ-45 COMMUNICATION/DATA OUTLET
- 4 — (2) RJ-45 COMMUNICATION/DATA OUTLET
- (4) RJ-45 COMMUNICATION/DATA OUTLET
- CEILING MOUNTED COMMUNICATION/DATA OUTLET
- FLOOR MOUNTED COMMUNICATION/DATA OUTLET
- TV — TELEVISION OUTLET
- WALL SPEAKER
- CEILING SPEAKER
- COLUMN SPEAKER
- HORN SPEAKER
- C — CALL-IN STATION
- M — MOTION DETECTOR
- C — CLOSED CIRCUIT TELEVISION OUTLET
- PB — PUSHBUTTON STATION
- RC — RELAY CABINET
- C — CLOCK SPEAKER
- CR — CARD READER
- M — MAGNETIC LOCK
- A — ALARM CONTACTS
- SECURITY CAMERA
- $ — SINGLE POLE SWITCH
- $2 — DOUBLE POLE SWITCH
- $3 — 3-WAY SWITCH
- $4 — 4-WAY SWITCH
- $P — SINGLE POLE SWITCH WITH PILOT LAMP
- $M — MOMENTARY CONTACT
- $K — SINGLE POLE SWITCH, KEY OPERATED
- $D — DIMMER SWITCH
- $LV — LOW VOLTAGE SWITCH
- $VA — VACANCY SENSOR SWITCH
- OC — OCCUPANCY SENSOR
- PP — POWER PACK

- BRANCH CIRCUIT IN CONDUIT CONCEALED IN CEILING OR WALL
- BRANCH CIRCUIT BELOW GRADE OR SLAB
- BRANCH CIRCUIT IN EXPOSED CONDUIT
- BRANCH CIRCUIT HOMERUN TO PANEL
- DIAGONAL LINES INDICATE NUMBER OF CONDUCTORS
- GROUND WIRE - INCLUDED IN ALL BRANCH CIRCUITS UNLESS OTHERWISE NOTED
- #18 WIRE
- #16 WIRE
- #14 WIRE
- #12 WIRE
- 1 — BRANCH CIRCUIT OR FEEDER - SEE SCHEDULE FOR CONDUCTOR & CONDUIT QUANTITY & SIZE
- FLEXIBLE CONDUIT
- TWISTED PAIR
- LIGHTING CONTROL WIRING
- MOTOR CONTROLLER
- MANUAL MOTOR CONTROLLER
- COMBINATION MOTOR CONTROLLER
- DISCONNECT SWITCH
- EQUIPMENT MOTOR
- UTILITY METER

## GENERAL SYMBOLS

- INDICATES DIRECTION OF PLAN NORTH
- 1 / M100 — DETAIL REFERENCE - UPPER NUMBER INDICATES DETAIL NUMBER, LOWER NUMBER INDICATES SHEET NUMBER
- 1 — PLAN NOTE REFERENCE
- 1 — REVISION DELTA
- 100 — ROOM NUMBER REFERENCE
- 1 / M100 — SECTION CUT REFERENCE - UPPER NUMBER INDICATES DETAIL NUMBER, LOWER NUMBER INDICATES SHEET NUMBER
- CONTINUATION
- INDICATES CONNECTION TO EXISTING SYSTEM
- BREAK LINE
- MATCHLINE

## ABBREVIATIONS

GENERAL:

| | | | |
|---|---|---|---|
| AFF | ABOVE FINISHED FLOOR | G/C | GENERAL CONTRACTOR |
| AFG | ABOVE FINISHED GRADE | M/C | MECHANICAL CONTRACTOR |
| CL | CENTERLINE ELEVATION | E/C | ELECTRICAL CONTRACTOR |
| DN | DOWN | P/C | PLUMBING CONTRACTOR |
| EX | EXISTING | | |

ELECTRICAL:

| | |
|---|---|
| AC | ALTERNATING CURRENT |
| BKR | BREAKER |
| CTCB | CONTROL TRANSFORMER CIRCUIT BREAKER |
| DISC | DISCONNECT SWITCH |
| DR | DUPLEX RECEPTACLE, GFI |
| DCB | DISCONNECT CIRCUIT BREAKER |
| GFCB | GROUND FAULT CIRCUIT BREAKER |
| HBCB | HOT BOX CIRCUIT BREAKER |
| LCB | LIGHT CIRCUIT BREAKER |
| MCB | MAIN CIRCUIT BREAKER |
| MD | MOTORIZED DAMPER |
| MPCB | MOTOR POWER CIRCUIT BREAKER |
| PCB | PUMP CIRCUIT BREAKER |
| PHCB | PANEL HEATER CIRCUIT BREAKER |
| RCB | RECEPTACLE CIRCUIT BREAKER |
| SCB | SPARE CIRCUIT BREAKER |
| TR | TRANSFORMER |
| TCB | TRANSFORMER CIRCUIT BREAKER |
| TR | TELEMETRY RADIO |
| VCCB | VALVE CONTROLS CIRCUIT BREAKER |
| VFD | VARIABLE FREQUENCY DRIVE |

| | |
|---|---|
| " " | QUOTATION AROUND TEXT INDICATES A SCHEDULED ITEM |
| * | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES DEVICE BOTTOM TO BE MOUNTED 4" ABOVE COUNTER TOP BACKSPLASH |
| GFCI | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES GROUND FAULT INTERRUPTER |
| IG | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES ISOLATED GROUND SERVICE |
| TL | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES LOCKING OR TWIST-LOCK TYPE DEVICE |
| WP | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES WEATHER-PROOF ENCLOSURE |
| XP | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES EXPLOSION-PROOF ENCLOSURE |
| ##" | THESE NUMBERS ADJACENT TO ANY SYMBOL INDICATES THE MOUNTING HEIGHT AFF TO TOP OF OF DEVICE |
| TP | THESE LETTERS ADJACENT TO ANY SYMBOL INDICATES TAMPER PROOF |

| # | DATE | DESCRIPTION | BY |
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# ELECTRICAL SYMBOLS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-000 |
| SHEET NO: | 2 of 32 |



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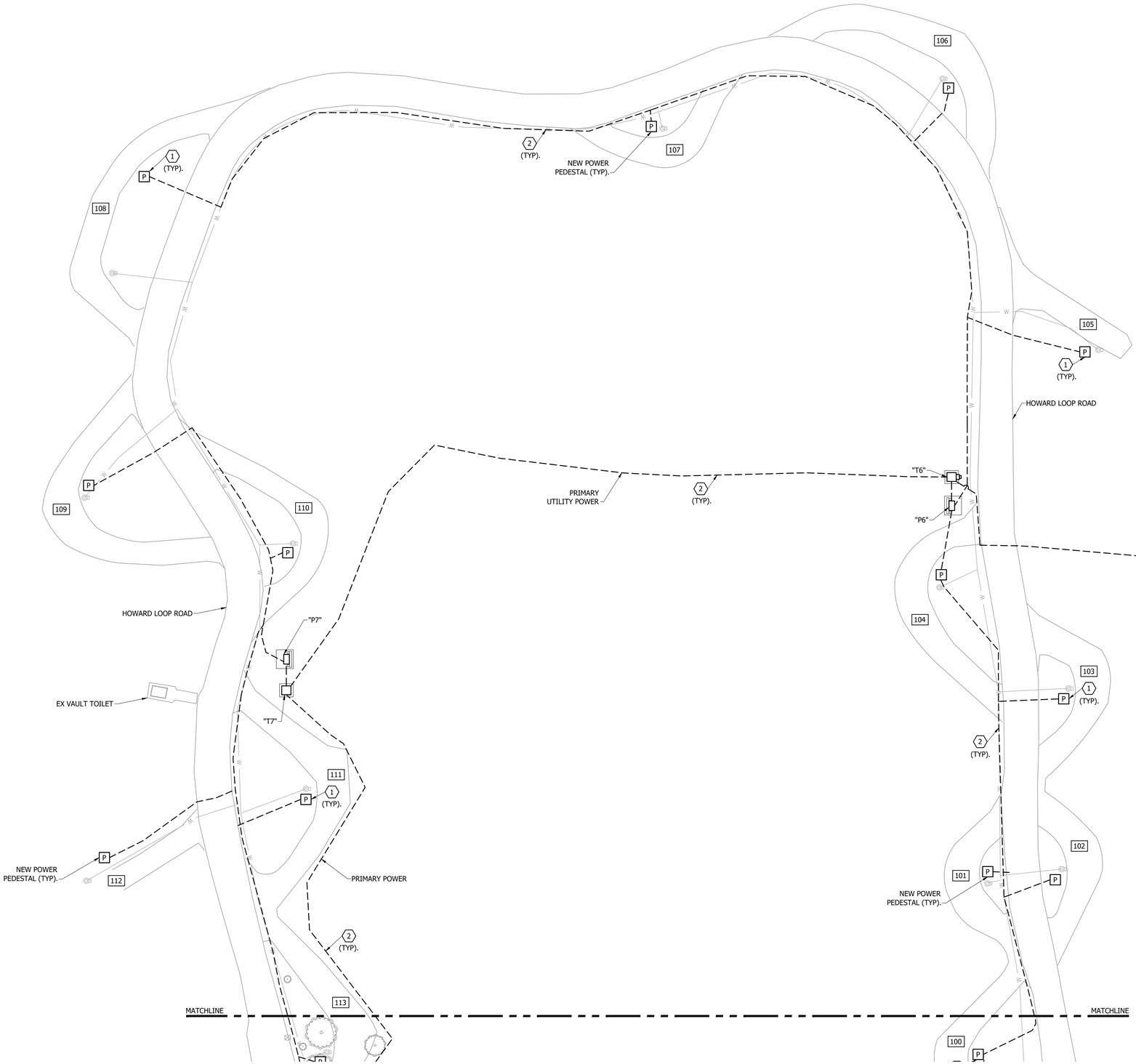
BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




UTILITY COORDINATION SITE PLAN - NORTH HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

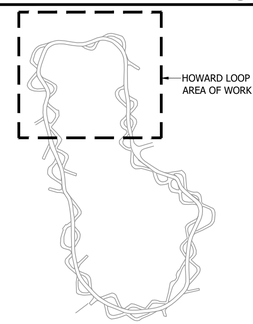
## REFERENCE NOTES:

1. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - HOWARD LOOP FOR NEW ELECTRICAL IMPROVEMENTS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   - 1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   - 1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:

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# UTILITY COORDINATION SITE PLAN
# NORTH HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10134
DATE 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-101 |
| SHEET NO: | 3 of 32 |



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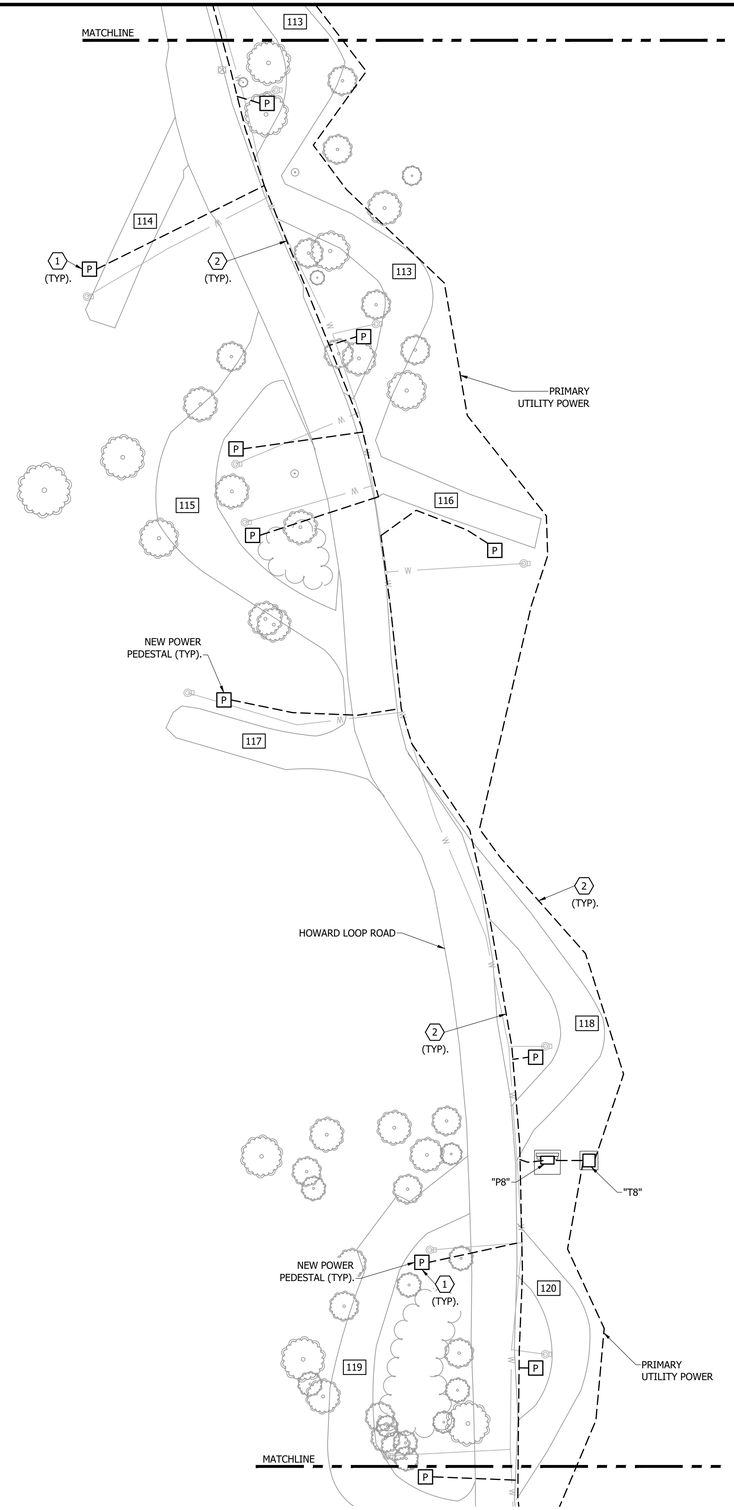



UTILITY COORDINATION SITE PLAN - WEST HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

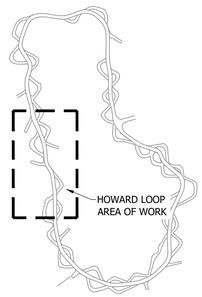
## REFERENCE NOTES:

1. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - HOWARD LOOP FOR NEW ELECTRICAL IMPROVEMENTS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   - 1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   - 1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:

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# UTILITY COORDINATION SITE PLAN
# WEST HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-102 |
| SHEET NO: | 4 of 32 |



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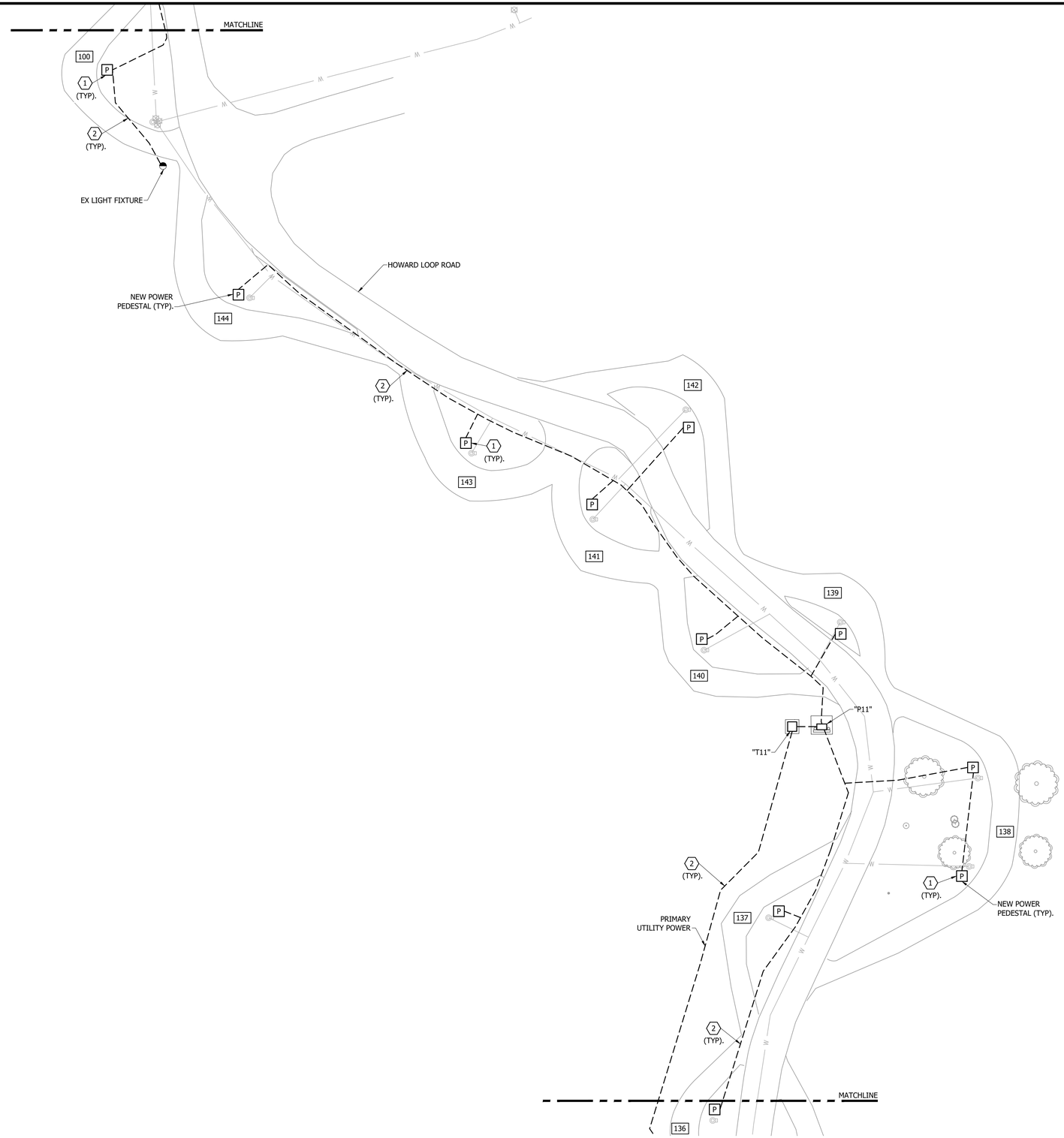



UTILITY COORDINATION SITE PLAN - EAST HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

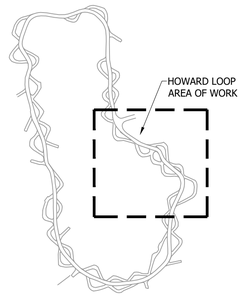
## REFERENCE NOTES:

1. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - HOWARD LOOP FOR NEW ELECTRICAL IMPROVEMENTS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   - 1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   - 1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:

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# UTILITY COORDINATION SITE PLAN
# EAST HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10134
STATE
NORTH DAKOTA
04/24/2023

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|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-103 |
| SHEET NO: | 5 of 32 |



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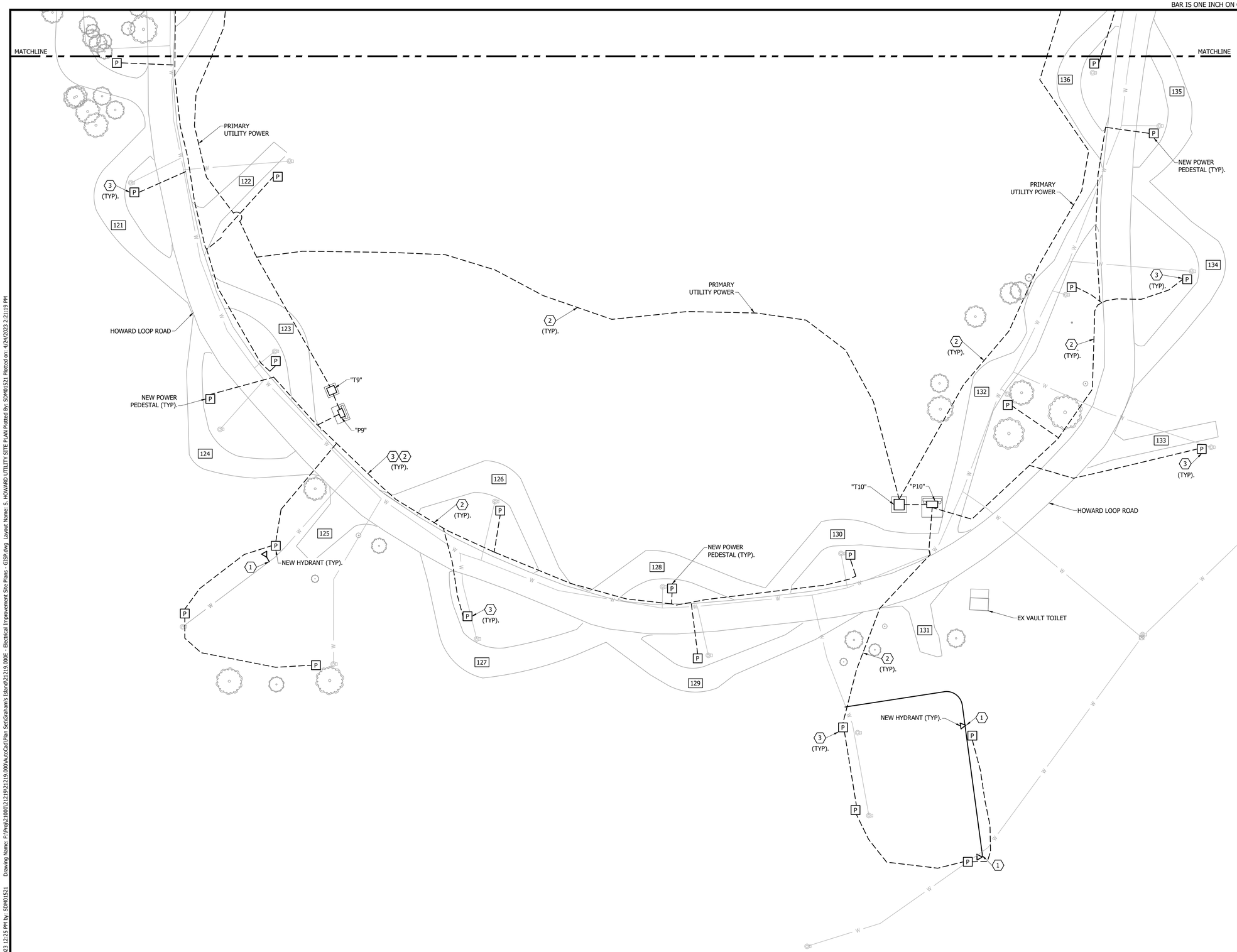



