



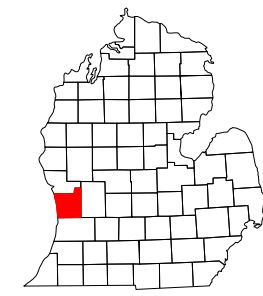
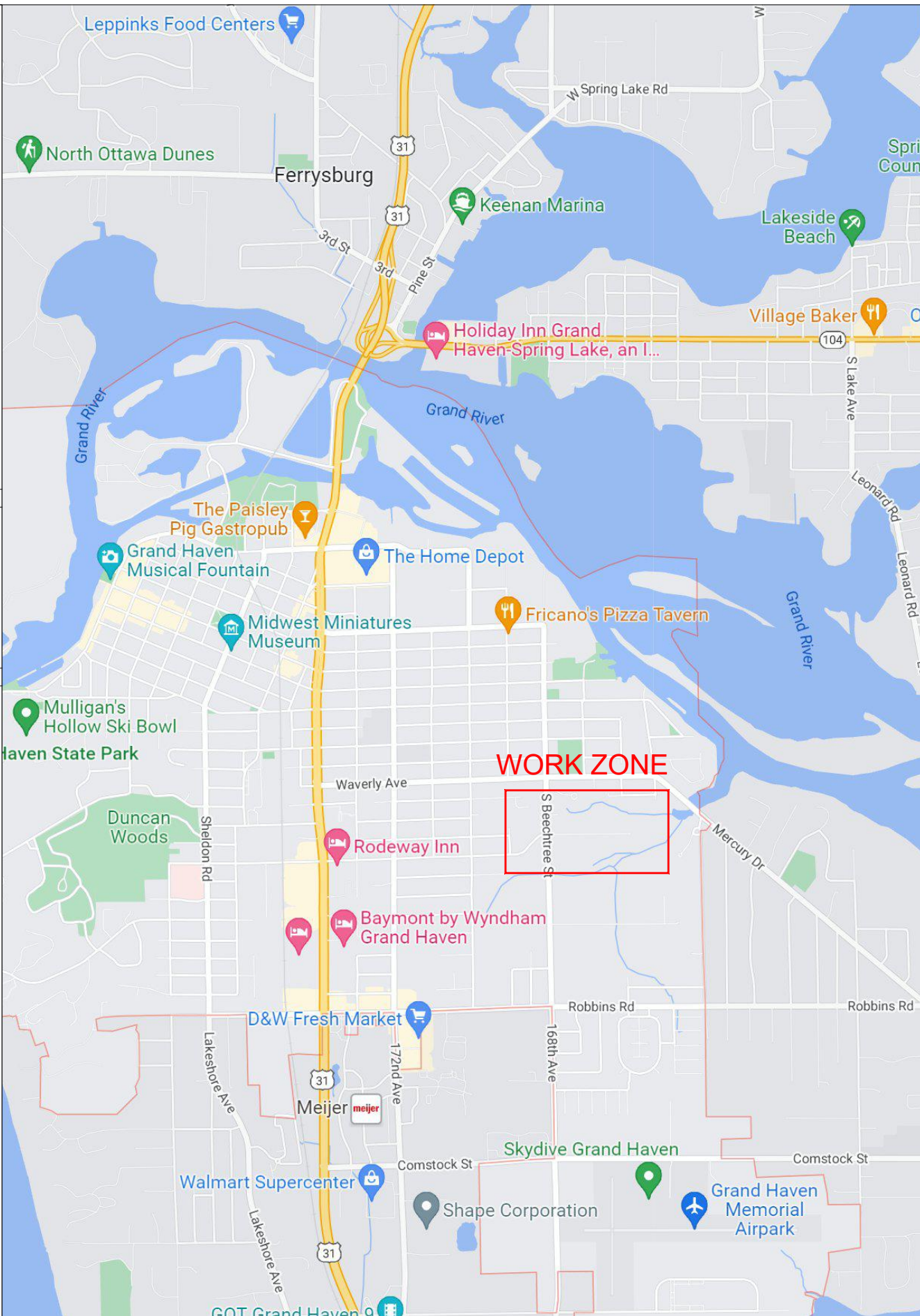
