



# **ABOUT US...**

Toro Blanco designs and provides infrastructure for Smart Community solutions including 5G, Broadband, EV charging, and IoT applications.

We believe in a holistic, community first approach to infrastructure deployments, and that installations like Small Cells should be the backbone of a Smarter City, not cheapen your ROW.

Engagement on a detailed level is critical to Toro Blanco Group, and we've spent considerable time working on proposals for Telluride and many thoughtful hours with the planning community in town.

We hope you'll review us and our thoughts on the Town of Mountain Village as positively as we view your beautiful town.

# Telluride Town of Mountain Village

# Background

Toro Blanco has worked with Park City, UT and Telluride, CO to prepare for the latest deployments of 5G and modern technology with the least visible impact to the beautiful esthetics of these mountain towns.

We'd like to take this same approach to the Town of Mountain Village and based on our discussions propose the following for minimizing the impact of telecommunications.

# **Guiding Principles**

Infrastructure for Town of Mountain Village:

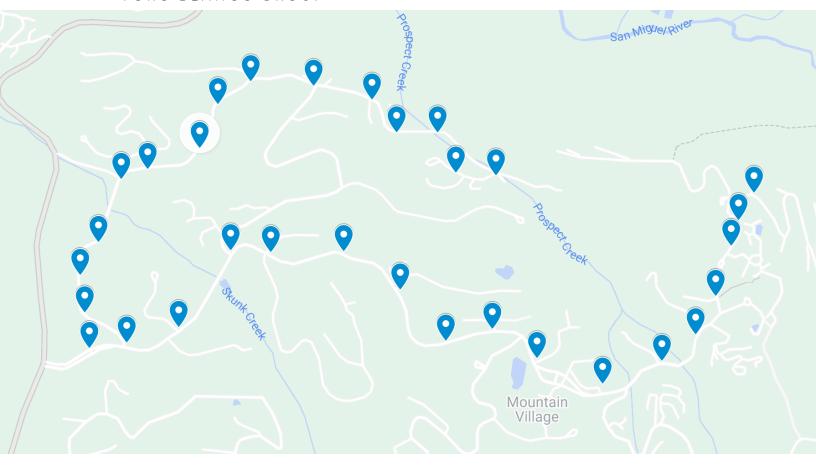
- · Limit infrastructure to ROW
- Avoid Residential Areas
- · Prioritize gathering areas, high visitor traffic and bus stops
- · Install slimline structures similar to Telluride that will blend into existing surroundings
- Establish telecom backbone available for Town, Public Safety and future IT needs
  - · Wayfinding, kiosk, security, SAR, Smart Community capabilities

# **Proposal**

Two main lines of infrastructure development, placed in the ROW

- · Mountain Village Blvd
- Adams Ranch to Meadows

We would ask permission to permit a collection of locations for a multi-carrier system using a unique design for the Town of Mountain Village that prioritizes the main thoroughfare, incorporates bus stops, and will facilitate coverage for key areas of the Town of Mountain Village with minimal impact to the viewshed.



# **OUTDOOR NETWORK**

30 Nodes throughout town connected by a hybrid power/Fiber cable A central location to house radio, either in existing facilities or in concealed outdoor furniture.

- · Network will allow for Multi-carrier use
- · Negate the need for separate poles for separate carriers
- Minimize construction and multiple telecom projects
- Incorporate Municipal network needs or future use

# **CAPABILITIES**

Multi-Band Coverage

 Up to 8 (Eight) Bands of Coverage, Operating Frequencies from 380 – 2700MHz, 3.5GHz, 3.7GHz, and 28GHz or 39GHz.

Fiber Connectivity

- Connectivity throughout Main St and commercial areas also available for municipal use DC Power Redundancy
- Cleaner power with built-in redundancies and battery backup for less network downtime.