## UTILITY COORDINATION SITE PLAN - SOUTH HOWARD CAMPGROUND

SCALE: 1"=30'

0 30' 60'

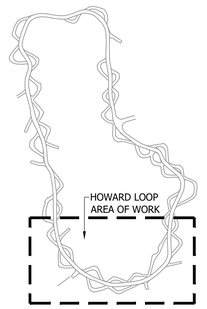
## REFERENCE NOTES:

1. ALL NEW WATER PIPE TO BE BURIED APPROXIMATELY 36" TO TOP OF PIPE BELOW FINISHED GRADE BY P/C. REFER TO WATER IMPROVEMENT SITE PLANS - HOWARD LOOP FOR NEW WATER IMPROVEMENTS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - HOWARD LOOP FOR NEW ELECTRICAL IMPROVEMENTS.
3. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   - 1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   - 1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|
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Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
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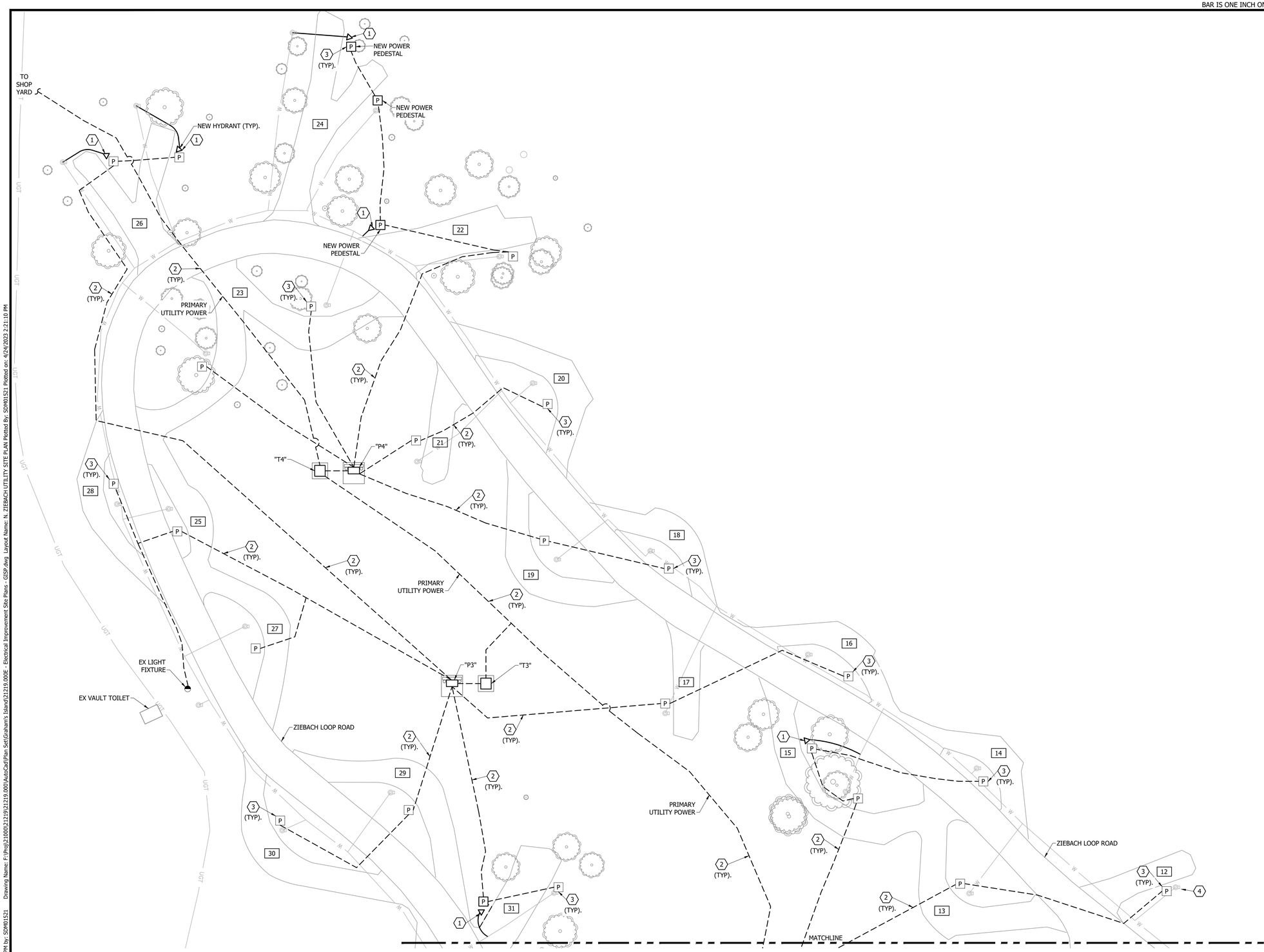
# UTILITY COORDINATION SITE PLAN
# SOUTH HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-104 |
| SHEET NO: | 6 of 32 |



Last edit on: 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: S: HOWARD UTILITY SITE PLAN Plotted By: SDM01521 Plotted on 4/24/2023 2:21:19 PM




UTILITY COORDINATION SITE PLAN - NORTH ZIEBACH CAMPGROUND
SCALE: 1"=30'
0 30' 60'

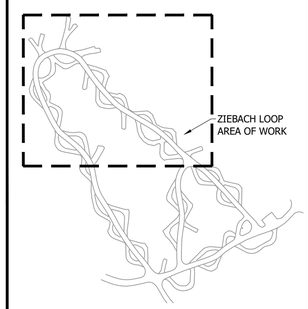
## REFERENCE NOTES:

1. ALL NEW WATER PIPE TO BE BURIED APPROXIMATELY 36" TO TOP OF PIPE BELOW FINISHED GRADE BY P/C. REFER TO WATER IMPROVEMENT SITE PLANS - ZIEBACH LOOP FOR NEW WATER IMPROVEMENTS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - ZIEBACH LOOP FOR NEW ELECTRICAL IMPROVEMENTS.
3. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:




| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

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# UTILITY COORDINATION SITE PLAN
# NORTH ZIEBACH CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

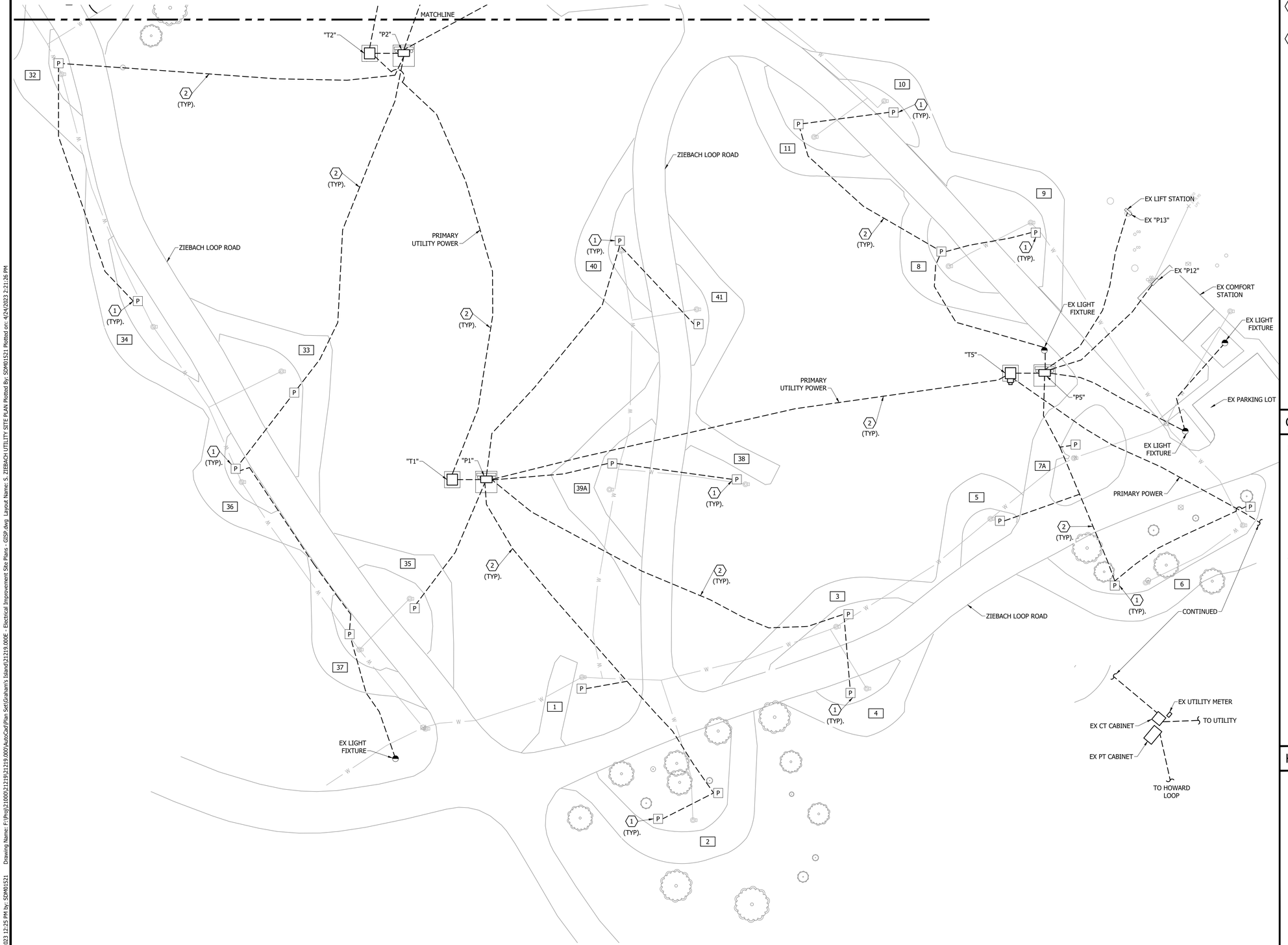
REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-105 |
| SHEET NO: | 7 of 32 |



Last edit on: 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: N. ZIEBACH UTILITY SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:10 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




UTILITY COORDINATION SITE PLAN - SOUTH ZIEBACH CAMPGROUND
SCALE: 1"=30'
0 30' 60'

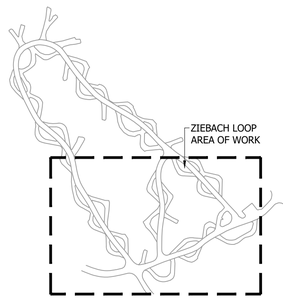
## REFERENCE NOTES:

1. REFER TO ELECTRICAL SITE DETAIL SHEET GI-E-501 FOR ALL SITE DETAIL AND DIMENSIONS FOR ALL NEW PEDESTALS.
2. ALL NEW DIRECT BURY WIRE TO BE A MINIMUM DEPTH OF 24" BELOW FINISHED GRADE BY E/C. REFER TO ELECTRICAL IMPROVEMENT SITE PLANS - ZIEBACH LOOP FOR NEW ELECTRICAL IMPROVEMENTS.

## GENERAL NOTES:

1. ALL UTILITY COORDINATION TO BE COMPLETED BEFORE START OF CONSTRUCTION. THE SEQUENCE OF CONSTRUCTION SHALL TAKE PLACE AS DESCRIBED IN ONE OF THE BELOW OPTIONS.
   - 1.1. THE REMOVAL OF EXISTING ELECTRICAL PEDESTALS, DIRECT BURY WIRE AND INSTALLATION OF NEW PEDESTALS, DIRECT BURY WIRE SHALL BE DONE PRIOR TO INSTALLATION OF NEW ELECTRICAL WATER PIPE AND HYDRANTS.
   - 1.2. CONSTRUCTION OF BOTH ELECTRICAL DEMOLITION/IMPROVEMENT AND WATER IMPROVEMENT SHALL TAKE PLACE AT THE SAME TIME.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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# UTILITY COORDINATION SITE PLAN
# SOUTH ZIEBACH CAMPGROUND
# GRAHAMS ISLAND STATE PARK
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

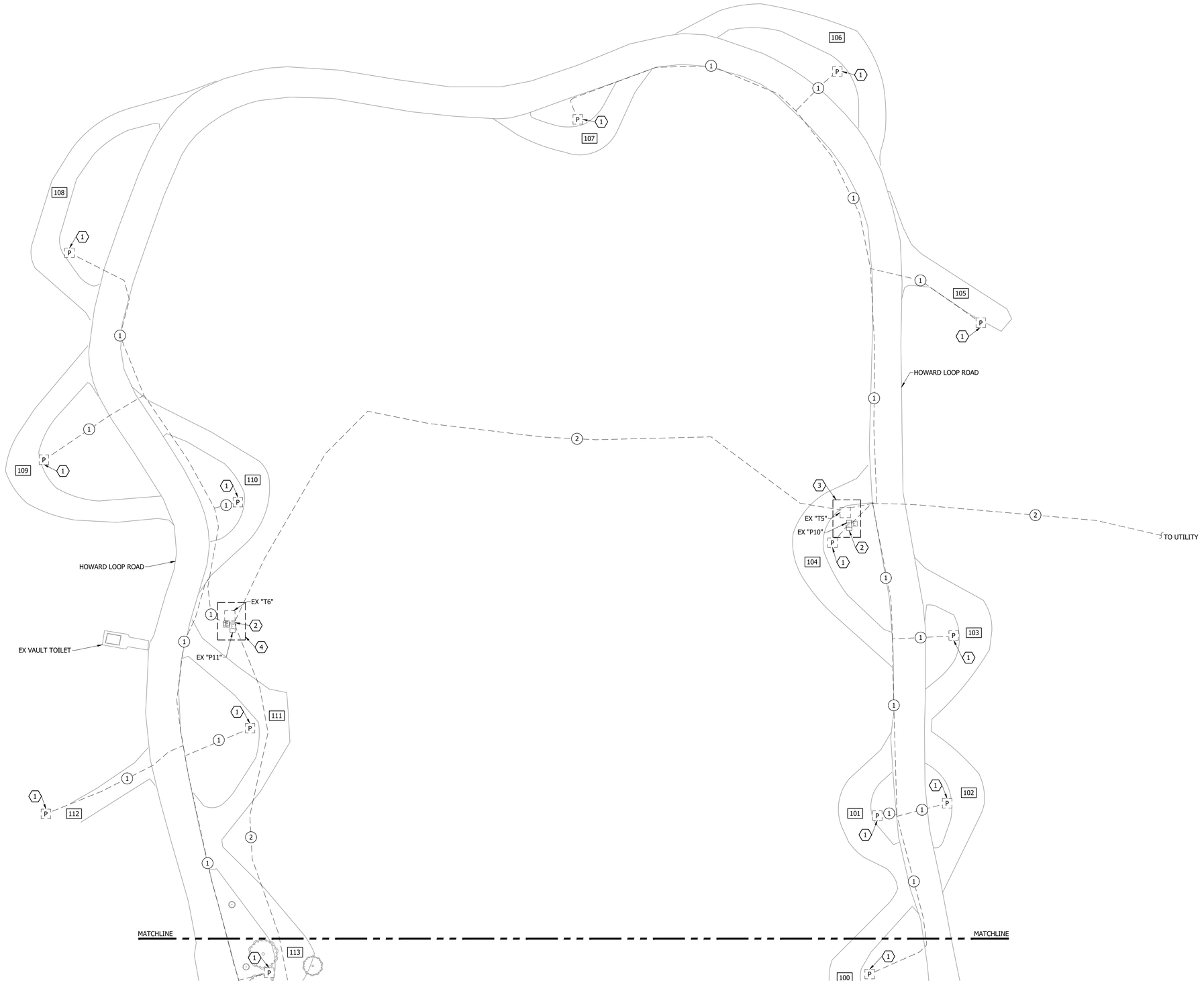
REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04-24-2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-UC-106 |
| SHEET NO: | 8 of 32 |



Last edit on: 4/21/2023 12:25 PM by SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Grahams Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: S_ZIEBACH UTILITY SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:26 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




ELECTRICAL DEMOLITION SITE PLAN - NORTH HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## REFERENCE NOTES:

1. EX RV POWER PEDESTAL, POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 1/GI-E-502 AND 2/GI-E-603.
4. E/C TO REFER TO ELECTRICAL DETAILS 2/GI-E-502 AND 2/GI-E-603.

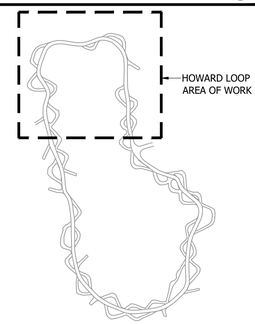
## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY. CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.

## KEY PLAN:

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# ELECTRICAL DEMOLITION SITE PLAN
# NORTH HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04-24-2023
NORTH DAKOTA

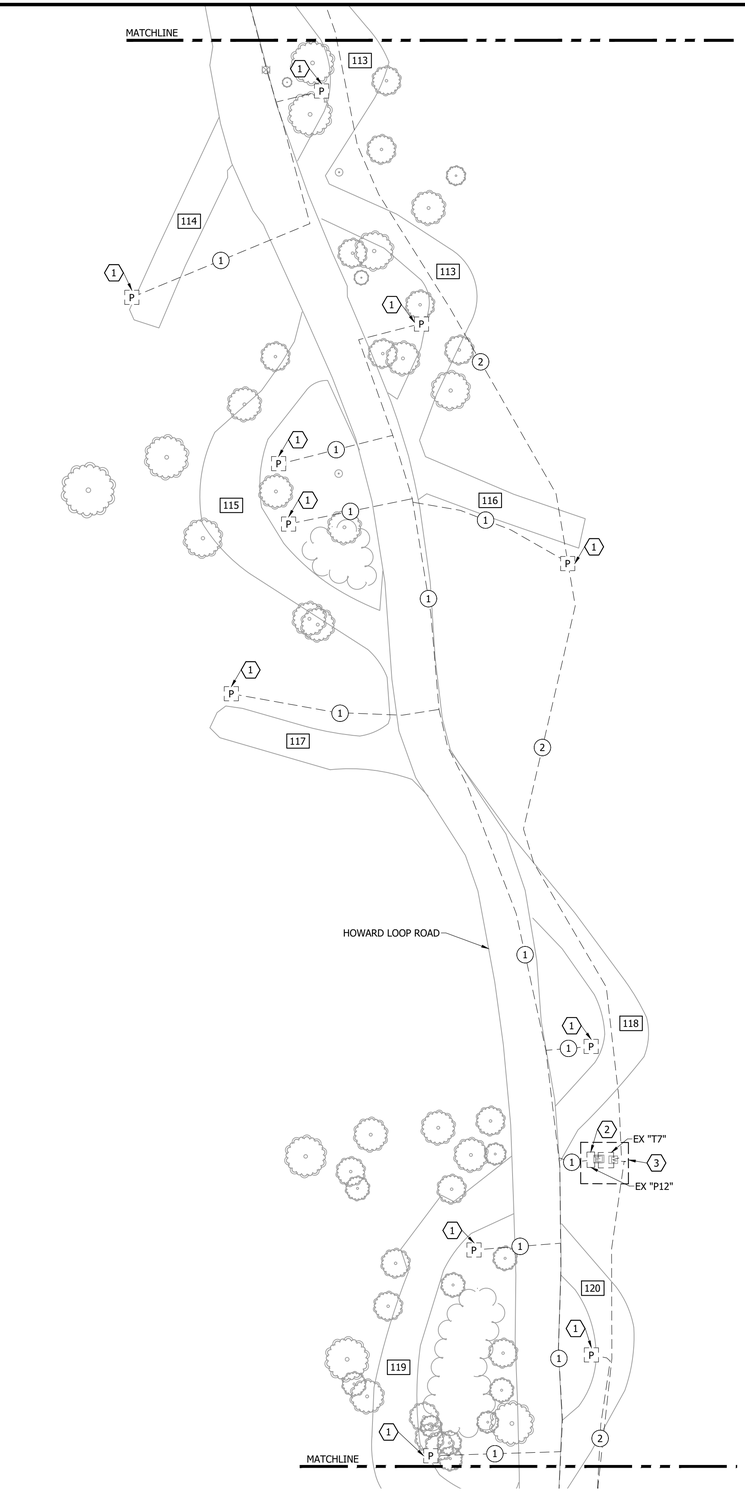
| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

DRAWING NO: **GI-E-101**

SHEET NO: 9 of 32



Last edit on: 4/21/2023 12:32 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: NORTH HOWARD - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:38 PM




ELECTRICAL DEMOLITION SITE PLAN - WEST HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## REFERENCE NOTES:

1. EX RV POWER PEDESTAL, POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 3/GI-E-502 AND 2/GI-E-603.

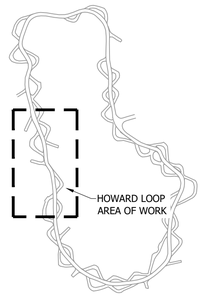
## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.