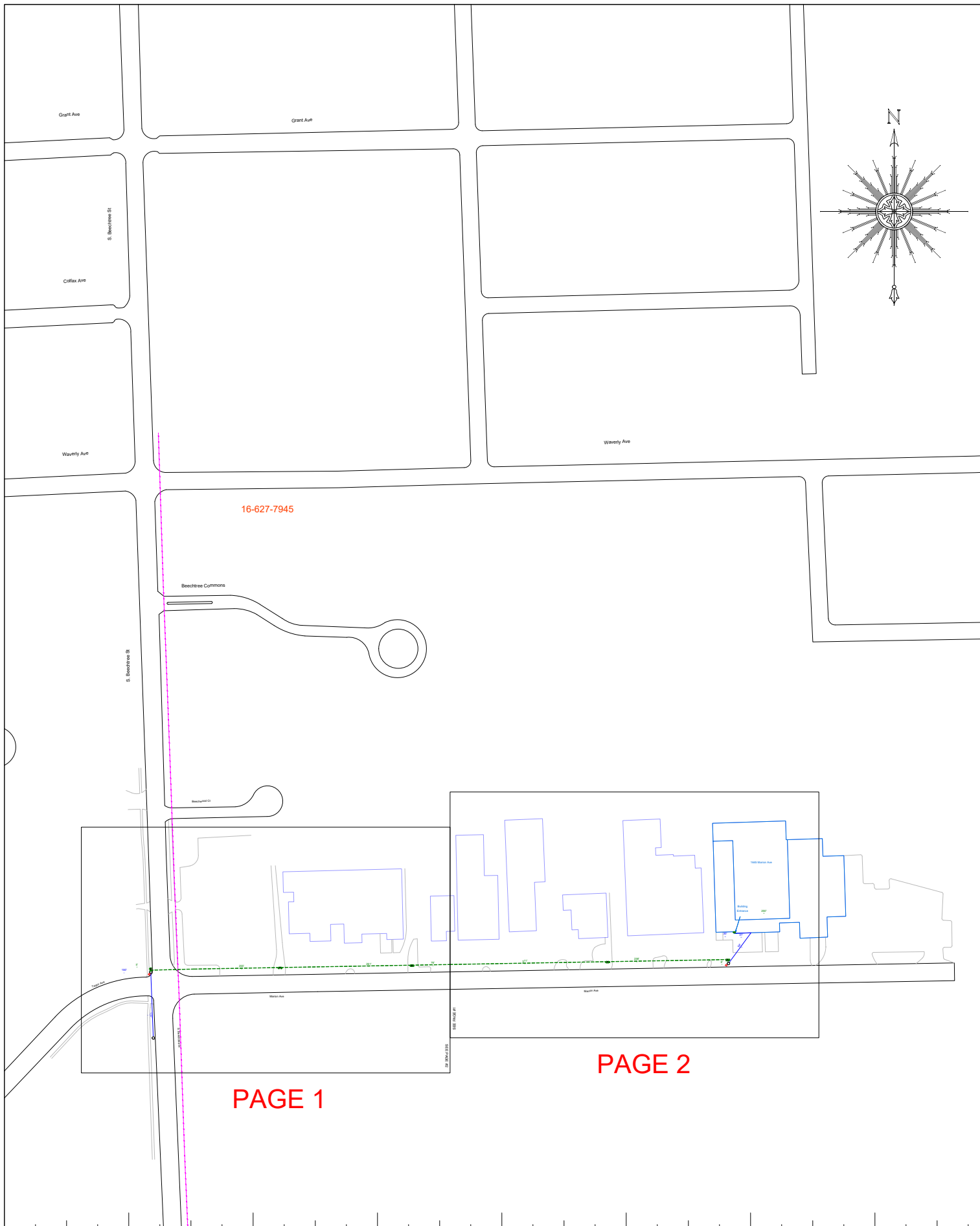
Communications & Data