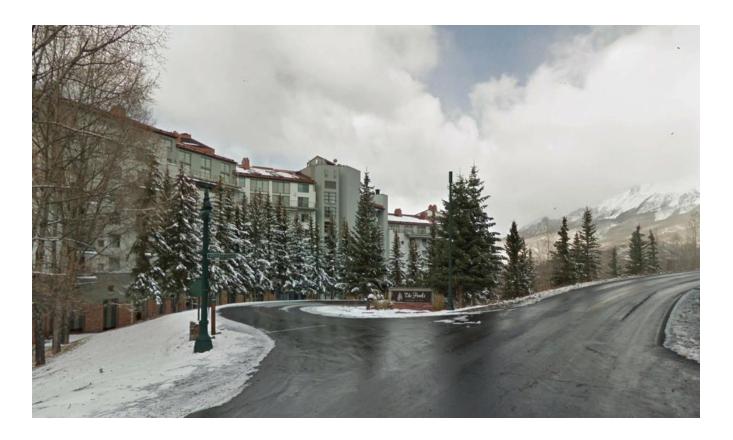
# **INITIAL NODE SELECTION**

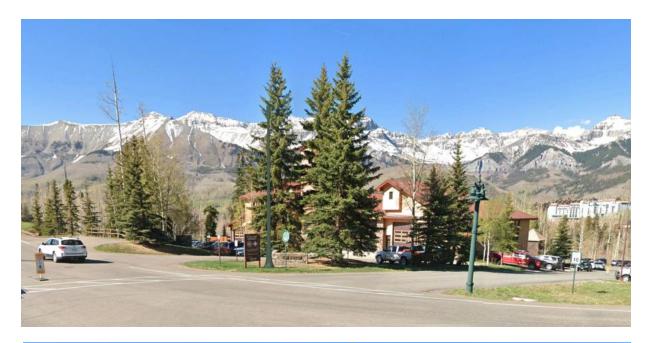
# 31 POTENTIAL LOCATIONS IDENTIFIED

These first locations selected based on suitability include some existing light poles. This is just an initial pass, and we would like your input on site selection and the viability of each location.

# The recommended locations:

LAT	LON	CROSS-STREET	COMMENTS	SITE ID	NEW,
					REPLACEMENT
					, ATTACH TO
					EXISTING, OR
					LUMINAIRE
37.9393925	-107.84629	Mountain Valley Blvd & Sunny Ridge Pl			NEW POLE
37.9383817	-107.84702	Mountain Valley Blvd & Country Club Dr			NEW POLE
37.9374314	-107.84738	Mountain Valley Blvd & Madeline Hotel near Comm Boxes			NEW POLE
37.9355714	-107.84809	Mountain Valley Blvd & Aspen Ridge Dr Replace wayfinding	pole Bus Sto	р	NEW POLE
37.9341475	-107.84904	Mountain Valley Blvd & cross path near Vischer Dr			NEW POLE
37.933162	-107.85065	Mountain Valley Blvd & Prospect Creek near Comm Boxes			NEW POLE
37.9323008	-107.85341	Mountain Valley Blvd & Telluride Outfitters			NEW POLE
37.9332527	-107.85651	Mountain Valley Blvd & Fire Department Bus Stop			NEW POLE
37.9343561	-107.85863	Mountain Valley Blvd & Lakespur Ln			NEW POLE
37.9339084	-107.8608	Mountain Valley Blvd & Lower Galloping Goose			NEW POLE
37.9357935	-107.86296	Mountain Valley Blvd & Victoria Dr			NEW POLE
37.9372343	-107.86562	Mountain Valley Blvd & Petra Domus			NEW POLE
37.9371926	-107.86903	Mountain Valley Blvd & Aj Dr			NEW POLE
37.9372484	-107.87096	Mountain Valley Blvd & Russell Dr near Comm boxes			NEW POLE
37.9344004	-107.87337	Mountain Valley Blvd & Pennington Pl			NEW POLE
37.933836	-107.87584	Mountain Valley Blvd & Adams Ranch Rd near Comm boxes			NEW POLE
37.9336327	-107.87757	Mountain Valley Blvd & Turnaround near entry			NEW POLE
37.9349532	-107.87779	Adams Ranch Rd near 130			NEW POLE
37.9363524	-107.878	Adams Ranch Rd near 140			NEW POLE
37.9375681	-107.87715	Adams Ranch Rd near 150			NEW POLE
37.939908	-107.87607	Adams Ranch Rd near 176 Skunks Creek			NEW POLE
37.9402786	-107.87483	Adams Ranch Rd near Adams Way Bus Stop			NEW POLE
37.9410662	-107.8724	Adams Ranch Rd near 214			NEW POLE
37.9426913	-107.87155	Adams Ranch Rd near 220			NEW POLE
37.9435195	-107.87	Adams Ranch Rd & Lawson Overlook Bus Stop			NEW POLE
37.9433525	-107.86703	Adams Ranch Rd & Double Eagle Bus Stop			NEW POLE
37.9428379	-107.8643	Adams Ranch Rd & Lupine Ln			NEW POLE
37.9416173	-107.86311	Adams Ranch Rd & Coyote Ct			NEW POLE
37.941624	-107.8612	Adams Ranch Rd & The Boulders Bus Stop			NEW POLE
37.9400347	-107.85843	Adams Ranch Rd EV Charging Station			NEW POLE
37.9401326	-107.86033	Meadows Post Office			NEW POLE