## KEY PLAN:

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www.bartlettwest.com

# ELECTRICAL DEMOLITION SITE PLAN
# WEST HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10134
STATE
NORTH DAKOTA
04/24/2023

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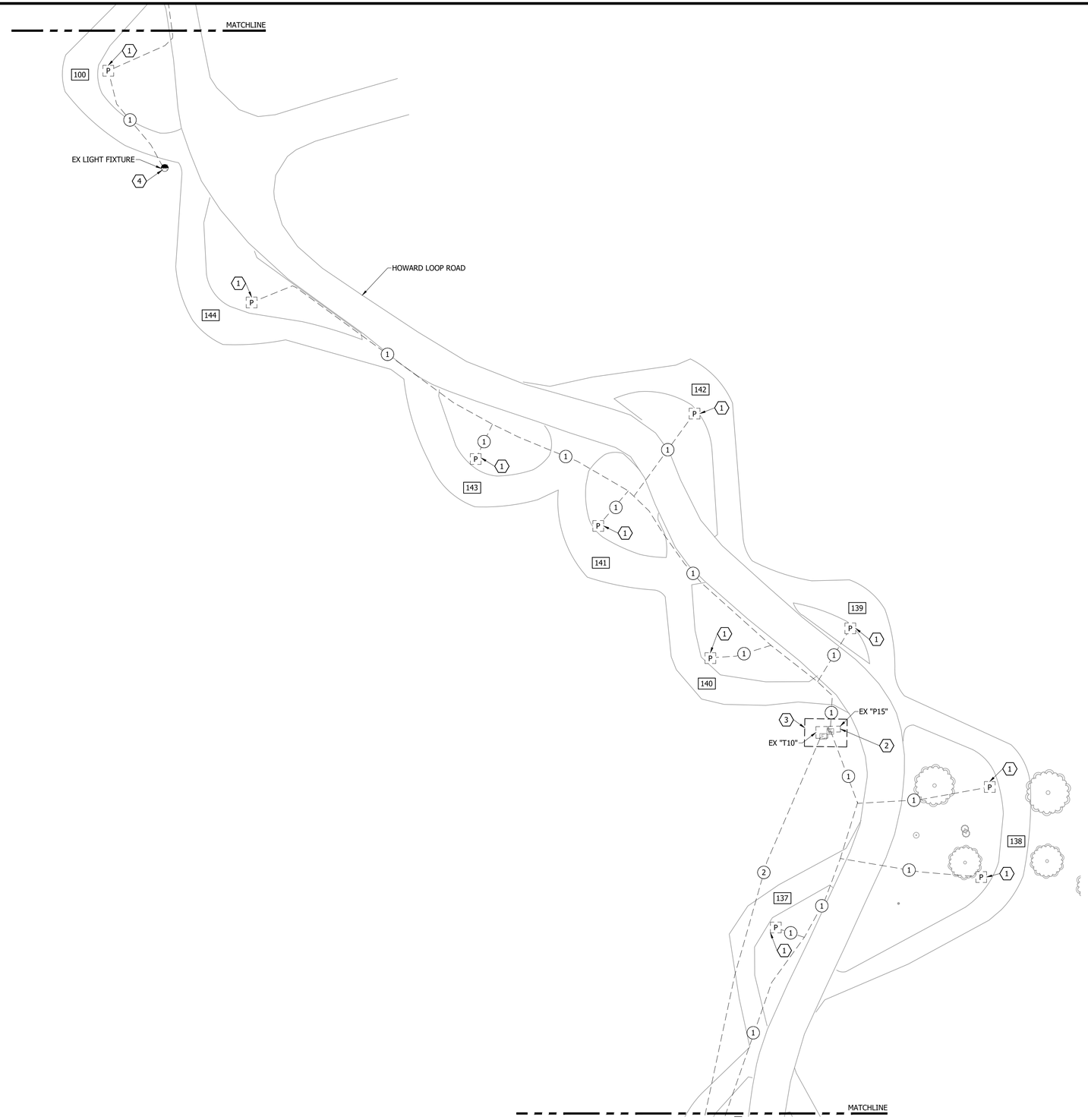
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-102 |
| SHEET NO: | 10 of 32 |



Last edit on 4/21/2023 12:32 PM by: SDM01521 Drawing Name: F:\Proj\21600\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: WEST HOWARD - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on 4/24/2023 2:21:22 PM




ELECTRICAL DEMOLITION SITE PLAN - EAST HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## REFERENCE NOTES:

1. EX RV POWER PEDESTAL, POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 6/GI-E-502 AND 2/GI-E-603.
4. EX POLE MOUNTED LIGHTING FIXTURE AND ASSOCIATED LIGHTING POLE TO REMAIN AND BE RECONNECTED. EX POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR LIGHTING FIXTURE POWER CONNECTION.

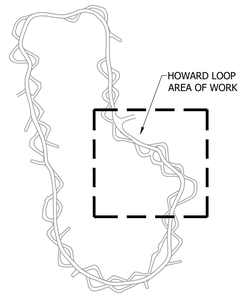
## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.

## KEY PLAN:

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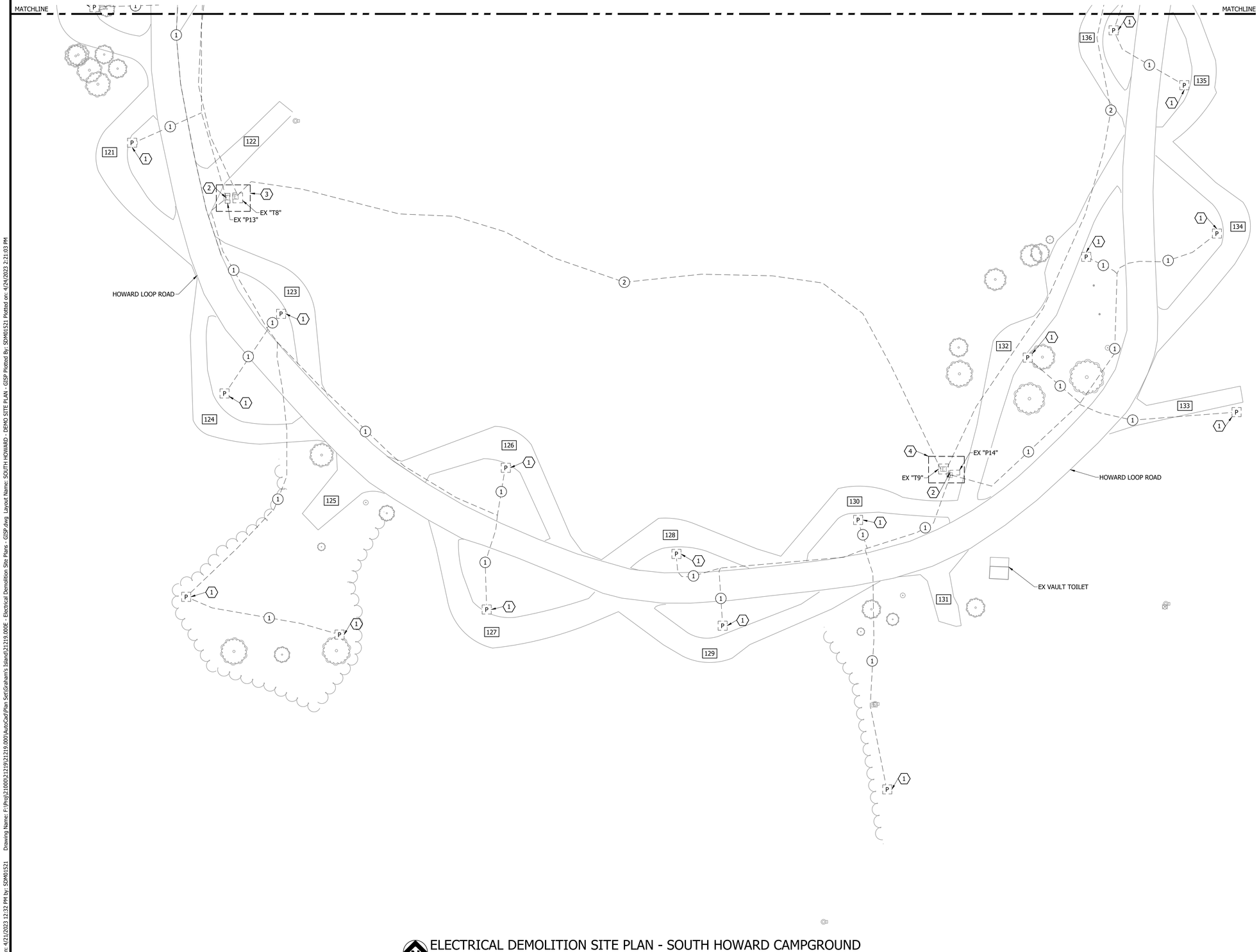
# ELECTRICAL DEMOLITION SITE PLAN
# EAST HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10134
STATE
NORTH DAKOTA
04/24/2023

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-103 |
| SHEET NO: | 11 of 32 |



Last edit on: 4/21/2023 12:32 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: EAST HOWARD - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:42 PM




ELECTRICAL DEMOLITION SITE PLAN - SOUTH HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## REFERENCE NOTES:

1. EX RV POWER PEDESTAL, POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - HOWARD LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 4/GI-E-502 AND 2/GI-E-603.
4. E/C TO REFER TO ELECTRICAL DETAILS 5/GI-E-502 AND 2/GI-E-603.

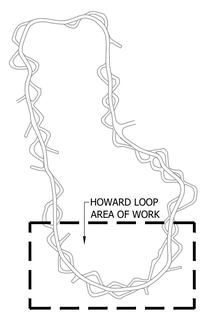
## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY. CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scott@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
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# ELECTRICAL DEMOLITION SITE PLAN
# SOUTH HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE:
NORTH DAKOTA

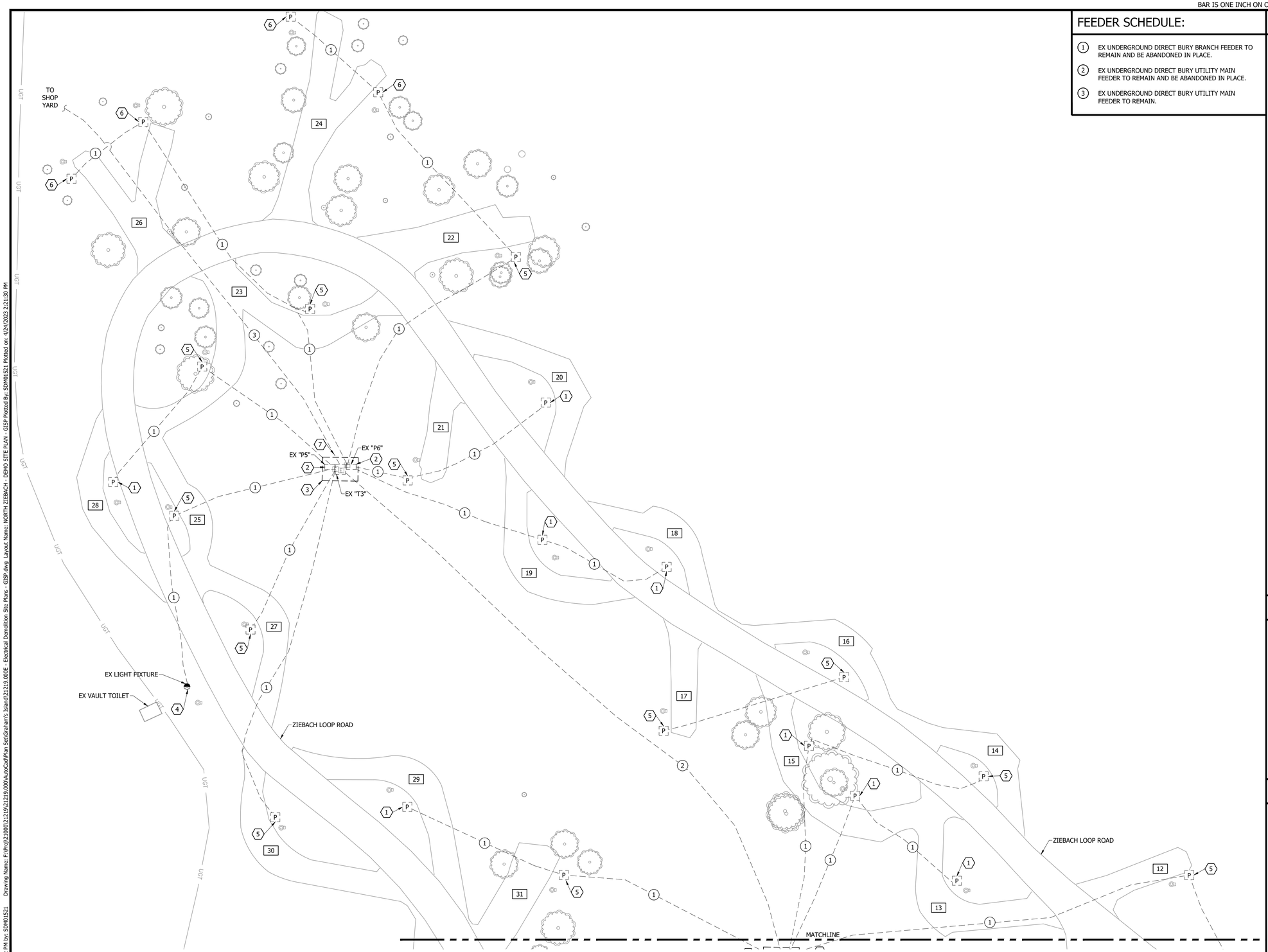
| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

DRAWING NO: **GI-E-104**

SHEET NO: 12 of 32



Last edit on: 4/21/2023 12:32 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Grahams Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: SOUTH HOWARD - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:03 PM




ELECTRICAL DEMOLITION SITE PLAN - NORTH ZIEBACH CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
3. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN.

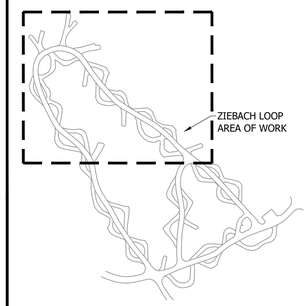
## REFERENCE NOTES:

1. EX POWER PEDESTAL TO REMAIN. EX 50 AMP/2P CIRCUIT BREAKER AND RECEPTACLE, EX 30 AMP/1P CIRCUIT BREAKER AND RECEPTACLE TO REMAIN. EX 20 AMP/1P CIRCUIT BREAKER AND GFCI RECEPTACLE TO BE REMOVED. EX MAIN FEEDER POWER CONNECTION TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 3/GI-E-503 AND 1/GI-E-603.
4. EX POLE MOUNTED LIGHTING FIXTURE AND ASSOCIATED LIGHTING POLE TO REMAIN AND BE RECONNECTED. EX POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR LIGHTING FIXTURE POWER CONNECTION.
5. EX POWER PEDESTAL TO BE REMOVED AND RELOCATED. EX 50 AMP/2P CIRCUIT BREAKER AND RECEPTACLE, EX 30 AMP/1P CIRCUIT BREAKER AND RECEPTACLE TO REMAIN. EX 20 AMP/1P CIRCUIT BREAKER AND GFCI RECEPTACLE TO BE REMOVED. EX MAIN FEEDER POWER CONNECTION TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
6. EX RV POWER PEDESTAL, POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
7. UTILITY TO TEMPORARILY DISCONNECT MEDIUM VOLTAGE FEEDER TO EX SHOP YARD. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP. FIELD COORDINATE WITH E/C. E/C TO REFER TO ELECTRICAL DETAILS 8/GI-E-503.

## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scotti@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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# ELECTRICAL DEMOLITION SITE PLAN
## NORTH ZIEBACH CAMPGROUND
## GRAHAMS ISLAND STATE PARK
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

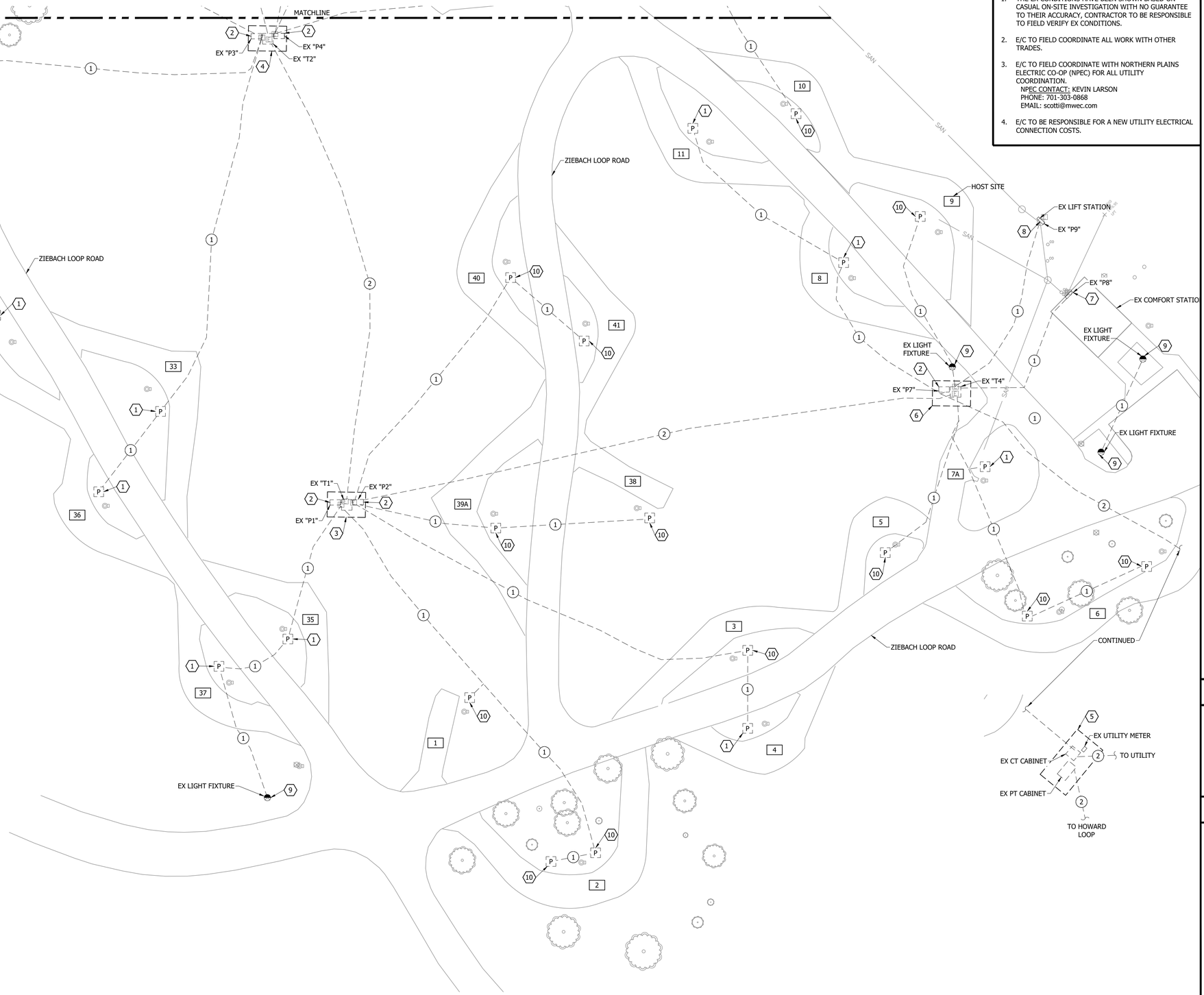
DRAWING NO: **GI-E-105**

SHEET NO: 13 of 32



Last edit on: 4/21/2023 12:32 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: NORTH ZIEBACH - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:30 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




ELECTRICAL DEMOLITION SITE PLAN - SOUTH ZIEBACH CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scotti@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.

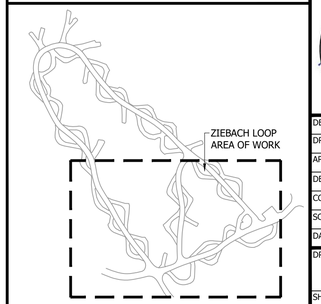
## REFERENCE NOTES:

1. EX POWER PEDESTAL TO REMAIN. EX 50 AMP/2P CIRCUIT BREAKER AND RECEPTACLE, EX 30 AMP/1P CIRCUIT BREAKER AND RECEPTACLE TO REMAIN. EX 20 AMP/1P CIRCUIT BREAKER AND GFCI RECEPTACLE TO BE REMOVED. EX MAIN FEEDER POWER CONNECTION TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.
2. EX PANELBOARD, POWER CONNECTION, UNISTRUT, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW PANELBOARD IMPROVEMENTS.
3. E/C TO REFER TO ELECTRICAL DETAILS 1/GI-E-503 AND 1/GI-E-603.
4. E/C TO REFER TO ELECTRICAL DETAILS 2/GI-E-503 AND 1/GI-E-603.
5. E/C TO REFER TO ELECTRICAL DETAILS 4/GI-E-503 AND 1/GI-E-603.
6. E/C TO REFER TO ELECTRICAL DETAILS 5/GI-E-503 AND 1/GI-E-603.
7. EX PANELBOARD TO REMAIN. EX POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO REMAIN. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW PANELBOARD IMPROVEMENTS. E/C TO REFER TO ELECTRICAL DETAILS 6/GI-E-503 AND 1/GI-E-603.
8. EX PANELBOARD AND UNISTRUT TO REMAIN. EX POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO REMAIN. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW PANELBOARD IMPROVEMENTS.E/C TO REFER TO ELECTRICAL DETAILS 7/GI-E-503 AND 1/GI-E-603.
9. EX POLE MOUNTED LIGHTING FIXTURE AND ASSOCIATED LIGHTING POLE TO REMAIN AND BE RECONNECTED. EX POWER CONNECTION AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR LIGHTING FIXTURE POWER CONNECTION.
10. EX POWER PEDESTAL TO BE REMOVED AND RELOCATED. EX 50 AMP/2P CIRCUIT BREAKER AND RECEPTACLE, EX 30 AMP/1P CIRCUIT BREAKER AND RECEPTACLE TO REMAIN. EX 20 AMP/1P CIRCUIT BREAKER AND GFCI RECEPTACLE TO BE REMOVED. EX MAIN FEEDER POWER CONNECTION TO BE REMOVED. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED, LABELED "ABANDONED", AND ABANDONED IN PLACE. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN - ZIEBACH LOOP FOR NEW POWER PEDESTAL IMPROVEMENTS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. EX UNDERGROUND DIRECT BURY UTILITY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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# ELECTRICAL DEMOLITION SITE PLAN
# SOUTH ZIEBACH CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

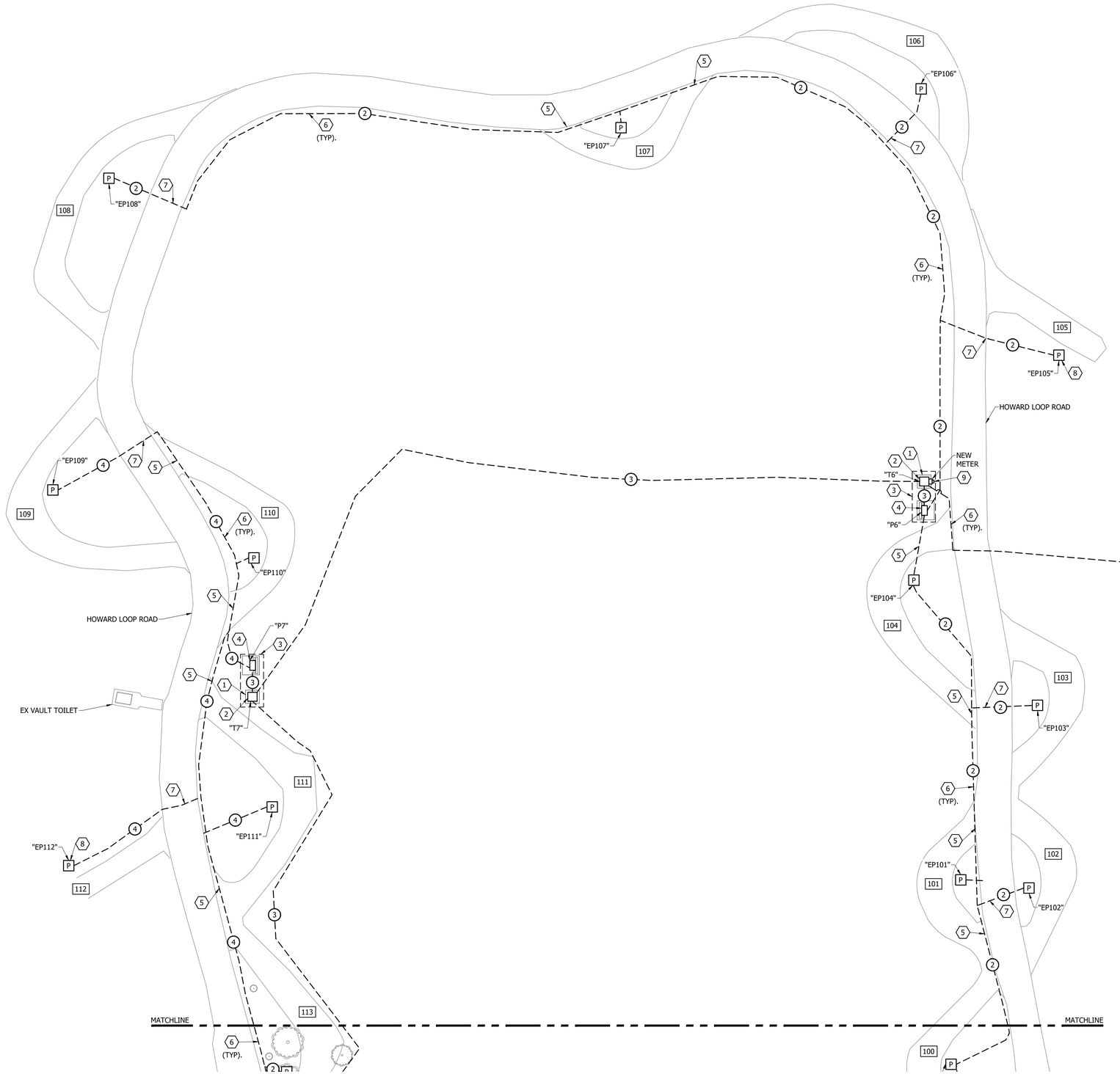
REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-106 |
| SHEET NO: | 14 of 32 |



Last edit on: 4/21/2023 12:22 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Demolition Site Plans - GISP.dwg Layout Name: SOUTH ZIEBACH - DEMO SITE PLAN - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:26 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




ELECTRICAL IMPROVEMENT SITE PLAN - NORTH HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY MAIN FEEDER TO REMAIN.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 5/GI-E-504 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 4/GI-E-603.
4. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 6/GI-E-505 FOR CIRCUITING AND FEEDER SCHEDULE.