**KEPS Technologies, Inc. d/b/a ACD.net**  
**FIBER OPTIC CABLE ROUTE**

**Project Number**  
**LC010421FO36765**

[517-999-9999](tel:517-999-9999)

1800 Grand River Ave  
Lansing MI 48906



**ACD**<sub>NET</sub>  
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 MISS DIG 1-800-482-7171 O.U.P.S. 1-800-362-2764 INDIANA811 1-800-382-5544  
 CAD Standard Ver. 72919

<b>Project Manager</b>	
T. Brown	
<b>Permitting</b>	
T. Brown	
<b>Transport Manager</b>	
G. Gould	
<b>Drawn By</b>	<b>Date</b>
K. Ngo	7/22/22
<b>As Built</b>	<b>Date</b>

<b>Revisions</b>			
REV #	DESCRIPTION	BY	DATE
1	Revision	KN	7/25/22

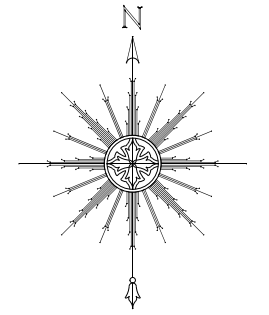
**Exhibit:** N/A

Remarks:				PEACHTREE ID: 36765	
SCALE: 1" = NTS		TRS:			
COUNTY: Ottawa	TOWNSHIP:	CITY: Grand Haven	PROJECT ID: LC010421FO36765	CUSTOMER NUMBER: 10421	

**GRID KEY**

**CONSTRUCTION NOTES**

1. CONTRACTOR SHALL EMAIL \_\_BROWN.TARA@ACD.NET\_\_ WITH DAILY STATUS UPDATES AND ONCE WORK IS COMPLETE
2. MUNICIPALITY MUST BE NOTIFIED AT LEAST 48 HOURS BEFORE ANY WORK COMMENCES
3. ALL APPROPRIATE PERMITS AND ASSOCIATED DRAWINGS SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION
4. NOTIFY THE APPROPRIATE UTILITY NOTIFICATION SERVICE 72 HOURS PRIOR TO CONSTRUCTION.  
MICHIGAN- MISS DIG (1-800-482-1711), OHIO- O.U.P.S. (1-800-362-2764) OR INDIANA- INDIANA811 (1-800-382-5544)
5. ALL UTILITIES MUST BE FIELD VERIFIED
6. ALL HANDHOLES ARE TO INCLUDE 150' OF COILED FIBER FOR STORAGE
7. NEW INSTALLATION SHALL MAINTAIN 18" CLEARANCE FROM ALL EXISTING UTILITIES UNLESS NOTED OTHERWISE
8. ALL ROAD AND DRIVEWAY CROSSINGS WILL BE DIRECTIONAL BORED
9. CONSTRUCTION SHALL NOT DEVIATE FROM APPROVED PLANS WITHOUT WRITTEN CONSENT FROM BOTH THE MUNICIPALITY AND AN AUTHORIZED ACD.NET REPRESENTATIVE
10. PROPER SIGNAGE AND TRAFFIC CONTROL IS REQUIRED BEFORE STARTING ANY WORK WITHIN THE PUBLIC RIGHT OF WAY
11. ALL BACKFILL MATERIAL WITHIN THE ROAD RIGHT OF WAY OR NEAR SIDEWALKS AND PATHWAYS SHALL MEET THE REQUIREMENTS OF MDOT CLASS II MATERIAL, COMPACTED TO 95% OF ITS MAXIMUM DENSITY IN SUCCESSIVE LAYERS THAT ARE NO MORE THAN 12" THICK, UNLESS OTHERWISE AUTHORIZED
12. ALL SODDED AREAS THAT MAY DISTURBED DURING CONSTRUCTION ARE TO BE RESTORED WITH 3" QUALITY TOP SOIL, SEED AND MULCH
13. CONTRACTOR SHALL PROVIDE AS-BUILTS ON ALL WORK WITHIN 5 BUSINESS DAYS OF COMPLETION



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CAD Standard Ver. 72919

**Project Manager**

T. Brown

**Permitting**

T. Brown

**Transport Manager**

G. Gould

**Drawn By      Date**

K. Ngo                      7/22/22

**As Built      Date**

**Revisions**

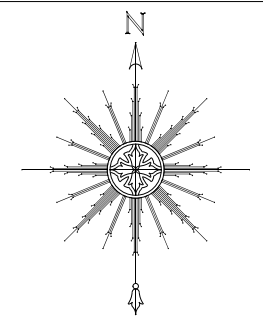
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**Exhibit:** N/A

Remarks:				PEACHTREE ID: 36765	
SCALE: 1" = NTS		TRS:			
COUNTY: Ottawa	TOWNSHIP:	CITY: Grand Haven	PROJECT ID: LC010421FO36765	CUSTOMER NUMBER: 10421	