\*Small cells in Telluride don't have to look like this.

# CHALLENGES

# of Traditional Small Cell Builds

Single Carrier Installations

Individual carrier nodes without the equipment sharing provided by a neutral host ODAS mean three to four times the overall amount of infrastructure, meaning more poles and more antennas cluttering the Telluride ROW.

Disjointed Build Out
Individual carrier build outs mean a piecemeal approach to connectivity in Telluride. Instead of one build that encompasses the whole town, like an ODAS, each carrier comes in separately to deploy their own equipment individually, meaning repeatedly tearing up streets and sidewalks.

By implementing one network across the entire town, we ensure uniformity across every antenna and pole installation. Individual carrier installations look different not only from carrier to carrier, but also from year to year, resulting in a myriad of installation types that clutter the Telluride ROW.

# O-DAS BENEFITS

Minimize Net Growth of Poles Multi-tenant Capability Design Consistency

- Consistent, City-wide Solutions
- Multiple Carriers on every installation, sharing antennas, fiber,
   & power
- Custom Smart Poles & Concealments
- Smart City Infrastructure
- Open Access Network / Open Access Fiber
- 5G Readiness and Deployment
- Holistic, advanced system design
- Historical Accuracy, Aesthetic Integration
- Sustainable, climate resilient deployment
- DC micro grid critical communications networks stay online, even during power outages



# POLE DESIGN

# **MULTI-CARRIER STAND ALONE POLE**



Design capable of accommodating 1-2 side mount lanterns for pedestrian lighting.



# **OUR ASK**

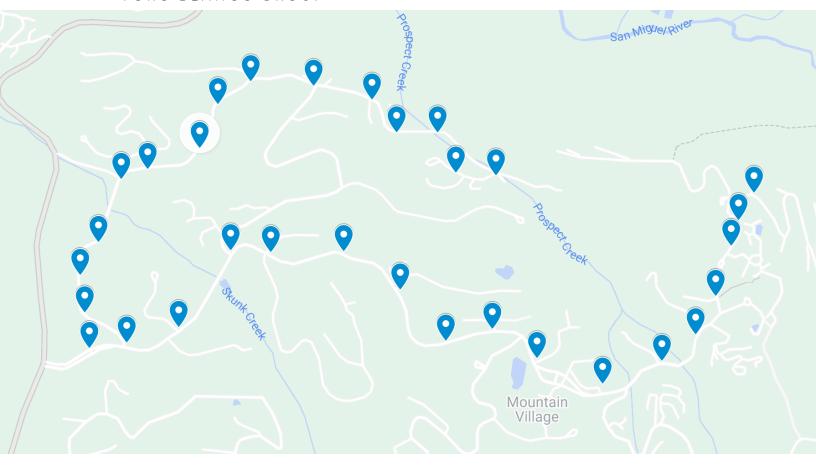
Contact:

Terry Cope Managing Partner terry@toroblancogroup.com M: 678.818.3797

Zack Hodgin
Managing Director
zack@toroblancogroup.com
M: 828.260.6238

Toro Blanco would like permission to apply for permits for these locations with the intent to build out the network within the next 12 – 24 months.

Advantages for The Town of Mountain Village include a multi-carrier network that minimizes the amount of infrastructure needed, prevents multiple project in town, and gives the town access to a network that can incorporate future IT and public safety projects.



# **OUTDOOR NETWORK**

30 Nodes throughout town connected by a hybrid power/Fiber cable A central location to house radio, either in existing facilities or in concealed outdoor furniture.