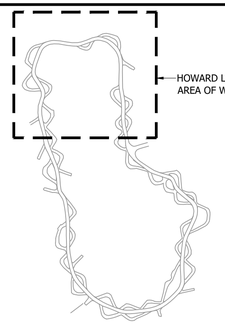
## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 4/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-601.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
7. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ASPHALT ROADWAY, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED.E/C TO FIELD COORDINATE ALL REQUIREMENTS.
8. E/C TO REFER TO 1/GI-E-501 FOR NEW SINGLE BACK-IN PEDESTAL LOCATION.
9. ALTERNATE BID 1: E/C TO PROVIDE NEW METER. E/C TO FIELD COORDINATE WITH OWNER ON ALL REQUIREMENTS.

## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
3. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
4. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
5. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
6. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
7. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
8. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
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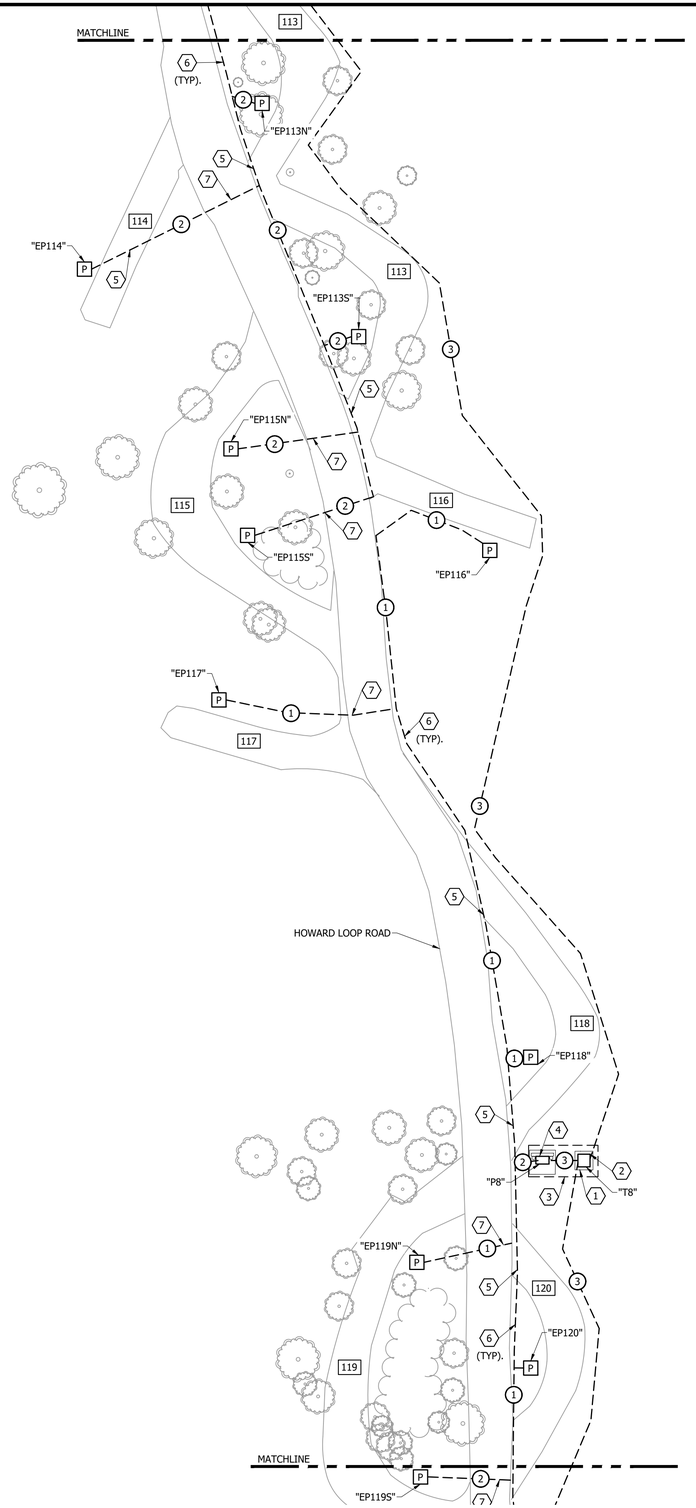
# ELECTRICAL IMPROVEMENT SITE PLAN
## NORTH HOWARD CAMPGROUND
## GRAHAMS ISLAND STATE PARK
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-111 |
| SHEET NO: | 15 of 32 |



Last edit on: 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: N_HOWARD IMPRV. SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:06 PM




ELECTRICAL IMPROVEMENT SITE PLAN - WEST HOWARD CAMPGROUND

SCALE: 1"=30'

0 30' 60'

## FEEDER SCHEDULE:

1. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 7/GI-E-505 FOR CIRCUITING AND FEEDER SCHEDULE.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 6/GI-E-504 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 4/GI-E-603.

## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 4/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-601.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
7. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ROADWAY ASPHALT, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEETING NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
8. E/C TO REFER TO 1/GI-E-501 FOR NEW SINGLE BACK-IN PEDESTAL LOCATION.

## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
3. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
4. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
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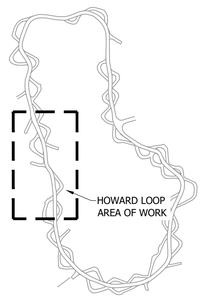
   EMAIL: scottl@mwec.com
6. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
7. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
8. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

## KEY PLAN:




| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
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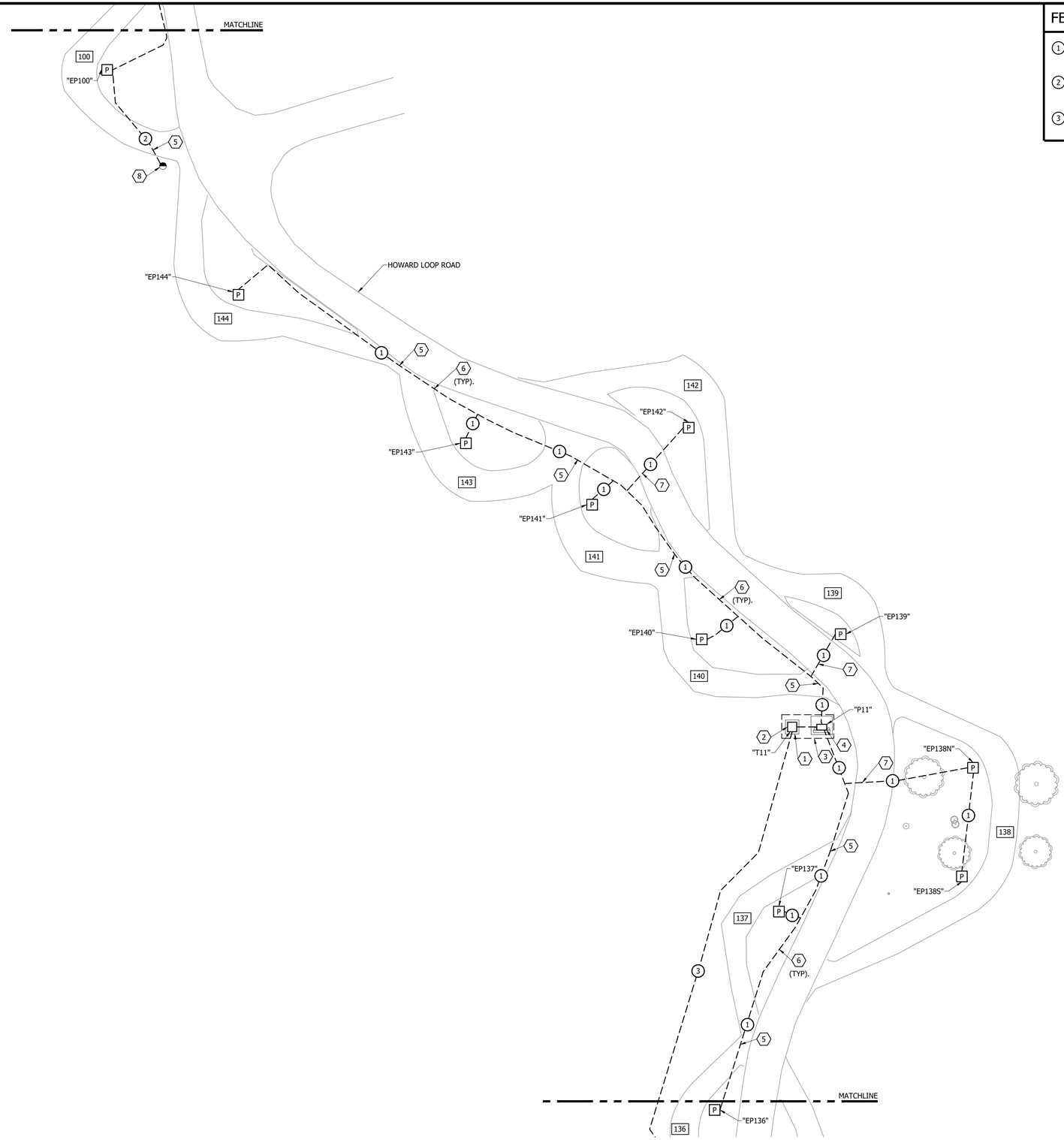
# ELECTRICAL IMPROVEMENT SITE PLAN
# WEST HOWARD CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-112 |
| SHEET NO: | 16 of 32 |




## ELECTRICAL IMPROVEMENT SITE PLAN - EAST HOWARD CAMPGROUND

SCALE: 1"=30'

0 30' 60'

## FEEDER SCHEDULE:

1. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 10/GI-E-507 FOR CIRCUITING AND FEEDER SCHEDULE.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 5/GI-E-504 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 4/GI-E-603.

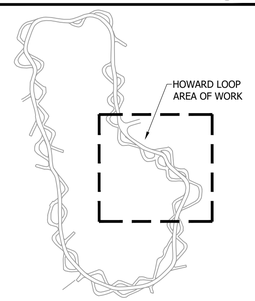
## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 4/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-601.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
7. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ASPHALT ROADWAY, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
8. E/C TO CONNECT NEW FEEDER WIRE AND CONDUIT TO EX POLE MOUNTED LIGHTING FIXTURE. ALL EXPOSED FEEDER WIRE TO BE IN RIGID CONDUIT PAINTED TO MATCH EX POLE FINISH. FIELD VERIFY EXACT REQUIREMENTS.

## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
3. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
4. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
5. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scotti@nwec.com
6. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
7. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
8. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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www.bartlettwest.com

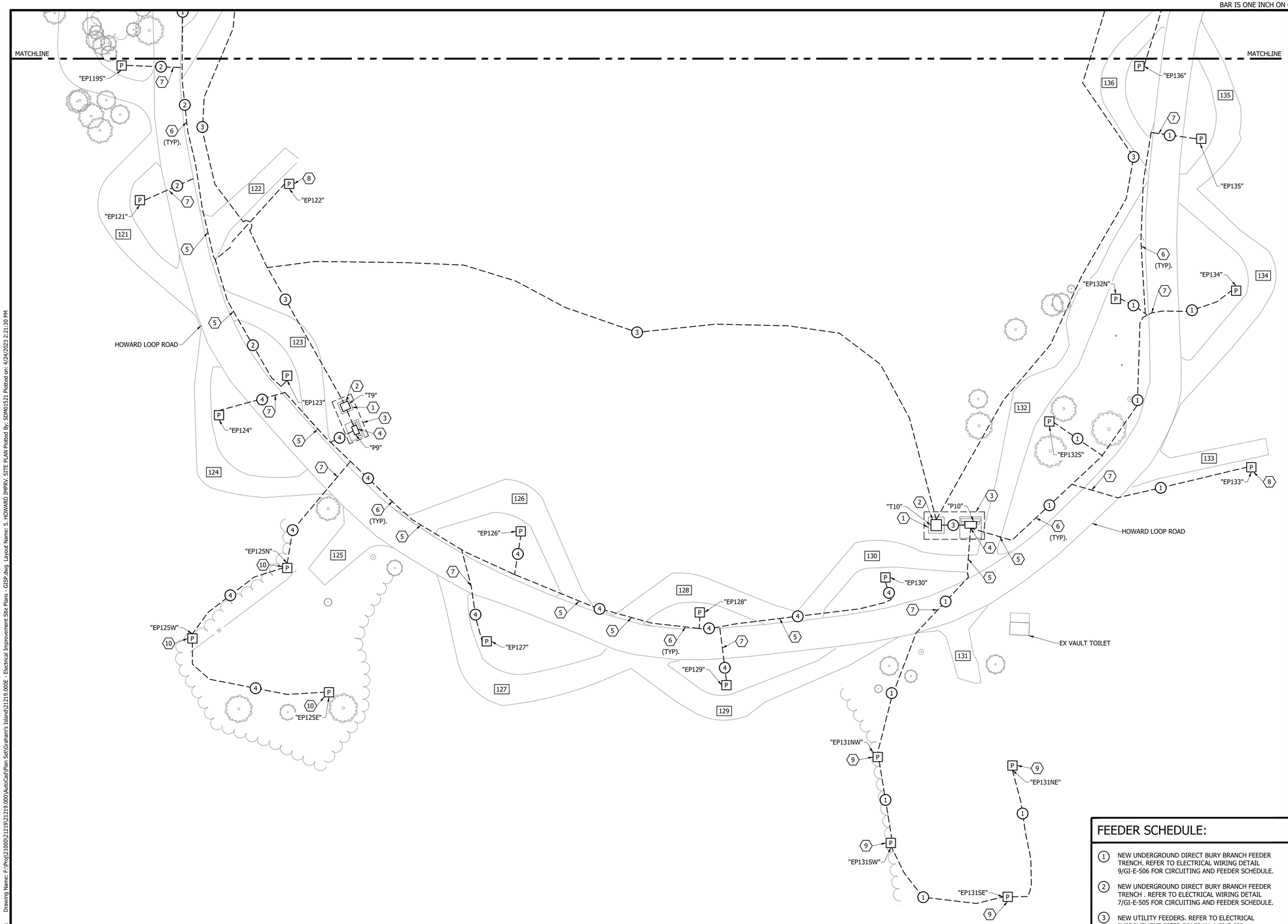
# ELECTRICAL IMPROVEMENT SITE PLAN
## EAST HOWARD CAMPGROUND
## GRAHAMS ISLAND STATE PARK
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-113 |
| SHEET NO: | 17 of 32 |



Last edit on 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: E. HOWARD IMPRV. SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:52 PM




ELECTRICAL IMPROVEMENT SITE PLAN - SOUTH HOWARD CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER AND UTILITY METER, PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 4/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-601.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND.E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
7. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ASPHALT ROADWAY, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
8. E/C TO REFER TO 1/GI-E-501 FOR NEW SINGLE BACK-IN PEDESTAL LOCATION.
9. E/C TO REFER TO 5/GI-E-501 FOR NEW QUAD PEDESTAL LOCATIONS.
10. E/C TO REFER TO 6/GI-E-501 FOR NEW TRIPLE PEDESTAL LOCATIONS.

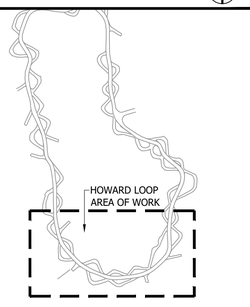
## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
3. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
4. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
5. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
6. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
7. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
8. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

## FEEDER SCHEDULE:

1. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 9/GI-E-506 FOR CIRCUITING AND FEEDER SCHEDULE.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH . REFER TO ELECTRICAL WIRING DETAIL 7/GI-E-505 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 4/GI-E-603.
4. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 8/GI-E-506 FOR CIRCUITING AND FEEDER SCHEDULE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
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# ELECTRICAL IMPROVEMENT SITE PLAN
## SOUTH HOWARD CAMPGROUND
## GRAHAMS ISLAND STATE PARK
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

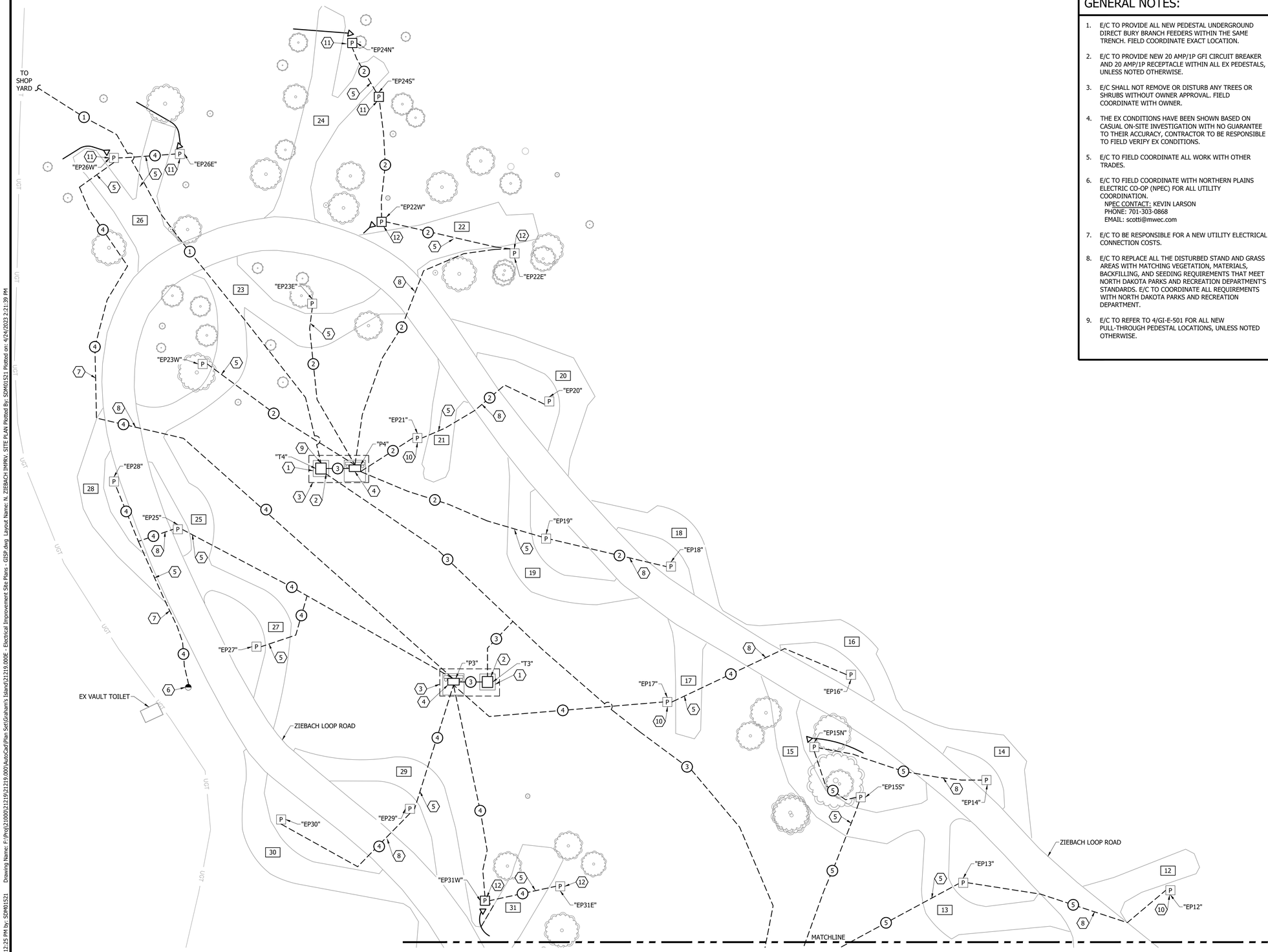
REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
NORTH DAKOTA
DATE: 04/24/2023

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-114 |
| SHEET NO: | 18 of 32 |



Last edit on: 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000s\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: S: HOWARD IMPRV. SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:30 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




ELECTRICAL IMPROVEMENT SITE PLAN - NORTH ZIEBACH CAMPGROUND
SCALE: 1"=30'
0 30' 60'

## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C TO PROVIDE NEW 20 AMP/1P GFI CIRCUIT BREAKER AND 20 AMP/1P RECEPTACLE WITHIN ALL EX PEDESTALS, UNLESS NOTED OTHERWISE.
3. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
4. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
5. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
6. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scotti@mwec.com
7. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
8. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
9. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

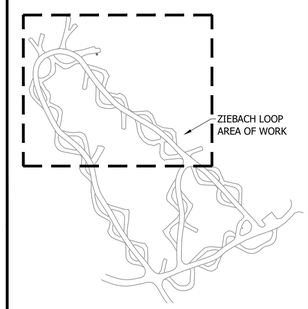
## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 3/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-602.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND. E/C TP RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO CONNECT NEW FEEDER WIRE AND CONDUIT TO EX POLE MOUNTED LIGHTING FIXTURE. ALL EXPOSED FEEDER WIRE TO BE IN RIGID CONDUIT PAINTED TO MATCH EX POLE FINISH. FIELD VERIFY EXACT REQUIREMENTS.
7. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
8. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ASPHALT ROADWAY, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
9. UTILITY TO INTERCEPT AND EXTEND EX UNDERGROUND MEDIUM VOLTAGE FEEDER AND CONDUIT AND RECONNECT TO NEW "T4". FIELD COORDINATE WITH E/C.
10. E/C TO REFER TO 1/GI-E-501 FOR NEW SINGLE BACK-IN PEDESTAL LOCATION.
11. E/C TO REFER TO 3/GI-E-501 FOR NEW DOUBLE BACK-IN PEDESTAL LOCATIONS.
12. E/C TO REFER TO 2/GI- E-501 FOR NEW PULL-IN AND BACK-IN PEDESTAL LOCATIONS.

## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY MAIN FEEDER TO REMAIN.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 14/GI-E-509 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 3/GI-E-603.
4. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 13/GI-E-508 FOR CIRCUITING AND FEEDER SCHEDULE.
5. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 12/GI-E-508 FOR CIRCUITING AND FEEDER SCHEDULE.

## KEY PLAN:




| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL IMPROVEMENT SITE PLAN
# NORTH ZIEBACH CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04/24/2023
NORTH DAKOTA

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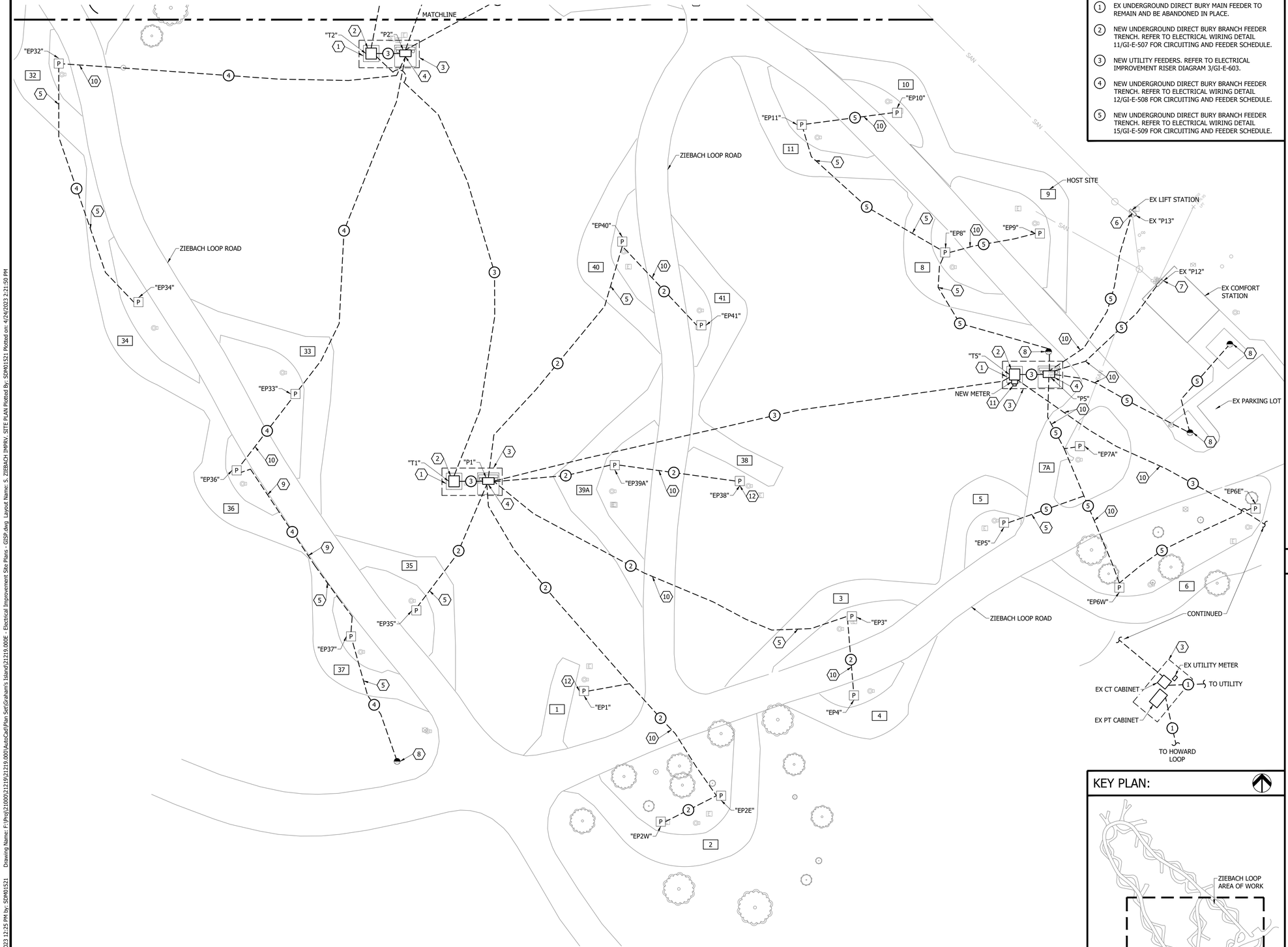
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-115 |
| SHEET NO: | 19 of 32 |



Last edit on 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: N. ZIEBACH IMPRV. SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:39 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.




## FEEDER SCHEDULE:

1. EX UNDERGROUND DIRECT BURY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
2. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 11/GI-E-507 FOR CIRCUITING AND FEEDER SCHEDULE.
3. NEW UTILITY FEEDERS. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM 3/GI-E-603.
4. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 12/GI-E-508 FOR CIRCUITING AND FEEDER SCHEDULE.
5. NEW UNDERGROUND DIRECT BURY BRANCH FEEDER TRENCH. REFER TO ELECTRICAL WIRING DETAIL 15/GI-E-509 FOR CIRCUITING AND FEEDER SCHEDULE.

## REFERENCE NOTES:

1. E/C TO PROVIDE NEW UTILITY TRANSFORMER CONCRETE EQUIPMENT PAD. E/C TO FIELD VERIFY EXACT LOCATION AND COORDINATE ALL REQUIREMENTS WITH ELECTRIC UTILITY.
2. NEW UTILITY TRANSFORMER PROVIDED BY ELECTRIC UTILITY. E/C TO COORDINATE EXACT CONNECTION REQUIREMENTS WITH ELECTRIC UTILITY.
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 3/GI-E-603.
4. NEW 600 AMP, 120/240 VOLT, 1 PHASE, 3 WIRE PANELBOARD. REFER TO PANELBOARD SCHEDULE ON SHEET GI-E-602.
5. E/C HAS THE OPTION TO BORE UNDER THE STAND (RV GRAVEL PAD) OR TRENCH THROUGH THE STAND. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
6. E/C TO CONNECT NEW FEEDER WIRE AND CONDUIT TO EX LIFT STATION PANELBOARD. PROVIDE NEW LABEL "P13" FOR EXISTING PANELBOARD. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 3/GI-E-603.
7. E/C TO CONNECT NEW FEEDER WIRE AND CONDUIT TO EX COMFORT STATION PANELBOARD. PROVIDE NEW LABEL "P12" FOR EXISTING PANELBOARD.REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM DETAIL 3/GI-E-603.
8. E/C TO CONNECT NEW FEEDER WIRE AND CONDUIT TO EX POLE MOUNTED LIGHTING FIXTURE. ALL EXPOSED FEEDER WIRE TO BE IN RIGID CONDUIT PAINTED TO MATCH EX POLE FINISH. FIELD VERIFY EXACT REQUIREMENTS.
9. E/C TO ROUTE UNDERGROUND FEEDER PARALLEL WITH EX LOOP ROAD. E/C SHALL NOT DISTURB EX ROAD MATERIAL AND BE RESPONSIBLE TO REPAIR ANY DAMAGED ROAD MATERIAL.
10. E/C HAS THE OPTION TO BORE UNDER THE ROAD OR TRENCH THROUGH THE ROAD. E/C TO RECLAIM TO EX CONDITIONS. E/C TO REPLACE ALL THE DISTURBED ASPHALT ROADWAY, GRAVEL, AND GRASS AREAS WITH MATCHING MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED. E/C TO FIELD COORDINATE ALL REQUIREMENTS.
11. ALTERNATE BID 1: E/C TO PROVIDE NEW METER. E/C TO FIELD COORDINATE WITH OWNER ON ALL REQUIREMENTS.
12. E/C TO REFER TO 1/GI-E-501 FOR NEW SINGLE BACK-IN PEDESTAL LOCATION.

## GENERAL NOTES:

1. E/C TO PROVIDE ALL NEW PEDESTAL UNDERGROUND DIRECT BURY BRANCH FEEDERS WITHIN THE SAME TRENCH. FIELD COORDINATE EXACT LOCATION.
2. E/C TO PROVIDE NEW 20 AMP/1P GFI CIRCUIT BREAKER AND 20 AMP/1P RECEPTACLE WITHIN ALL EX PEDESTALS, UNLESS NOTED OTHERWISE.
3. E/C SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT OWNER APPROVAL. FIELD COORDINATE WITH OWNER.
4. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
5. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
6. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scotti@mwec.com
7. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
8. E/C TO REPLACE ALL THE DISTURBED STAND AND GRASS AREAS WITH MATCHING VEGETATION, MATERIALS, BACKFILLING, AND SEEDING REQUIREMENTS THAT MEET NORTH DAKOTA PARKS AND RECREATION DEPARTMENT'S STANDARDS.
9. MIXED GRAVEL/SAND/DIRT REPLACEMENT FILL MATERIAL WILL NOT BE ACCEPTED. E/C WILL BE REQUIRED TO SORT EX MATERIAL IF REUSED.E/C TO COORDINATE ALL REQUIREMENTS WITH NORTH DAKOTA PARKS AND RECREATION DEPARTMENT.
10. E/C TO REFER TO 4/GI-E-501 FOR ALL NEW PULL-THROUGH PEDESTAL LOCATIONS, UNLESS NOTED OTHERWISE.

## KEY PLAN:




| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
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# ELECTRICAL IMPROVEMENT SITE PLAN
# SOUTH ZIEBACH CAMPGROUND
# GRAHAMS ISLAND STATE PARK
## NORTH DAKOTA PARKS & RECREATION DEPARTMENT
## ELECTRICAL UPGRADES
## BISMARCK, NORTH DAKOTA

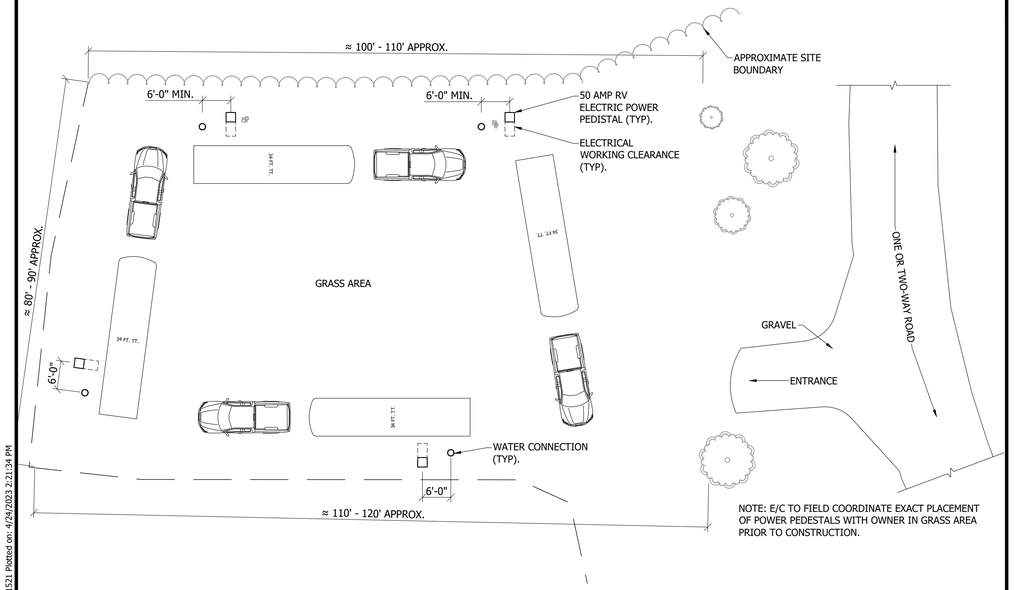
REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE: 04/24/23
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-116 |
| SHEET NO: | 20 of 32 |

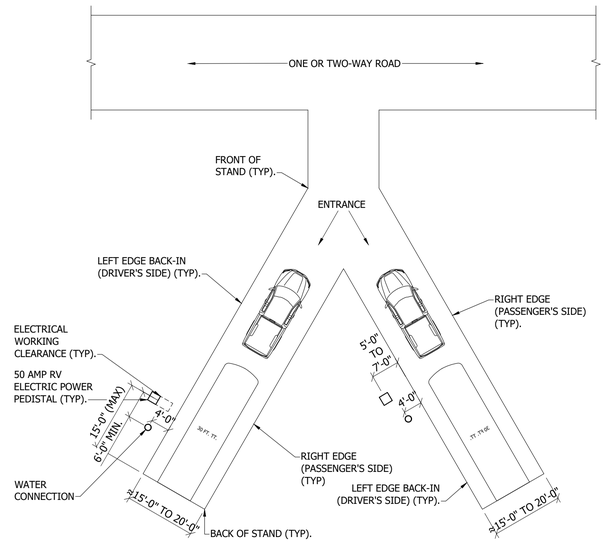


Last edit on: 4/21/2023 12:25 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Improvement Site Plans - GISP.dwg Layout Name: S_ZIEBACH IMPRV SITE PLAN Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:50 PM

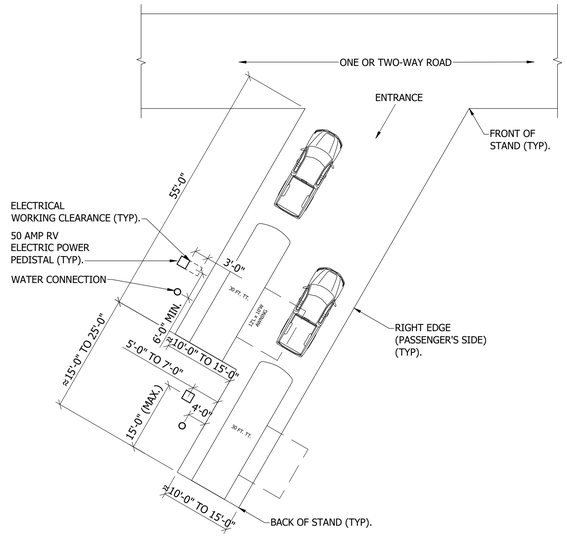
BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.



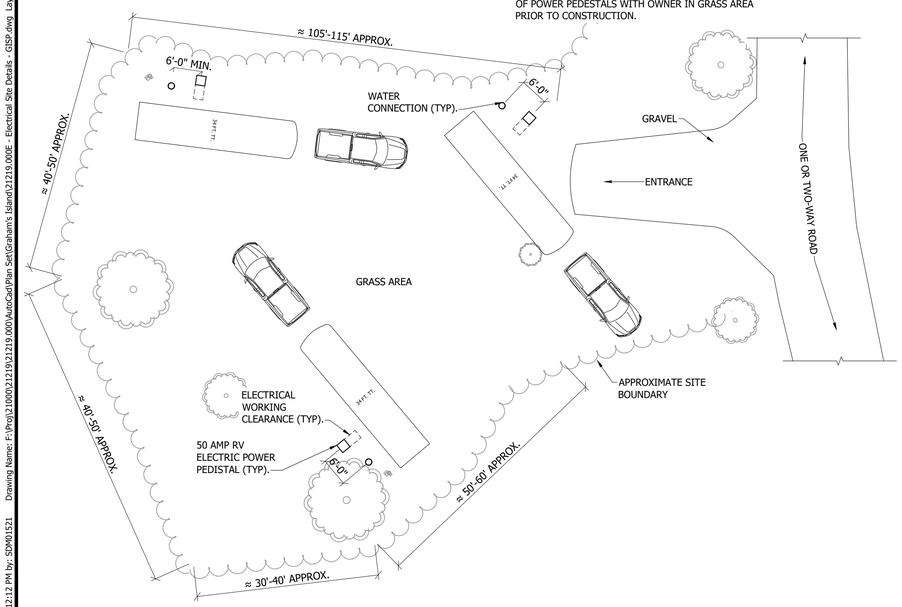

5 GRAHAMS ISLAND
QUAD PULL-THRU/BACK-IN SITE DETAIL
NOT TO SCALE



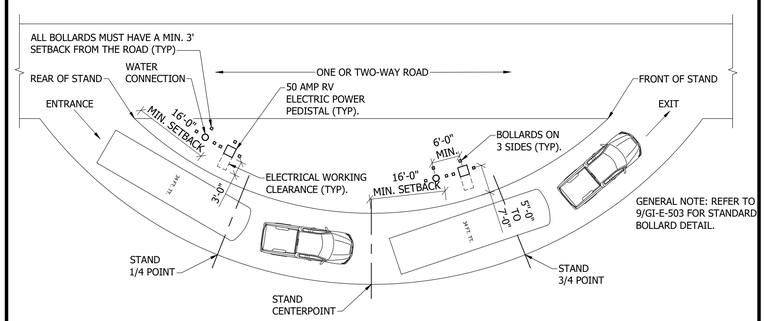

3 GRAHAMS ISLAND
DOUBLE BACK-IN SITE DETAIL
NOT TO SCALE



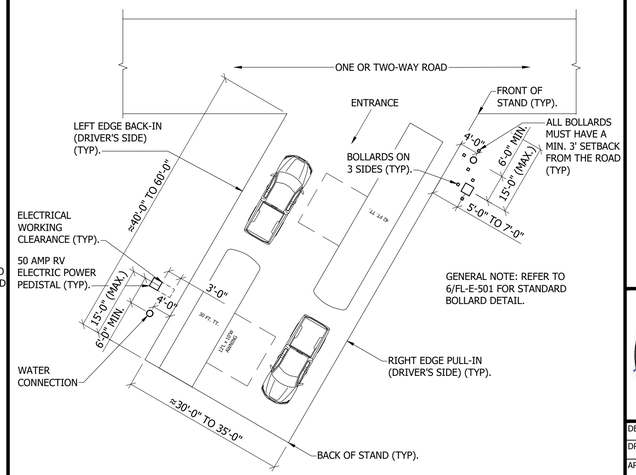

1 GRAHAMS ISLAND
DOUBLE BACK-IN SITE DETAIL
NOT TO SCALE




6 GRAHAMS ISLAND
TRIPLE PULL-THRU/BACK-IN SITE DETAIL
NOT TO SCALE




4 GRAHAMS ISLAND
DOUBLE PULL-THRU SITE DETAIL
NOT TO SCALE




2 GRAHAMS ISLAND
PULL-IN & BACK-IN SITE DETAIL
NOT TO SCALE

| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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# ELECTRICAL SITE DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE:
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-501 |
| SHEET NO: | 21 of 32 |



Last edit on: 4/21/2023 12:12 PM by SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Site Details - GISP.dwg Layout Name: SITE DETAILS - GISP Plotted by: SDM01521 Plotted on: 4/24/2023 2:21:34 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

EX "P13"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD


EX "T8"

4 EX "P13" AND EX "T8" (SITE 122, HOWARD LOOP)
NOT TO SCALE

EX "P10"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD


EX "T5"

1 EX "P10" AND EX "T5" (SITE 104, HOWARD LOOP)
NOT TO SCALE

EX "P14"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD

EX "T9"

5 EX "P14" AND EX "T9" (EAST OF SITE 130, HOWARD LOOP)
NOT TO SCALE

EX "P11"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD

EX "T6"

2 EX "P11" AND EX "T6" (NORTH OF SITE 111, HOWARD LOOP)
NOT TO SCALE

EX "P15"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD


EX "T10"

6 EX "P15" AND EX "T10" (SOUTH OF SITE 140, ZIEBACH LOOP)
NOT TO SCALE

EX "P12"
MIDWEST ELECTRIC
200 AMP, 120/240 VOLT,
1 PHASE, 3 WIRE
PANELBOARD


EX "T7"

3 EX "P12" AND EX "T7" (NORTH OF SITE 120, ZIEBACH LOOP)
NOT TO SCALE

| # | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | | | |

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# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04-24-2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

DRAWING NO:
**GI-E-502**

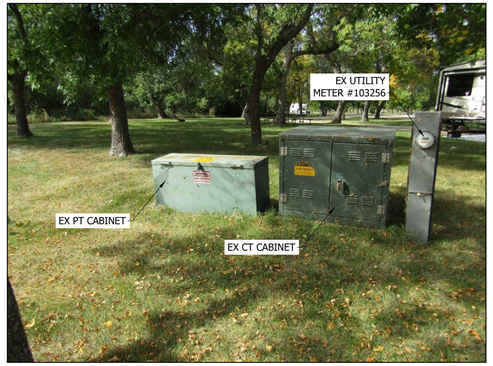
SHEET NO:
22 of ----



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS Plotted on: 4/24/2023 2:21:07 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.