**NOTES**

Proposed Anchor Distance and Direction		Fiber Count W/ Segment Number		Man Hole		<b>Typical Line Types</b> Rail Road Tracks Proposed Underground Fiber Existing Underground Fiber Right Of Way Boundary Side Walk and Driveway Fiber Design Line Aerial Fiber Center Line Water Main Forced Water Main Storm Sewer Sanitary Sewer Gas Main Foreign UG Fiber AT&T UG Fiber UG Electric Oil Line Fence TRS Boundary Civil Boundary Property Boundary Water Boundary
Proposed ACD Communications Poles		Fiber Termination Point		Storm Drain		
Proposed ACD NON Communications Pole		ACD Splice Case Six Way		ACD Regen Cabinet		
Colocation Poles (ACD Communication Equipment on Existing Poles)		ACD Splice Case Four Way		TRS Section Corner		
Joint Use Pole NON Transformer		ACD Splice Case Three Way		Fire Hydrant		
Joint Use Pole Transformer		ACD Splice Case Two Way		Location Address		
Foreign Pole Indicator		ACD Fiber Tap Capsule		Foliage		
Joint Use Pole NON Transformer- UNUSED		ACD RE-Box		Centerline Marker		
Joint Use Pole Transformer- UNUSED		Foreign Splice Case		Station Marker		
Street Light		Storage Loop w/ Footage and Segment		Use of Double Dead End		
Existing Traffic Signal Pole		ACD Buried Cable Marker				
Pole Number Marker		ACD Hand Hole 17" x 12"				
Proposed Riser		ACD Hand Hole 24" x 13"				
Make Ready Symbol w/ Attachment and Sag Heights		ACD Hand Hole 24" x 36"				
Down Ground		ACD Hand Hole 30" x 48"				
Bonding Clamp		Foreign Hand Hole				
Fiber Overlash		Proposed Bore Pit Location				
Overhead Guy Marker		Communications Tower				
Span Length and Segment ID						



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**Transport Manager**

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**Drawn By Date**

K. Ngo 7/22/22

**As Built Date**

**Revisions**

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Our Match Lines can be found in the lower right hand corner and represents the neighboring page numbers.

WEST PAGE	NORTH PAGE	EAST PAGE
	PAGE	
	SOUTH PAGE	

Remarks: PEACHTREE ID: 36765

SCALE: 1" = NTS TRS: COUNTY: Ottawa TOWNSHIP: CITY: Grand Haven PROJECT ID: LC010421FO36765 CUSTOMER NUMBER: 10421

**Exhibit: N/A**

SYMBOLS
LEGEND

## General Site Preparation For Installing Hand Holes (All Sizes)

These guidelines for installing ACD Hand holes are provided as a general guide and actual site conditions may warrant the use of additional installations procedures not covered here. Follow all project specifications when installing ACD Hand holes.

1. Excavate the earth approximately 12" wider and longer than the hand hole as well as 6" deeper than the depth of the hand hole. Fill the excavation with a 6" base of pea stone or crushed rock to ensure proper drainage. Tamping is recommended to provide a compact and level surface for the hand hole to be placed upon.
2. Wood bracing should be used inside the hand hole to ensure minimal sidewall deflection when backfilling. Temporary bracing can be constructed out of construction grade lumber. Start by using (1) 2x4 to brace the end walls and (2) 2x4s to brace the side walls, finish with (1) 2x4 from one side of the ring to the other. Do not install the bracing to tight to prevent damage.
3. Lift the Hand hole into the excavation using the lifting bolts or lifting wires. Check the top of the box is flush with the finished grade. Any necessary adjustments should be made to bring it to finished grade.
4. Backfill with clean, loose soil and compact to a minimum of 90%-95% compaction. Remove bracing materials and secure cover using included hardware.

## General Hand Hole Notes (All Sizes)

1. All Hand holes are to contain 150' of coiled up storage.
2. All Conduits are to be brought up through the bottom of the hand hole. No Conduits are to penetrate the sides of the enclosure. All conduits are to be tagged with the colored zip ties following this system:  
 Red= Riser  
 Blue= North  
 Yellow= West  
 Green= South  
 Black= East
3. All Hand holes are to contain a 5/8" DIA x 8' grounding rod to be placed in a corner 3" away from each side and 18" above tamped earth.