- · Network will allow for Multi-carrier use
- · Negate the need for separate poles for separate carriers
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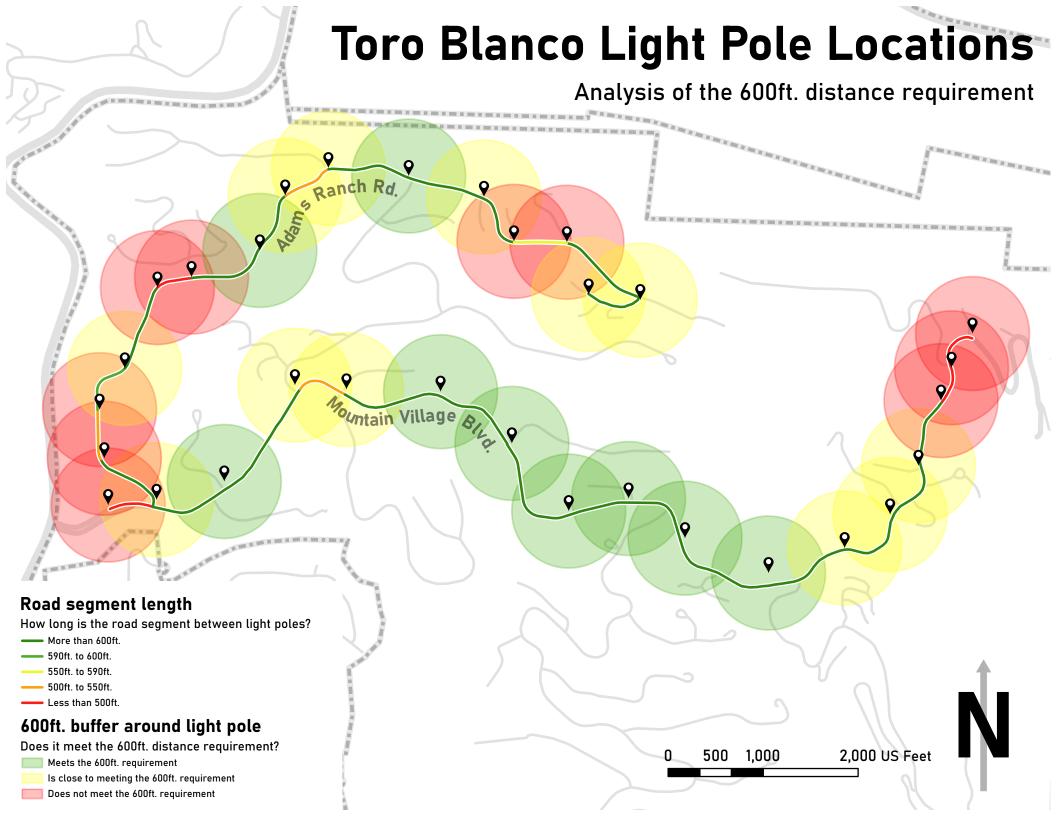
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	SHEET LIST TABLE
SHEET NO:	SHEET TITLE
COV-1	COVER / TITLE SHEET
LEG-1	LEGEND
SP-1	EXHIBIT PHOTO
SP-2	SITE PLAN
EV-1	PHOTO SIMULATION
EV-2	SUB-SURFACE VAULT DIAGRAM
EQ-1	EQUIPMENT DETAILS
EQ-2	EQUIPMENT DETAILS
EQ-	EQUIPMENT DETAILS
EQ-2	EQUIPMENT DETAILS
EQ-2	EQUIPMENT DETAILS
F-1	FOUNDATION DETAILS
TC-1	VEHICULAR TRAFFIC CONTROL PLAN
TC-2	PEDESTRIAN SAFETY PLAN
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES

### **GENERAL NOTES**

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE . A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FO ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OF FFFECT ON DRAINAGE: NO SANITARY SEWER SERVICE POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

PRIOR TO ANY CONSTRUCTION WORK, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE

THIS DESIGN IS SUBJECT TO ANY JURISDICTIONAL AND OWNER APPROVALS INCLUDING JURISDICTIONAL REQUIREMENTS, RF EQUIPMENT CONFIGURATION, AND FINAL UTILITY COORDINATION WITH PUBLIC POWER AND UTILITY PROVIDERS/CONTRACTOR TO CONFIRM FINAL REQUIREMENTS WITH OWNER.

CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION OR CLEARING

CONTRACTOR SHALL CALL "ONE CALL" AT 1-800-662-4111 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET RIGHT OF WAYS.

NO PORTION OF THIS SITE IS LOCATED WITHIN PARKLAND OR LAND USED FOR PARK PURPOSES (IF SUCH LAND IS INCLUDED. DOCUMENTATION OF PARKS AND RECREATION DEPT APPROVAL IS REQUIRED AT THE TIME OF SUBMITTAL FOR GENERAL PERMIT

THERE ARE NO CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT. A FIELD INVESTIGATION HAS NOT BEEN PERFORMED AS PART OF THIS PROJECT AND IS NOT

APPROPRIATE EASEMENTS/APPROVALS MUST BE SECURED AND DOCUMENTED FOR PROJECT AREAS LOCATED OUTSIDE OF RIGHT OF WAYS. NO WORK SHALL BE PERFORMED WITHIN THESE AREAS INTIL ASSOCIATED RIGHT OF ENTRY HAS BEEN SECURED. ADDITIONALLY, PROJECT PORTIONS IMPACTED BY LACK OF RECORDED DOCUMENT NUMBERS WILL NOT BE CONSIDERED FOR

TRAFFIC CONTROL NOTE PRIOR TO INSTALLATION. OR THE START OF CONSTRUCTION. THE APPLICANT MUST SUBMIT TO THE RIGHT OF WAY MANAGEMENT DIVISION FOR REVIEW AND ORTAIN APPROVAL OF A TRAFFIC CONTROL PLAN LIPDATED TO SHOW CURRENT CONDITIONS

## DO NOT SCALE DRAWINGS

CONTRACTORS SHALL VERIEY ALL PLANS (F) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

# TBG MULTI-CARRIER WIRELESS NODE

**5G DECORATIVE NEW POLE** 

# TORO BLANCO GROUP MULTI-CARRIER WIRELESS PROJECT SUMMARY

TORO BLANCO GROUP, LLC PROPOSES TO INSTALL A NEW DECORATIVE 5G POLE CAPABLE OF ACCOMMODATING TELECOMMUNICATIONS EQUIPMENT WITHIN THE EXISTING PUBLIC RIGHT-OF-WAY. THE PROPOSED DESIGN IS CAPABLE OF ACCOMMODATING THE EQUIPMENT NECESSARY FOR UP TO FOUR (4) CARRIER SMALL CELLS. THE PROPOSED DESIGN IS TECHNOLOGICALLY CAPABLE OF ACCOMMODATING BOTH 4G AND 5G TECHNOLOGIES SIMULTANEOUSLY, AS WELL AS ANY NECESSARY CITY-OWNED SMART CITY DEVICES (SUCH AS, BUT NOT LIMITED TO, CAMERAS, WATER SENSORS, TRAFFIC SENSORS, POLLUTION MONITORS, ETC).

THE SCOPE OF THE INSTALLATION WILL CONSIST OF THE FOLLOWING:

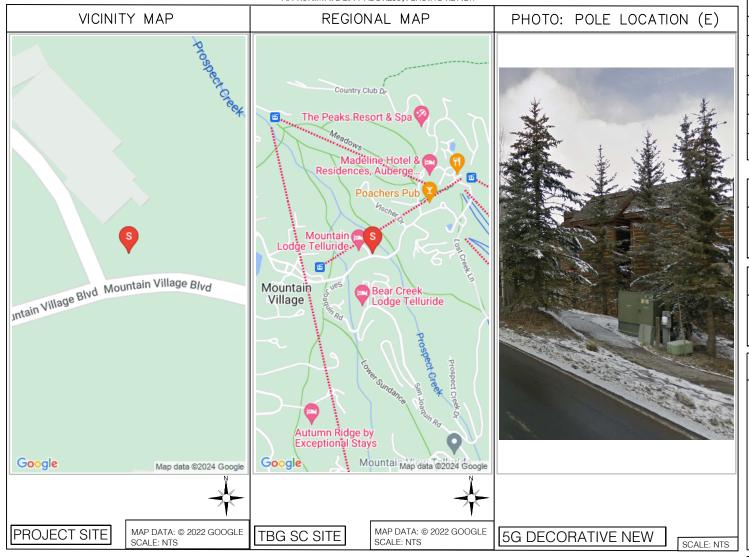
- INSPECT EXISTING POLE AND FOUNDATION AND ESTABLISH STRUCTURAL FEASIBILITY FOR ANTENNA ATTACHMENTS, REPLACE IF NECESSARY
  - INSTALL A NEW, FULLY CONCEALED SUB-SURFACE UTILITY ENCLOSURE WITH PROPOSED 5G TELECOMMUNICATIONS EQUIPMENT RESTORE SITE TO ORIGINAL OR BETTER CONDITION