7 EX "P9" (LIFT STATION, ZIEBACH LOOP)
NOT TO SCALE



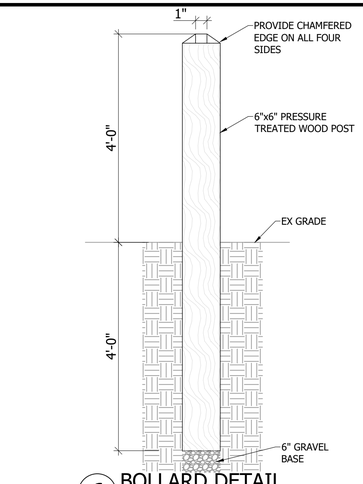

4 EX UTILITY EQUIPMENT (SOUTH OF SITE 6, ZIEBACH LOOP)
NOT TO SCALE


1 EX "P1", EX "T1", AND EX "P2" (WEST OF SITE 39A, ZIEBACH LOOP)
NOT TO SCALE


8 EX SHOP YARD TRANSFORMER (NORTH OF ZIEBACH LOOP)
NOT TO SCALE


5 EX "P7" AND "T4" (NORTH OF SITE 7A, ZIEBACH LOOP)
NOT TO SCALE


2 EX "P3", EX "T2", AND EX "P4" (WEST OF SITE 13, ZIEBACH LOOP)
NOT TO SCALE




6 BOLLARD DETAIL
NOT TO SCALE


6 EX "P8" (COMFORT STATION, ZIEBACH LOOP)
NOT TO SCALE


3 EX "P5", EX "T3", AND EX "P6" (WEST OF SITE 21, ZIEBACH LOOP)
NOT TO SCALE

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

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# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

DRAWING NO: **GI-E-503**

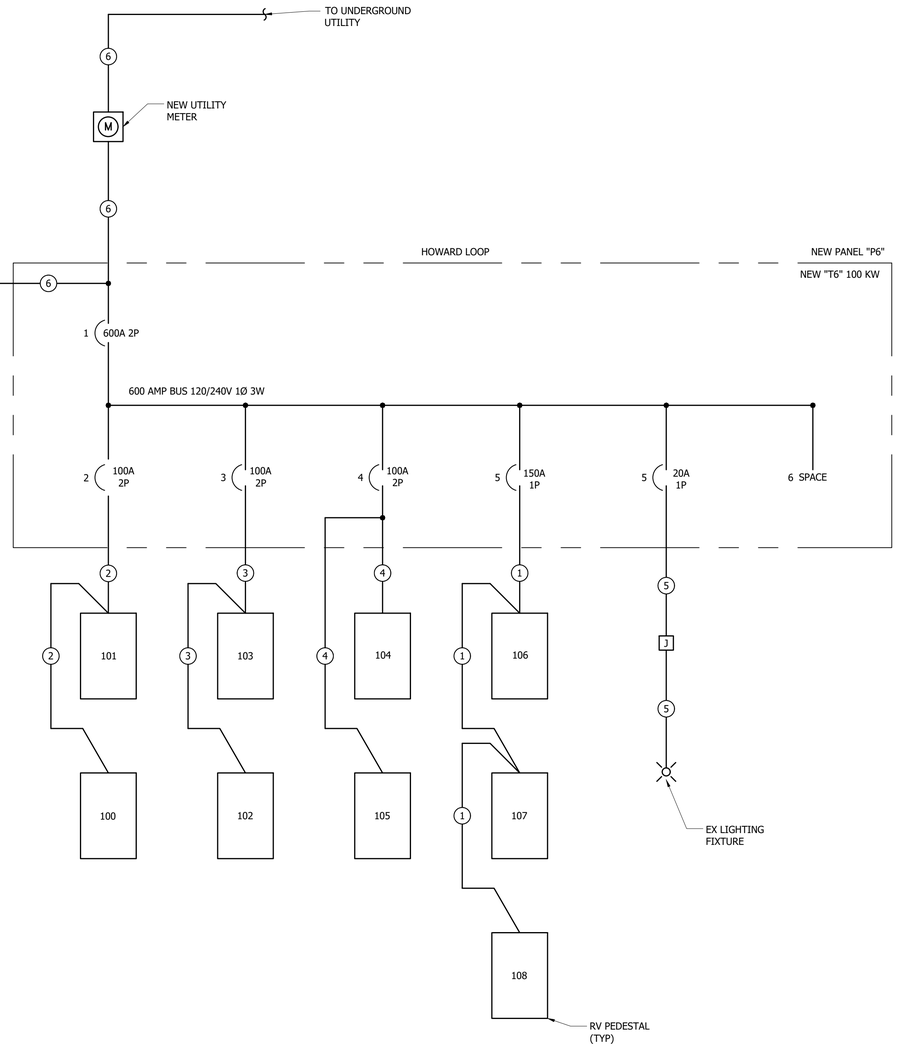
SHEET NO: 23 of ----



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000s\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 2 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:20 PM

## FEEDER SCHEDULE:

1. 3-250 DIRECT BURY CABLE WITH 250G.(BASED ON COPPER)
2. 3-1 DIRECT BURY CABLE WITH 1G.(BASED ON COPPER)
3. 3-2 DIRECT BURY CABLE WITH 2G.(BASED ON COPPER)
4. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
5. 2-10 DIRECT BURY CABLE WITH 1-10G. (BASED ON COPPER)
6. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.




5 "P6" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

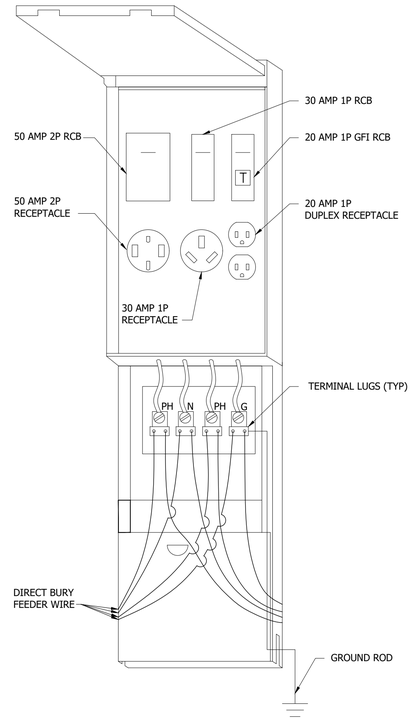
ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

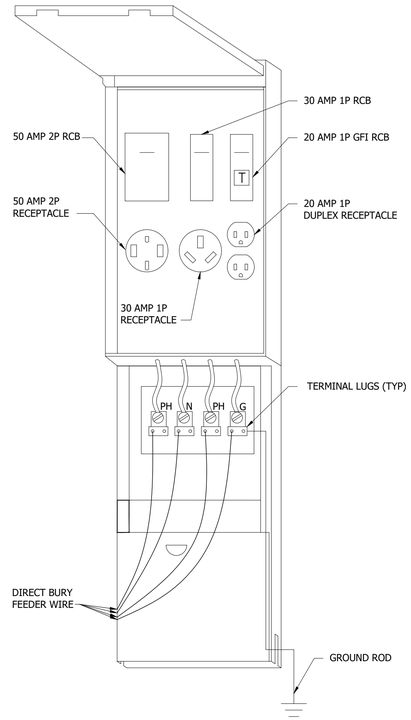
2 - REFER TO IMPROVEMENT PLAN GI-E-111 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.

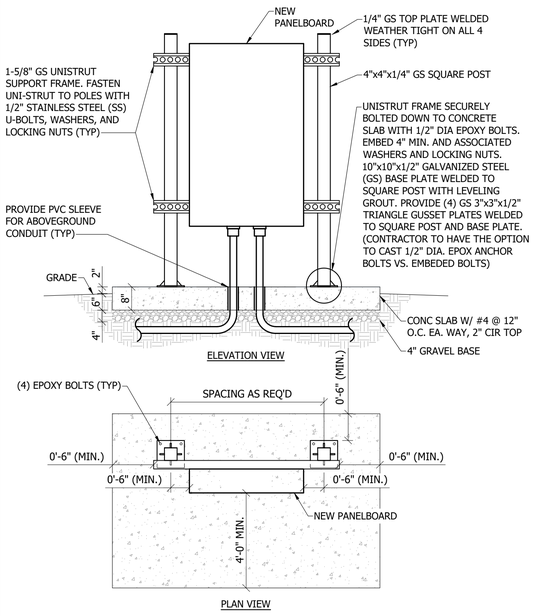



2 FEED THRU RV PEDESTAL DETAIL
NOT TO SCALE

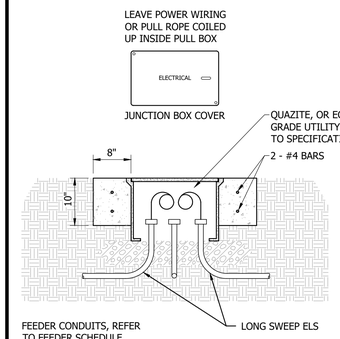



1 END OF LINE RV PEDESTAL DETAIL
NOT TO SCALE

GENERAL NOTE: RATTLE CAN SPRAY GALVANIZING WILL NOT BE AN ACCEPTED METHOD OF GALVANIZING WELDS AND PLATES.




4 UNI-STRUT MOUNTING DETAIL
NOT TO SCALE




3 FLUSH GRADE JUNCTION BOX DETAIL
NOT TO SCALE

| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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PHONE 701-258-1110 - FAX 701-258-1111
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# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE:
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |

DRAWING NO: **GI-E-504**

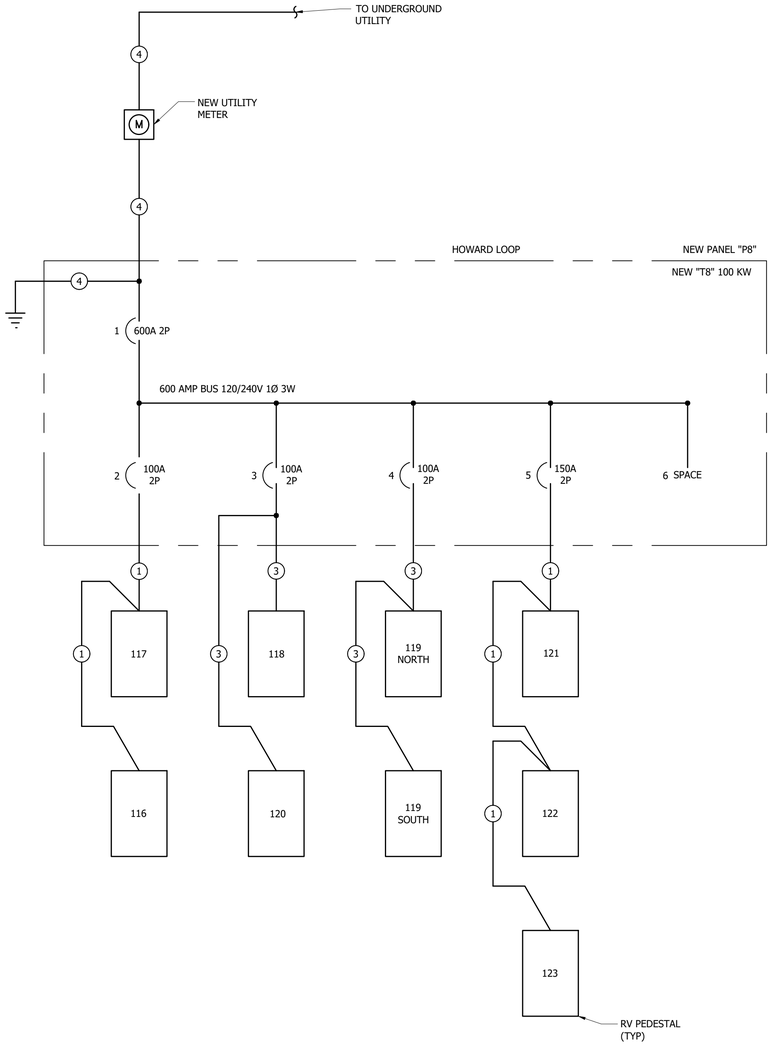
SHEET NO: 24 of 32



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21600\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 3 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:41 PM

## FEEDER SCHEDULE:

1. 3-2/0 DIRECT BURY CABLE WITH 2/0G.(BASED ON COPPER)
2. 3-2 DIRECT BURY CABLE WITH 2G.(BASED ON COPPER)
3. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.




ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-112 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

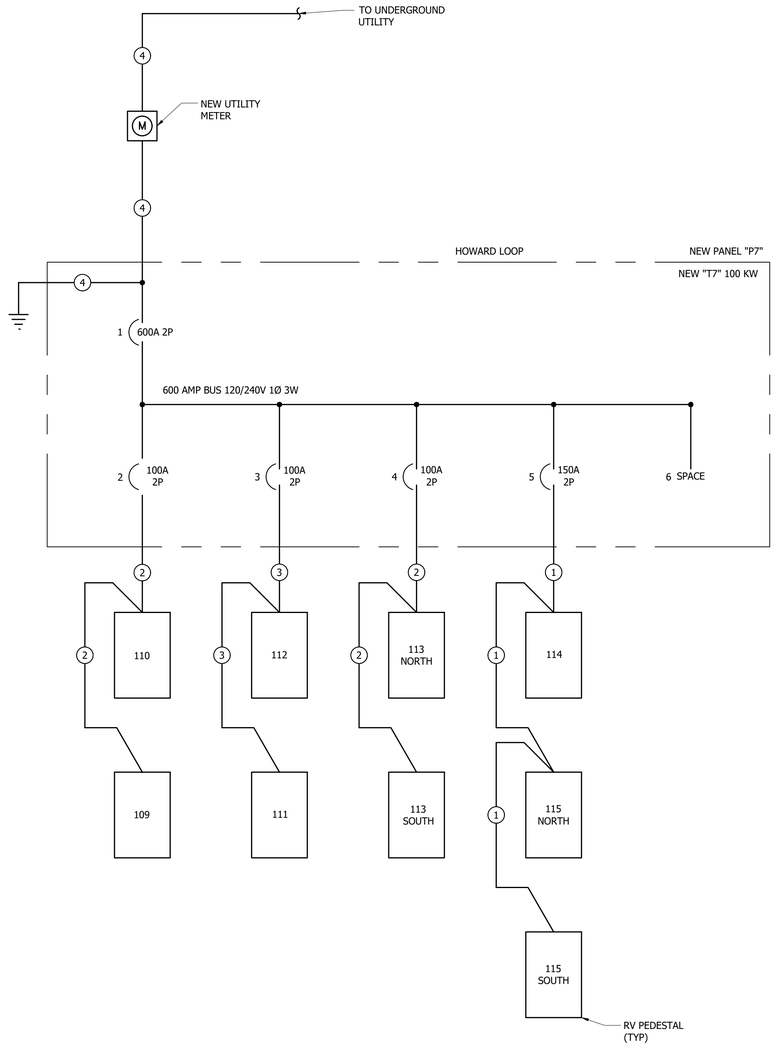
3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.

7 "P8" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

## FEEDER SCHEDULE:

1. 3-3/0 DIRECT BURY CABLE WITH 3/0G.(BASED ON COPPER)
2. 3-1 DIRECT BURY CABLE WITH 1G.(BASED ON COPPER)
3. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.




ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-111 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.

6 "P7" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

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PHONE 701-258-1110 - FAX 701-258-1111
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# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE:
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH-SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-505 |
| SHEET NO: | 25 of 32 |

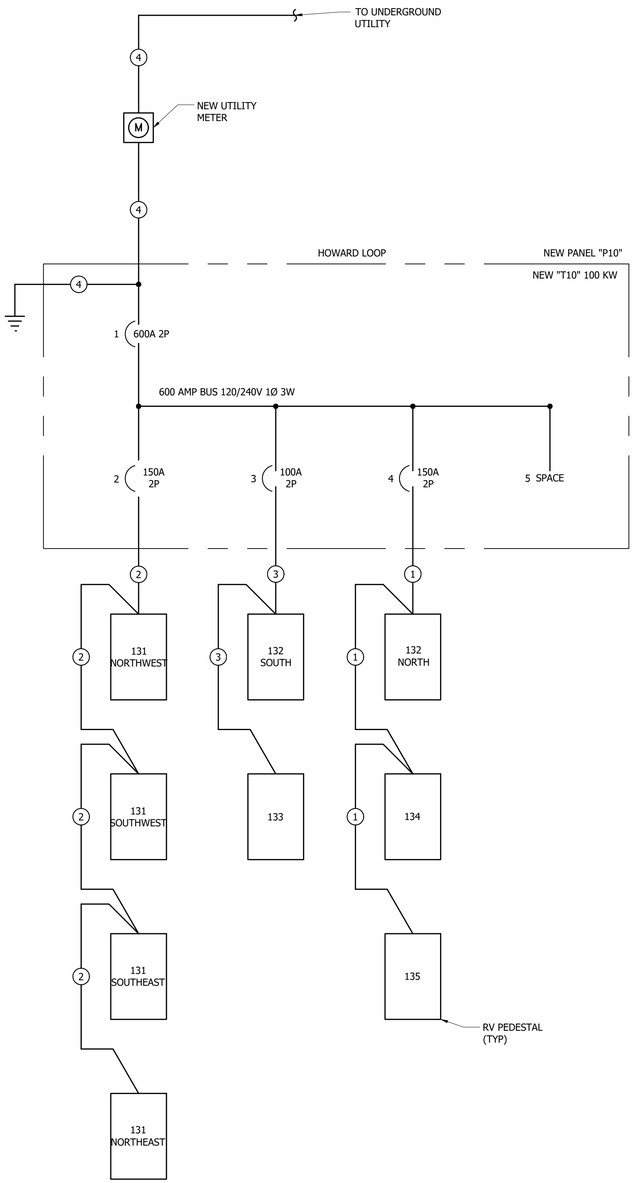


Last edit on: 4/21/2023 12:11 PM by SDM01521 Drawing Name: P:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Grahams Island\21219.00GE - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 4 - GISP Plotted By: SDM01521 Plotted on 4/24/2023 2:21:57 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

## FEEDER SCHEDULE:

1. 3-2/0 DIRECT BURY CABLE WITH 2/0G.(BASED ON COPPER)
2. 3-3/0 DIRECT BURY CABLE WITH 1G.(BASED ON COPPER)
3. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.




ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-114 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

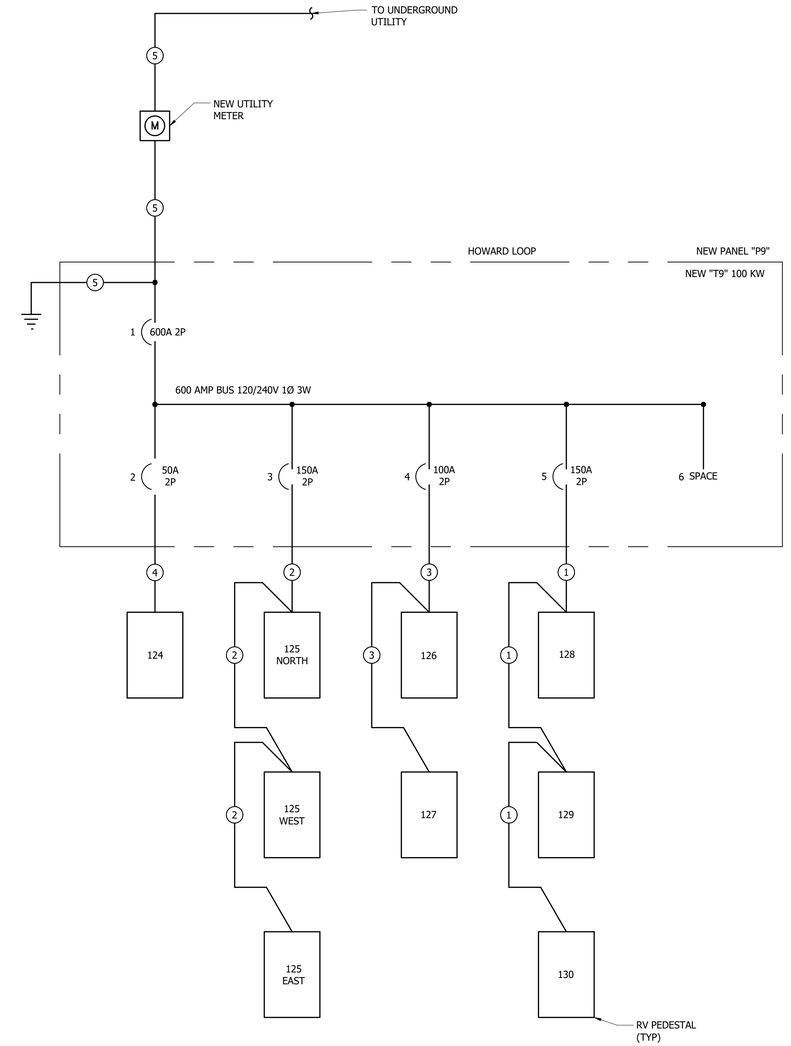
3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.

9 "P10" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

## FEEDER SCHEDULE:

1. 3-3/0 DIRECT BURY CABLE WITH 3/0G.(BASED ON COPPER)
2. 3-2 DIRECT BURY CABLE WITH 2G.(BASED ON COPPER)
3. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. 3-6 DIRECT BURY CABLE WITH 6G. (BASED ON COPPER)
5. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.




ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-114 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.

8 "P9" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|


Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com


# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10734
DATE:
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-506 |
| SHEET NO: | 26 of 32 |




Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.00GE - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 5 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:17 PM

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

## FEEDER SCHEDULE:

1. 3-2 DIRECT BURY CABLE WITH 2G. (BASED ON COPPER)
2. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

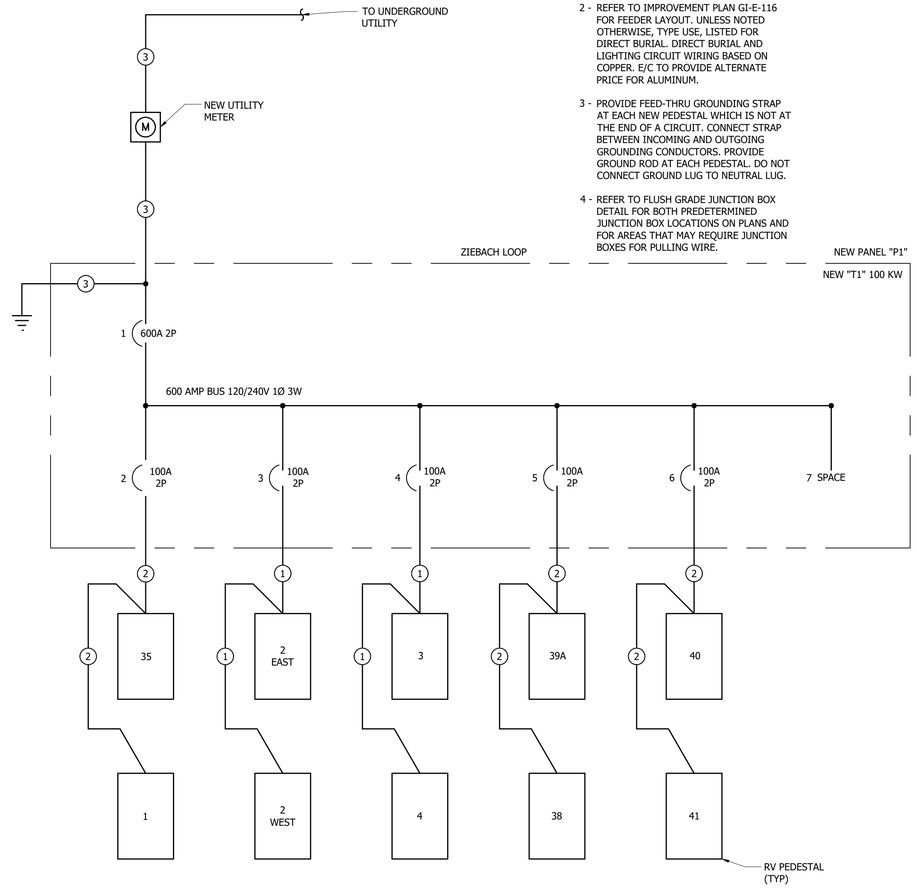
ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-116 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.