## Underground Coupler Detail

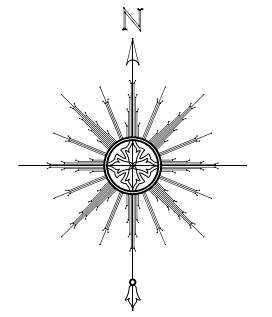
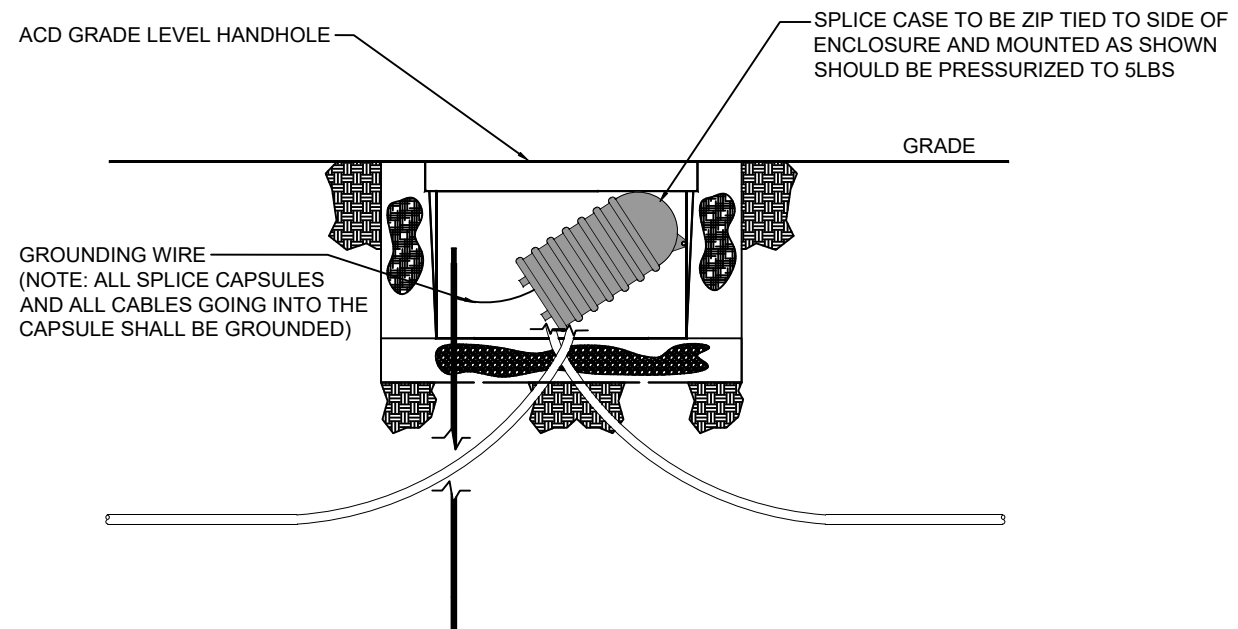
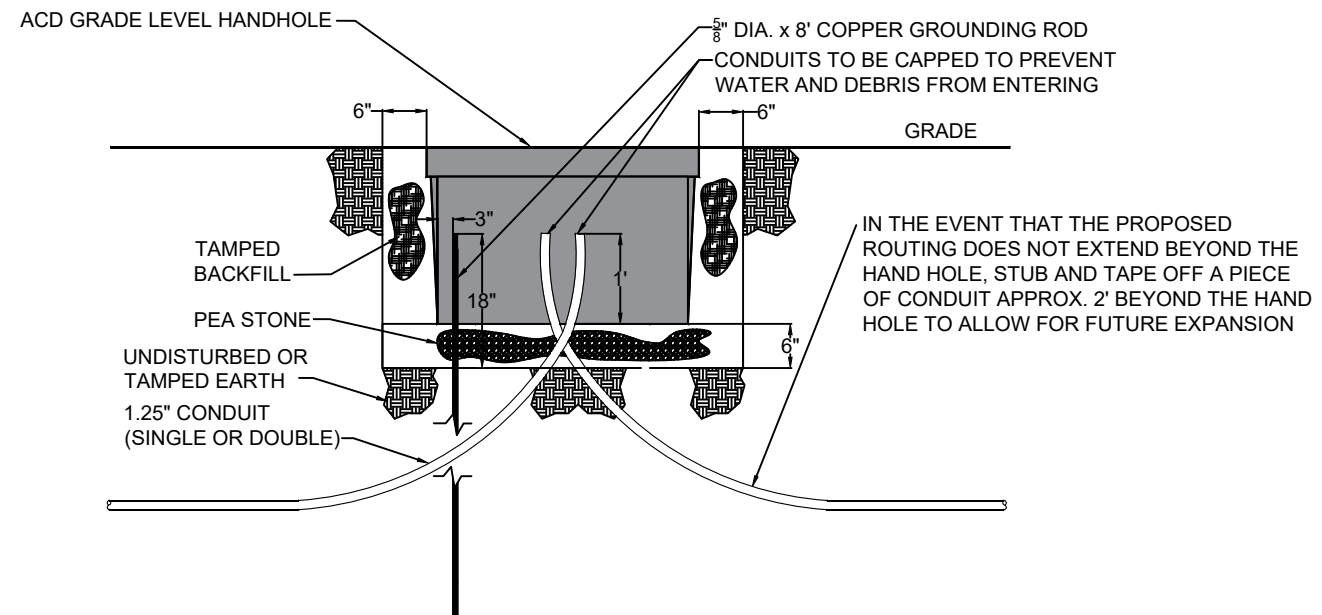
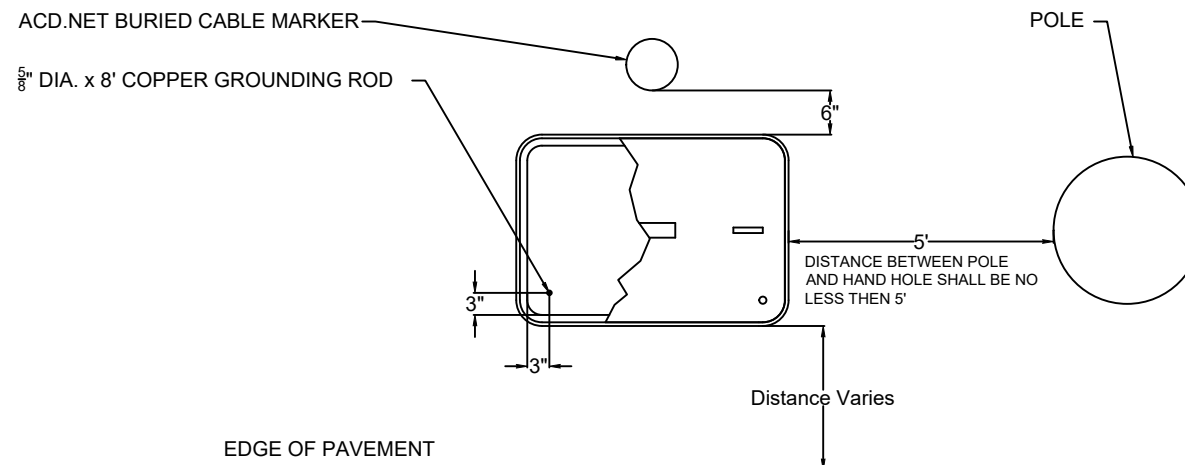
# PUSH2CONNECT™ Coupler