11 "P1" ELECTRICAL WIRING DIAGRAM (ZIEBACH LOOP)
NOT TO SCALE

## FEEDER SCHEDULE:

1. 3-1/0 DIRECT BURY CABLE WITH 1/0G. (BASED ON COPPER)
2. 3-2 DIRECT BURY CABLE WITH 2G. (BASED ON COPPER)
3. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

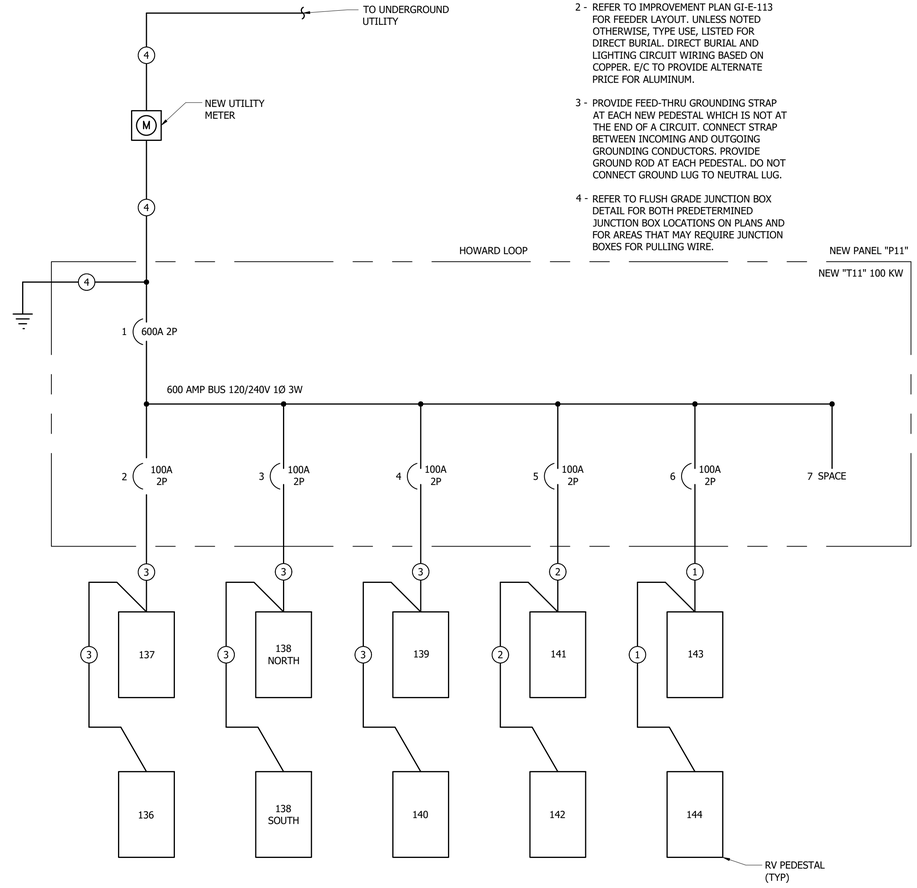
ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-113 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.




10 "P11" ELECTRICAL WIRING DIAGRAM (HOWARD LOOP)
NOT TO SCALE

| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-507 |
| SHEET NO: | 27 of 32 |



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 6 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:54 PM

## FEEDER SCHEDULE:

1. 3-1/0 DIRECT BURY CABLE WITH 1/0G. (BASED ON COPPER)
2. 3-2/0 DIRECT BURY CABLE WITH 1G. (BASED ON COPPER)
3. 3-2 DIRECT BURY CABLE WITH 2G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

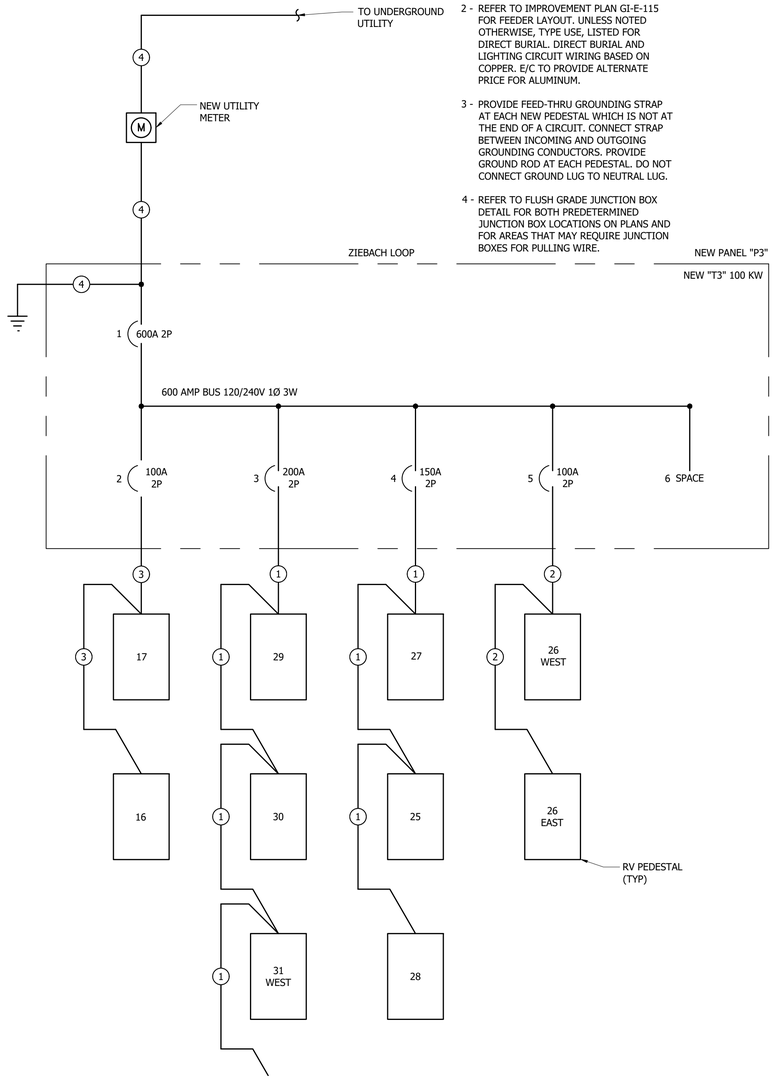
ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-115 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.




13 "P3" ELECTRICAL WIRING DIAGRAM (ZIEBACH LOOP)
NOT TO SCALE

## FEEDER SCHEDULE:

1. 3-2/0 DIRECT BURY CABLE WITH 3/0G.(BASED ON COPPER)
2. 3-1/0 DIRECT BURY CABLE WITH 1G. (BASED ON COPPER)
3. 3-2 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
4. 2-10 DIRECT BURY CABLE WITH 1-10G. (BASED ON COPPER)
5. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

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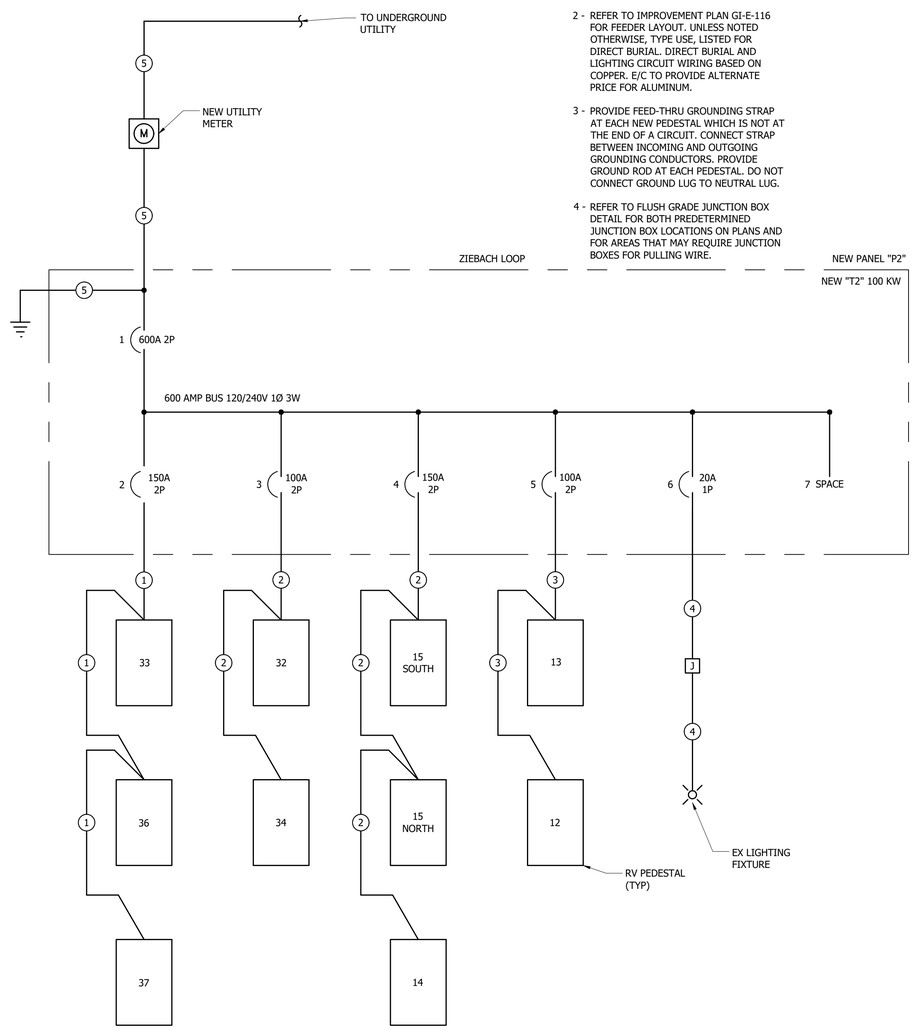
2 - REFER TO IMPROVEMENT PLAN GI-E-116 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.




12 "P2" ELECTRICAL WIRING DIAGRAM (ZIEBACH LOOP)
NOT TO SCALE

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

Bartlett & West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-508 |
| SHEET NO: | 28 of 32 |



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000s\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 7 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:55 PM

## FEEDER SCHEDULE:

1. 3-2 DIRECT BURY CABLE WITH 2G.(BASED ON COPPER)
2. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
3. 2-10 DIRECT BURY CABLE WITH 1-10G. (BASED ON COPPER)
4. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-116 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

3 - PROVIDE FEED-THRU GROUNDING STRAP AT EACH NEW PEDESTAL WHICH IS NOT AT THE END OF A CIRCUIT. CONNECT STRAP BETWEEN INCOMING AND OUTGOING GROUNDING CONDUCTORS. PROVIDE GROUND ROD AT EACH PEDESTAL. DO NOT CONNECT GROUND LUG TO NEUTRAL LUG.

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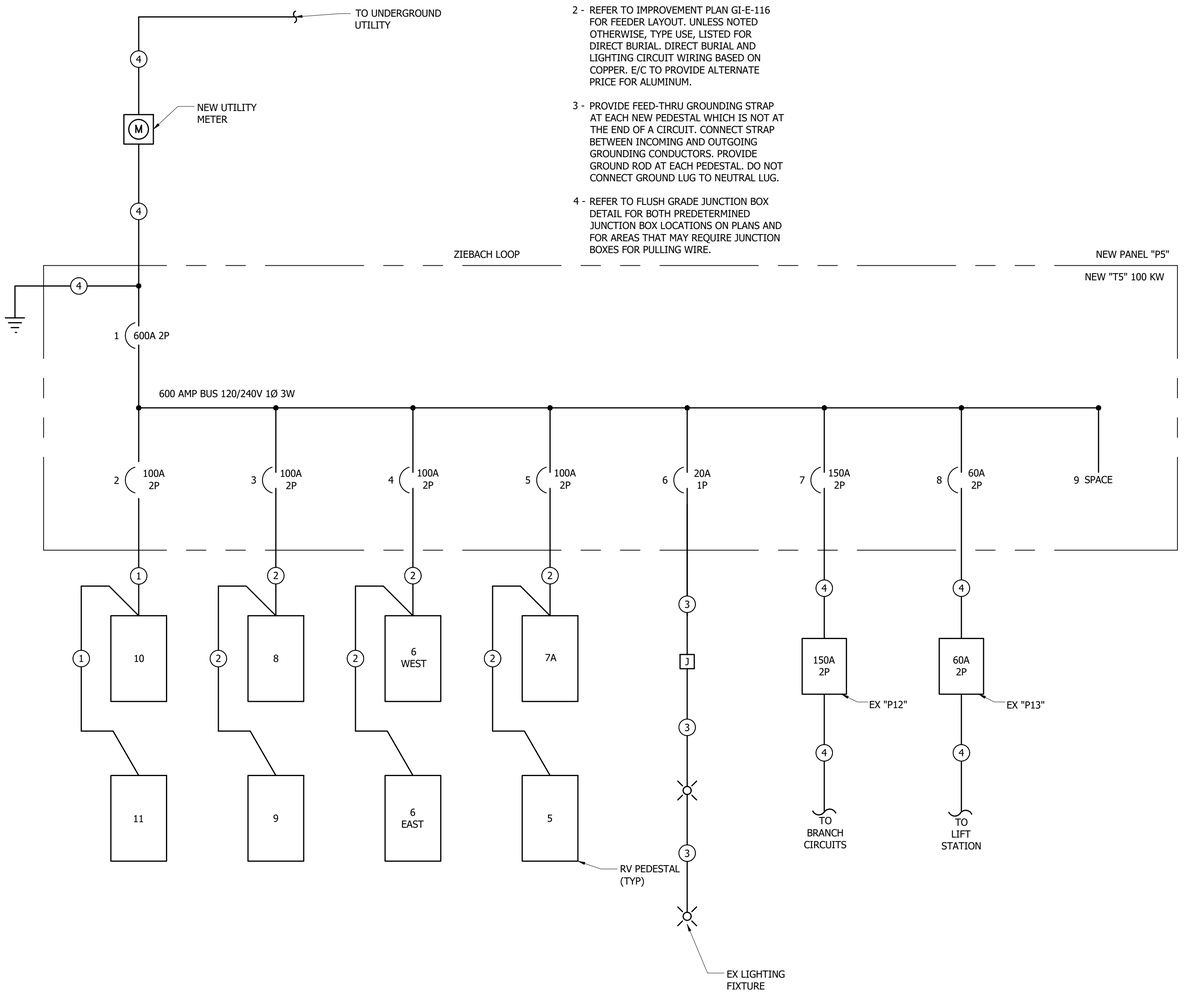


15 "P5" ELECTRICAL WIRING DIAGRAM (ZIEBACH LOOP)
NOT TO SCALE

## FEEDER SCHEDULE:

1. 3-1 DIRECT BURY CABLE WITH 1G. (BASED ON COPPER)
2. 3-3 DIRECT BURY CABLE WITH 3G. (BASED ON COPPER)
3. REFER TO ELECTRICAL IMPROVEMENT RISER DIAGRAM.

ALL POWER OUTLET PEDESTALS ARE BASED ON MIDWEST U075 GP6 POWER OUTLET PANELS W/ 100 AMP MAINS. 1-50 AMP, 2P BKR & 50AMP 240 VOLT RECEPTACLE, 1-30 AMP 1P BKR & 30 AMP 120 VOLT RECEPTACLE, AND 1-20 AMP 1P GFI BKR & 120 VOLT DUPLEX RECEPTACLE.

1 - PROVIDE PANELS WHICH ARE NEMA 3R & SERVICE ENTRANCE RATED.

2 - REFER TO IMPROVEMENT PLAN GI-E-115 FOR FEEDER LAYOUT. UNLESS NOTED OTHERWISE, TYPE USE, LISTED FOR DIRECT BURIAL. DIRECT BURIAL AND LIGHTING CIRCUIT WIRING BASED ON COPPER. E/C TO PROVIDE ALTERNATE PRICE FOR ALUMINUM.

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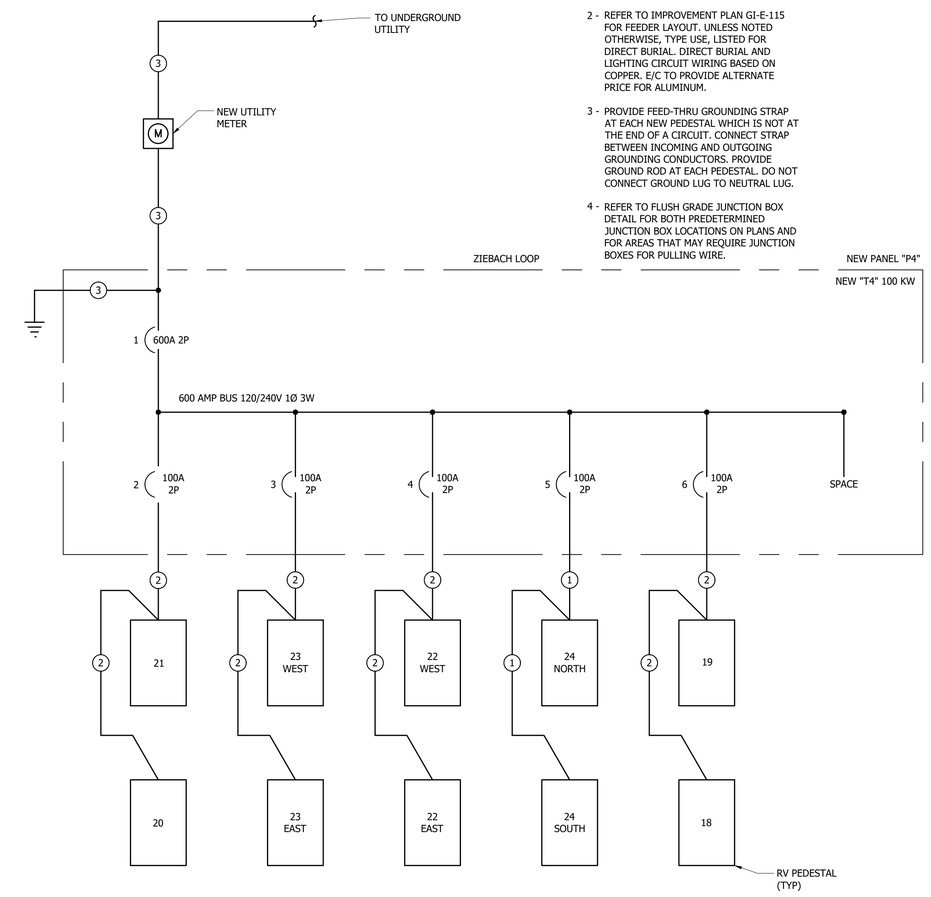
4 - REFER TO FLUSH GRADE JUNCTION BOX DETAIL FOR BOTH PREDETERMINED JUNCTION BOX LOCATIONS ON PLANS AND FOR AREAS THAT MAY REQUIRE JUNCTION BOXES FOR PULLING WIRE.




14 "P4" ELECTRICAL WIRING DIAGRAM (ZIEBACH LOOP)
NOT TO SCALE

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL DETAILS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE 04/24/2023
NORTH DAKOTA

| | |
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| DESIGNED BY: | ARH |
| DRAWN BY: | ARH/SDM |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-509 |
| SHEET NO: | 29 of 32 |



Last edit on: 4/21/2023 12:11 PM by: SDM01521 Drawing Name: F:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Details - GISP.dwg Layout Name: ELECTRICAL DETAILS 8 - GISP Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:14 PM

## RV PEDESTAL SCHEDULE - HOWARD LOOP

| MARK | MFGR | MODEL | AMPERAGE | VOLTAGE | POLES | "P6" CIRCUIT # | "P7" CIRCUIT # | "P8" CIRCUIT # | "P9" CIRCUIT # | "P10" CIRCUIT # | "P11" CIRCUIT # | RECEPTACLES | ENCLOSURE TYPE | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| "EP100" | MIDWEST | U075GP6 | 100 | 240 | 2 | 2 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP101" | MIDWEST | U075GP6 | 100 | 240 | 2 | 2 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP102" | MIDWEST | U075GP6 | 100 | 240 | 2 | 3 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP103" | MIDWEST | U075GP6 | 100 | 240 | 2 | 3 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP104" | MIDWEST | U075GP6 | 100 | 240 | 2 | 4 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP105" | MIDWEST | U075GP6 | 100 | 240 | 2 | 4 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP106" | MIDWEST | U075GP6 | 100 | 240 | 2 | 5 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP107" | MIDWEST | U075GP6 | 100 | 240 | 2 | 5 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP108" | MIDWEST | U075GP6 | 100 | 240 | 2 | 5 | | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP109" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 2 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP110" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 2 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP111" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 3 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP112" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 3 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP113N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 4 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP113S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 4 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP114" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 5 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP115N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 5 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP115S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 5 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP116" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 2 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP117" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 2 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP118" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP119N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 4 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP119S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 4 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP120" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP121" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 5 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP122" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 5 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP123" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 5 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP124" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 2 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP125N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP125W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP125E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP126" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 4 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP127" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 4 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP128" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 5 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP129" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 5 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP130" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 5 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP131NW" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP131SW" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP131SE" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP131NE" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP132S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 3 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP132N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 4 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP133" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 3 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP134" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 4 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP135" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 4 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP136" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 2 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP137" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 2 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP138N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 3 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP138S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 3 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP139" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 4 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP140" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 4 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP141" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 5 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP142" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 5 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP143" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 6 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP144" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | | 6 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |

NOTES:
1. LOCATE NEW BACK IN PEDESTALS 5'-7' FROM LEFT EDGE (DRIVER'S SIDE) OF STAND AND A MAXIMUM OF 15'-0" FROM BACK OF STAND TO COMPLY WITH 551.77(A) OF N.E.C.
2. LOCATE NEW PULL THROUGH PEDESTALS 5'-7' FROM LEFT EDGE (DRIVER'S SIDE) OF STAND AND A MAXIMUM OF 16'-0" FROM BACK OF STAND TO THE CENTER POINT BETWEEN THE TWO READS THAT GIVE ACCESS TO AND FROM THE SITE TO COMPLY WITH 551.77(A) OF N.E.C.
3. PROVIDE FEED THRU LUGS.