## Do Not Unscrew!

**Push-On-Only!**  
 (Loosening collars prior to installing can cause improper installation, create air loss, or coupler failure)

**Air Tight - Water Tight**  
 Tested to **GREATER THAN 1500#**  
**Pull-Out**  
**GREATER THAN 450 (psi) air pass-through**

Couplers for the Following Sizes	Duct OD	Color	Box Qty	Part Number
1" Smoothwall HDPE	1.315	Yellow	85	P2C-1.315
1.25" Smoothwall HDPE	1.66"	Blue	100	P2C-1.66
1.25" Smoothwall HDPE True Sized	1.58"	Black	100	P2C-1.58
2" Smoothwall HDPE	2.375"	Orange	24	P2C-2.375
Transition Coupler 1.25" to 1.25"	1.58" to 1.66"	Black AND Blue	100	P2C-1.66-1.58trans



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### Project Manager

T. Brown

### Permitting

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### Transport Manager

G. Gould

### Drawn By Date

K. Ngo 7/22/22

### As Built Date

### Revisions

REV #	DESCRIPTION	BY	DATE
1	Revision	KN	7/25/22

**Exhibit:** N/A

Remarks:

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TRS:

COUNTY: Ottawa

TOWNSHIP:

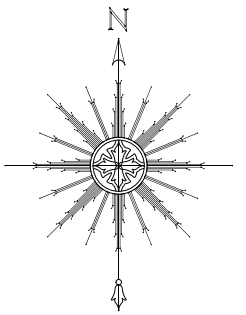
CITY: Grand Haven

PROJECT ID: LC010421FO36765

CUSTOMER NUMBER: 10421

**HANDHOLE INSTALL**

DETAIL



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**Drawn By** K. Ngo

**Date** 7/22/22

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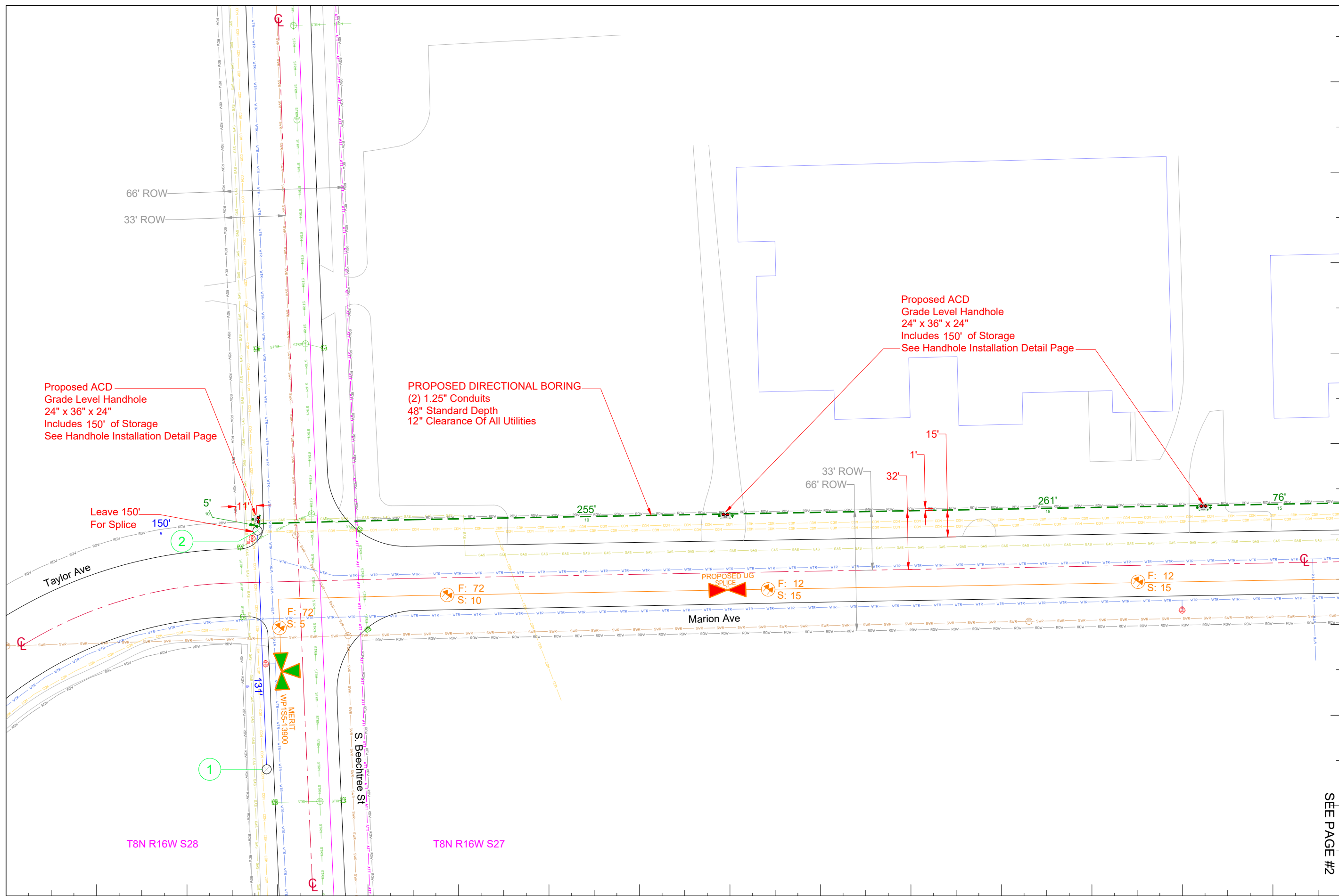
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SEE PAGE #2

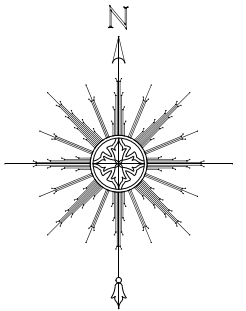
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Remarks: PEACHTREE ID: 36765

SCALE: 1" = 50' TRS: T8N R16W S27 T8N R16W S28

COUNTY: Ottawa TOWNSHIP: CITY: Grand Haven PROJECT ID: LC010421FO036765 CUSTOMER NUMBER: 10421



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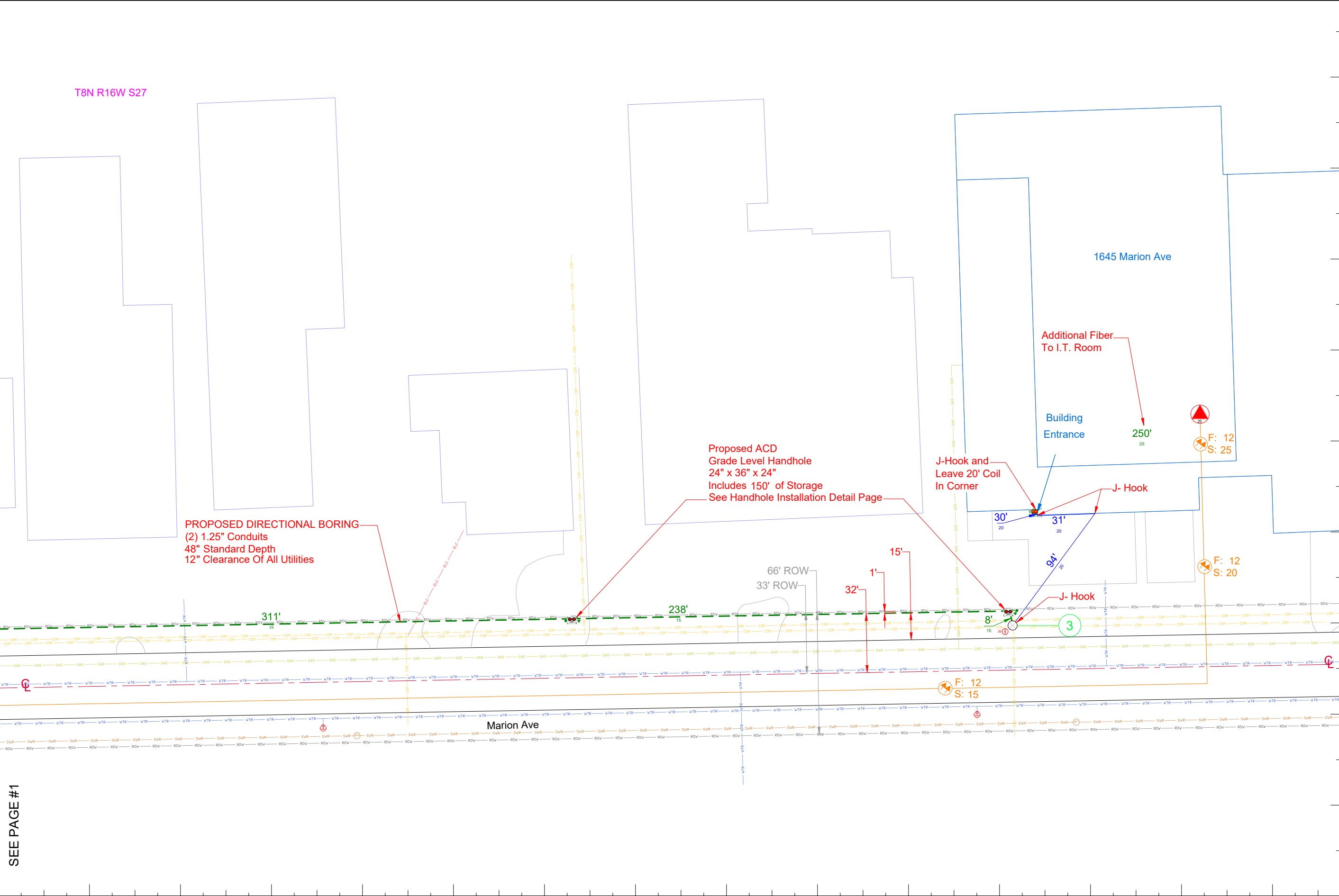
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PAGE 2