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P9" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 124 | 50 | 2 |
| 3 | RV SITE 125 NORTH,125 WEST,125 EAST | 150 | 2 |
| 4 | RV SITE 126,127 | 100 | 2 |
| 5 | RV SITE 128,129,130 | 150 | 2 |
| 6 | SPACE | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P6" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 100,101 | 100 | 2 |
| 3 | RV SITE 102,103 | 100 | 2 |
| 4 | RV SITE 104,105 | 100 | 2 |
| 5 | RV SITE 106,107,108 | 150 | 2 |
| 6 | LIGHT POLE SOUTH OF SITE 100 | 20 | 1 |
| 7 | SPACE | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P10" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 131 NW,131 SW, 131 SE, 131 NE | 200 | 2 |
| 3 | RV SITE 132 SOUTH,133 | 100 | 2 |
| 4 | RV SITE 132 NORTH,134,135 | 150 | 2 |
| 5 | SPACE | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P7" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 109,110 | 100 | 2 |
| 3 | RV SITE 111,112 | 100 | 2 |
| 4 | RV SITE 113 NORTH,113 SOUTH | 100 | 2 |
| 5 | RV SITE 114,115 NORTH,115 SOUTH | 150 | 2 |
| 6 | SPACE | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P11" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 136,137 | 100 | 2 |
| 3 | RV SITE 138 NORTH,138 SOUTH | 100 | 2 |
| 4 | RV SITE 139,140 | 100 | 2 |
| 5 | RV SITE 141,142 | 100 | 2 |
| 6 | RV SITE 143,144 | 100 | 2 |
| 7 | SPACE | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P8" NEMA 3R | MAIN BUSS: 600 AMP
VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | GROUND BUS: 300 AMP

| UNIT NO. | HOWARD LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 116,117 | 100 | 2 |
| 3 | RV SITE 118,120 | 100 | 2 |
| 4 | RV SITE 119 NORTH,119 SOUTH | 100 | 2 |
| 5 | RV SITE 121,122,123 | 150 | 2 |
| 6 | SPACE | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

| # | DATE | DESCRIPTION | BY |
|---|---|---|---|

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL SCHEDULES
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE: 04/24/2023
NORTH DAKOTA

| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-601 |
| SHEET NO: | 30 of 32 |



Last edit on: 4/21/2023 12:10 PM by: SDM01521 Drawing Name: F:\Proj\21600\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Schedules - GISP.dwg Layout Name: ELECTRICAL SCHEDULES

## RV PEDESTAL SCHEDULE - ZIEBACH LOOP

| MARK | MFGR | MODEL | AMPERAGE | VOLTAGE | POLES | "P1" CIRCUIT # | "P2" CIRCUIT # | "P3" CIRCUIT # | "P4" CIRCUIT # | "P5" CIRCUIT # | RECEPTACLES | ENCLOSURE TYPE | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| "EP1" | MIDWEST | U075GP6 | 100 | 240 | 2 | 2 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP2W" | MIDWEST | U075GP6 | 100 | 240 | 2 | 3 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP2E" | MIDWEST | U075GP6 | 100 | 240 | 2 | 3 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP3" | MIDWEST | U075GP6 | 100 | 240 | 2 | 4 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP4" | MIDWEST | U075GP6 | 100 | 240 | 2 | 4 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP5" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 5 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP6W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 4 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP6E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 4 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP7A" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 5 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP8" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 3 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP9" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 3 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP10" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP11" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | | 2 | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP12" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 5 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP13" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 5 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP14" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 4 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP15N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 4 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP15S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 4 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP16" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 2 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP17" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 2 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP18" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 6 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP19" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 6 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP20" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP21" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 2 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP22W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 4 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP22E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 4 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP23W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 3 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP23E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 3 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP24N" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 5 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP24S" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | | 5 | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP25" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 4 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP26W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 5 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP26E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 5 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP27" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 4 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP28" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 4 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP29" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP30" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP31W" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP31E" | MIDWEST | U075GP6 | 100 | 240 | 2 | | | 3 | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 1,3 |
| "EP32" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 3 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP33" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 2 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP34" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 3 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP35" | MIDWEST | U075GP6 | 100 | 240 | 2 | 2 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP36" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 2 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP37" | MIDWEST | U075GP6 | 100 | 240 | 2 | | 2 | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP38" | MIDWEST | U075GP6 | 100 | 240 | 2 | 5 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP39A" | MIDWEST | U075GP6 | 100 | 240 | 2 | 5 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP40" | MIDWEST | U075GP6 | 100 | 240 | 2 | 6 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |
| "EP41" | MIDWEST | U075GP6 | 100 | 240 | 2 | 6 | | | | | 50A/2P, 30A/1P, 20A/1P | NEMA 3R | 2,3 |

NOTES:
1. LOCATE NEW BACK IN PEDESTALS 5'-7' FROM LEFT EDGE (DRIVER'S SIDE) OF STAND AND A MAXIMUM OF 15'-0" FROM BACK OF STAND TO COMPLY WITH 551.77(A) OF N.E.C.
2. LOCATE NEW PULL THROUGH PEDESTALS 5'-7' FROM LEFT EDGE (DRIVER'S SIDE) OF STAND AND A MAXIMUM OF 16'-0" FROM BACK OF STAND TO THE CENTER POINT BETWEEN THE TWO READS THAT GIVE ACCESS TO AND FROM THE SITE TO COMPLY WITH 551.77(A) OF N.E.C.
3. PROVIDE FEED THRU LUGS.

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P4" NEMA 3R MAIN BUSS: 600 AMP
VOLTAGE: 120/240 PHASE: 1 WIRE: 3 GROUND BUS: 300 AMP

| UNIT NO. | ZIEBACH LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 20,21 | 100 | 2 |
| 3 | RV SITE 23 EAST,23 WEST | 100 | 2 |
| 4 | RV SITE 22 EAST,22 WEST | 100 | 2 |
| 5 | RV SITE 24 NORTH,24 SOUTH | 100 | 2 |
| 6 | RV SITE 18,19 | 100 | 1 |
| 7 | SPACE | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P1" NEMA 3R MAIN BUSS: 600 AMP
VOLTAGE: 120/240 PHASE: 1 WIRE: 3 GROUND BUS: 300 AMP

| UNIT NO. | ZIEBACH LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 35,1 | 100 | 2 |
| 3 | RV SITE 2 WEST,2 EAST | 100 | 2 |
| 4 | RV SITE 3,4 | 100 | 2 |
| 5 | RV SITE 38,39A | 100 | 2 |
| 6 | RV SITE 40,41 | 100 | 2 |
| 7 | SPACE | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P5" NEMA 3R MAIN BUSS: 600 AMP
VOLTAGE: 120/240 PHASE: 1 WIRE: 3 GROUND BUS: 300 AMP

| UNIT NO. | ZIEBACH LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 10,11 | 100 | 2 |
| 3 | RV SITE 8,9 | 100 | 2 |
| 4 | RV SITE 6 EAST,6 WEST | 100 | 2 |
| 5 | RV SITE 5,7A | 100 | 2 |
| 6 | LIGHT POLES IN COMFORT STATION PARKING | 20 | 1 |
| 7 | COMFORT STATION EX "P12" | 150 | 2 |
| 8 | LIFT STATION EX "P13" | 60 | 2 |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P2" NEMA 3R MAIN BUSS: 600 AMP
VOLTAGE: 120/240 PHASE: 1 WIRE: 3 GROUND BUS: 300 AMP

| UNIT NO. | ZIEBACH LOOP EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 33,36,37 | 150 | 2 |
| 3 | RV SITE 32,34 | 100 | 2 |
| 4 | RV SITE 14,15 NORTH,15 SOUTH | 150 | 2 |
| 5 | RV SITE 12,13 | 100 | 2 |
| 6 | LIGHT POLE SOUTH OF SITE 37 | 20 | 1 |
| 7 | SPACE | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

## CIRCUIT BREAKER DISTRIBUTION PANEL SCHEDULE

MARK: "P3" NEMA 3R MAIN BUSS: 600 AMP
VOLTAGE: 120/240 PHASE: 1 WIRE: 3 GROUND BUS: 300 AMP

| UNIT NO. | EQUIPMENT SERVED | CIRCUIT BREAKER AMP | CIRCUIT BREAKER POLE |
|---|---|---|---|
| 1 | MCB | 600 | 2 |
| 2 | RV SITE 16,17 | 100 | 2 |
| 3 | RV SITE 29,30,31 | 150 | 2 |
| 4 | RV SITE 25,27,28 | 150 | 2 |
| 5 | RV SITE 26 WEST,26 EAST | 100 | 2 |
| 6 | SPACE | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| | | | |

ACCESSORIES:
35K AIC RATING (MINIMUM)

BY | DESCRIPTION | # | DATE

Bartlett&West
3456 E CENTURY AVENUE - BISMARCK, ND 58503
PHONE 701-258-1110 - FAX 701-258-1111
www.bartlettwest.com

# ELECTRICAL SCHEDULES
# GRAHAMS ISLAND STATE PARK

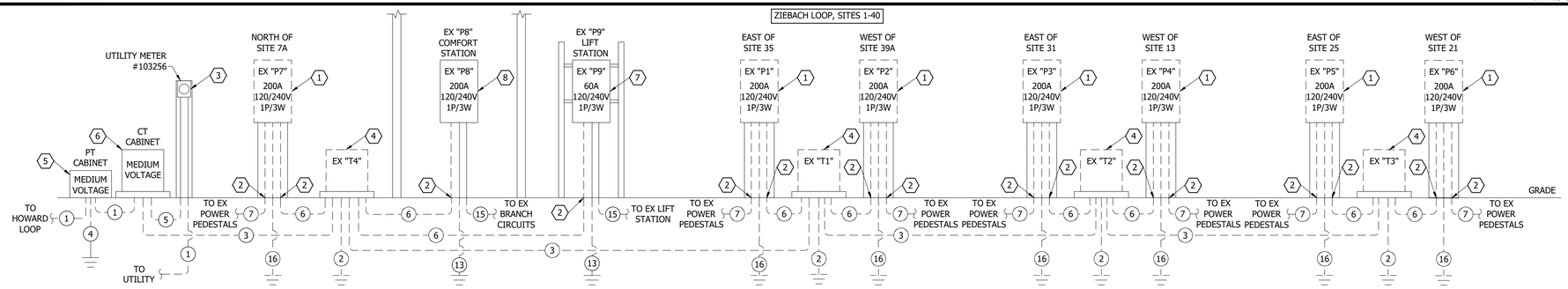
NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10794
DATE: 04-24-2023
NORTH DAKOTA

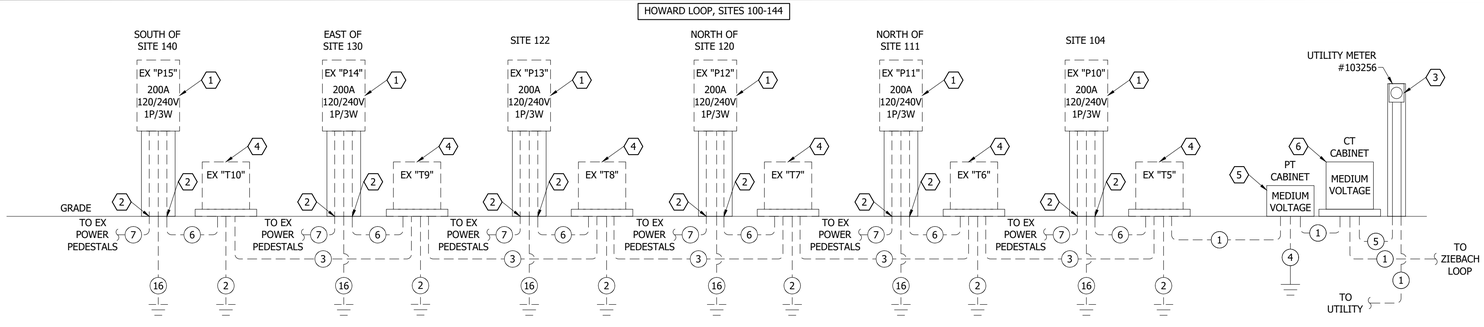
| | |
|---|---|
| DESIGNED BY: | ARH |
| DRAWN BY: | ARH |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-602 |
| SHEET NO: | 31 of 32 |



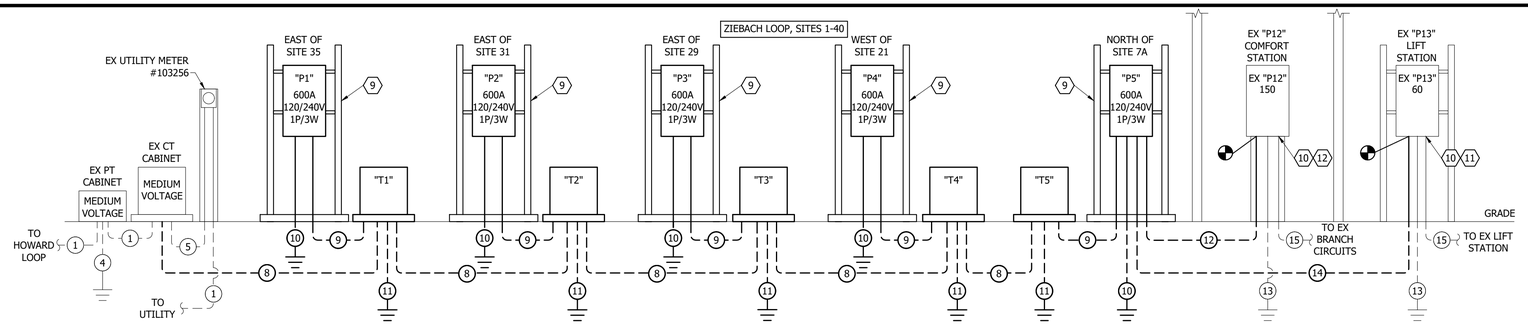
Last edit on: 4/21/2023 12:10 PM by: SDM01521 Drawing Name: P:\Proj\21000\21219\21219.000\AutoCad\Plan Set\Grahams Island\21219.000E - Electrical Schedules - GISP.dwg Layout Name: ELECTRICAL SCHEDULES - GISP (2) Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:58 PM



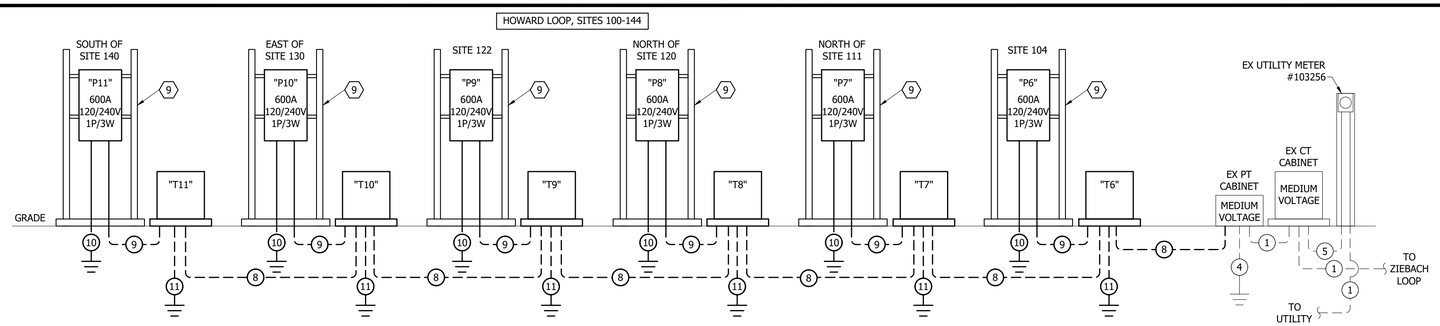

## 1 ZIEBACH LOOP ELECTRICAL DEMOLITION RISER DIAGRAM
NOT TO SCALE




## 2 HOWARD LOOP ELECTRICAL DEMOLITION RISER DIAGRAM
NOT TO SCALE




## 3 ZIEBACH LOOP ELECTRICAL IMPROVEMENT RISER DIAGRAM
NOT TO SCALE




## 4 HOWARD LOOP ELECTRICAL IMPROVEMENT RISER DIAGRAM
NOT TO SCALE

## REFERENCE NOTES:

1. EX PANELBOARD, POWER CONNECTION, WIRE GUTTER, AND ALL ASSOCIATED ABOVE GRADE WIRE AND CONDUIT TO BE REMOVED.
2. EX BELOW GRADE DIRECT BURY WIRE TO BE CUT BACK AND REMOVED TO 1'-0" BELOW GRADE. EX BELOW GRADE DIRECT BURY WIRE BELOW 1'-0" TO BE DISCONNECTED AND ABANDONED IN PLACE.
3. EX 120/240 VOLT UTILITY METER, METER POLE, AND ASSOCIATED WIRE TO REMAIN. METER NUMBER 103256.
4. EX UTILITY TRANSFORMER, EQUIPMENT BASE, AND ASSOCIATED WIRE AND CONDUIT TO BE REMOVED.
5. EX PT CABINET, POWER CONNECTIONS, UNI-STRUT, AND EQUIPMENT PAD TO REMAIN. ALL EX WIRE AND CONDUIT TO BE TO REMAIN UNLESS NOTED OTHERWISE.
6. EX CT CABINET, POWER CONNECTIONS, UNI-STRUT, AND EQUIPMENT PAD TO REMAIN. ALL EX WIRE AND CONDUIT TO BE TO REMAIN UNLESS NOTED OTHERWISE.
7. EX PANELBOARD, POWER CONNECTIONS, ASSOCIATED CONDUIT, BRANCH CIRCUITS, AND UNI-STRUT TO REMAIN. ALL EX WIRE AND CONDUIT TO BE TO REMAIN UNLESS NOTED OTHERWISE.
8. EX PANELBOARD, POWER CONNECTIONS, ASSOCIATED CONDUIT AND BRANCH CIRCUITS TO REMAIN. ALL EX WIRE AND CONDUIT TO BE TO REMAIN UNLESS NOTED OTHERWISE.
9. E/C TO PROVIDE NEW UNI-STRUT MOUNTING STRUCTURE. REFER TO UNI-STRUT MOUNTING DETAIL 4/GI-E-504.
10. EX BRANCH FEEDER WIRE AND CONDUIT TO REMAIN. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
11. E/C TO PROVIDE NEW LABEL "P13" FOR EXISTING PANELBOARD. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN GI-E-116.
12. E/C TO PROVIDE NEW LABEL "P12" FOR EXISTING PANELBOARD. REFER TO ELECTRICAL IMPROVEMENT SITE PLAN GI-E-116.

## GENERAL NOTES:

1. THE EX CONDITIONS HAVE BEEN SHOWN BASED ON CASUAL ON-SITE INVESTIGATION WITH NO GUARANTEE TO THEIR ACCURACY, CONTRACTOR TO BE RESPONSIBLE TO FIELD VERIFY EX CONDITIONS.
2. E/C TO FIELD COORDINATE ALL WORK WITH OTHER TRADES.
3. E/C TO FIELD COORDINATE WITH NORTHERN PLAINS ELECTRIC CO-OP (NPEC) FOR ALL UTILITY COORDINATION.
   NPEC CONTACT: KEVIN LARSON
   PHONE: 701-303-0868
   EMAIL: scottl@mwec.com
4. E/C TO BE RESPONSIBLE FOR A NEW UTILITY ELECTRICAL CONNECTION COSTS.
5. UTILITY TO FIELD VERIFY EX MEDIUM VOLTAGE FEEDERS WILL BE SUFFICIENT FOR NEW LAYOUT. PROVIDE NEW MEDIUM VOLTAGE FEEDERS IF SIZE IS INSUFFICIENT. FIELD COORDINATE WITH E/C.

## FEEDER SCHEDULE:

1. EX UTILITY PRIMARY MEDIUM VOLTAGE FEEDER WIRE AND CONDUIT TO REMAIN.
2. EX UTILITY GROUND WIRE AND CONDUIT TO BE REMOVED.
3. EX MEDIUM VOLTAGE MAIN SERVICE FEEDER WIRE AND CONDUIT TO BE REMOVED.
4. EX MEDIUM VOLTAGE MAIN SERVICE GROUND WIRE AND CONDUIT TO REMAIN.
5. EX MEDIUM VOLTAGE UTILITY METER WIRE AND CONDUIT TO REMAIN.
6. EX UNDERGROUND DIRECT BURY MAIN FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
7. EX UNDERGROUND DIRECT BURY BRANCH FEEDER TO REMAIN AND BE ABANDONED IN PLACE.
8. UTILITY TO PROVIDE PRIMARY MEDIUM VOLTAGE FEEDERS, ASSOCIATED CONDUIT AND TRENCHING. E/C TO COORDINATE WITH UTILITY.
9. 3-350 IN EACH OF 2-3"C. (BASED ON COPPER)
10. 1-2/0G IN 1"C. (BASED ON COPPER)
11. UTILITY GROUND WIRE AND CONDUIT, COORDINATE WITH UTILITY.
12. 3-1/0 IN OF 2"C. (BASED ON COPPER)
13. EX SERVICE GROUND WIRE AND CONDUIT TO REMAIN.
14. 3-4 & 1-10G IN 1"C.
15. EX BRANCH FEEDERS TO REMAIN.
16. EX SERVICE GROUND WIRE AND CONDUIT TO BE REMOVED.

| # | DESCRIPTION | DATE | BY |
|---|---|---|---|

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# ELECTRICAL RISER DIAGRAMS
# GRAHAMS ISLAND STATE PARK

NORTH DAKOTA PARKS & RECREATION DEPARTMENT
ELECTRICAL UPGRADES
BISMARCK, NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
MICHAEL VAN DUYNE
PE-10134
DATE: 04/24/2023
NORTH DAKOTA

| | |
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| DESIGNED BY: | ARH |
| DRAWN BY: | ARH |
| APPROVED BY: | MSV |
| DESIGN PROJ: | 21219.000 |
| CONST PROJ: | |
| SCALE: | AS NOTED |
| DATE: | 04-24-2023 |
| DRAWING NO: | GI-E-603 |
| SHEET NO: | 32 of 32 |



Last edit on: 4/21/2023 1:13 PM by: SDM01521 Drawing Name: F:\Proj\21600\21219\21219.000\AutoCad\Plan Set\Graham's Island\21219.000E - Electrical Riser Diagrams - GISP.dwg Layout Name: E-602 Plotted By: SDM01521 Plotted on: 4/24/2023 2:21:48 PM