# TBG ID US-CO-7105

**CROSS STREETS:** 

# Mountain Valley Blvd & cross path near Vischer Dr **ADDRESS:**

# 457 MOUNTAIN VILLAGE BLVD



PRELIMINARY PLANS - SUBMITTAL 01:

3/10/2024

PROJECT INF	ORMATION
VB ID:	US-CO-7105
LATITUDE:	37.933162
LONGITUDE:	-107.850654
CROSS STREET:	Mountain Valley Blvd & cross pa
E911 ADDRESS:	457 MOUNTAIN VILL (APPROX)
FEMA FLOOD MAP	
CITY, STATE, ZIP:	MOUNTAIN VILL# 81435
COUNTY:	SAN MIGUEL COUNTY
JURISDICTION:	MOUNTAIN VILLA
PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
APPLICANT:	TORO BLANCO GROUP, LLC ATLANTA, GA 30360 PHONE: 678-818-3797

POLE/LUMINAIRE DETAILS

EXISTING OVERALL POLE HEIGHT

EXISTING LUMINAIRE HEIGHT (T/)

EXISTING SIGNAGE HEIGHT (B/)

PROPOSED OVERALL STRUCTURE HEIGHT

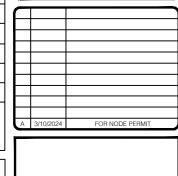
EXISTING POLE COLOR

XISTING POLE MATERIAL

# oro Blanco PHONE: 678-818-3797 TBG ID US-CO-7105

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B. KAUFFMA

IS A VIOLATION OF THE LAW FOR ANY PERS UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL



FORO BLANCO GROUP, LLC WWW.TOROBLANCOGROUP.COM POC: ZACK HODGIN TEL: 828-260-6238 E: ZACK@TOROBLANCOGROUP.COM

## DISCLAIMER

\*ALL HEIGHTS LISTED ARE FROM GROUND LEVEL (AGL) UNLESS

RESTORATION OF SITE AND ANY AFFECTED AREAS WILL BE TO

ACCOMMODATE FOR EXISTING UTILITIES OR OTHER FACILITIES

MODIFICATIONS TO THE PLAN SET MAY BE NECESSARY TO

ORIGINAL CONDITION OR BETTER ADJUSTMENTS IN THE FIELD OR

ANY INFORMATION AND ALL DESIGNS WITHIN THIS DOCUMENT ARE PROPRIETARY IN NATURE AND SHALL NOT BE REPRODUCED, USED, DISCLOSED, OR COPIED IN PART OR WHOLE WITHOUT WRITTEN CONSENT FROM TORO BLANCO GROUP, LLC

#### CODE COMPLIANCE

ALL FEDERAL AND STATE REGULATORY REQUIREMENTS WILL BE FOLLOWED THROUGHOUT THE PERMITTING AND CONSTRUCTION OF THE FACILITIES PROPOSED WITHIN THESE PLANS. PLEASE NOTE THAT ALL INSTALLATIONS, MATERIALS, AND ANY WORK PERFORMED SHALL BE IN COMPLIANCE WITH THE FOLLOWING CODES AND STANDARDS AS ADOPTED BY THE GOVERNING AUTHORITIES OF MOUNTAIN VILL, SAN MIGUEL COUNTAND THE STATE OF CO. ANYTHING WITHIN THESE PLANS INTENDED TO PERMIT WORK WHICH DOES NOT CONFORM TO THE MOST CURRENT EDITIONS OF THE RELEVANT CODES AND STANDARDS.

- INTERNATIONAL BUILDING CODE
- NATIONAL ELECTRICAL SAFETY CODE AND/OR SMPA
- TIA/EIA-222-G-2 OR LATEST EDITION
- LOCAL CITY OF MOUNTAIN / SAN MIGUEL COUNTY BUILDING / PLANNING CODE

UTILITY JOB #: UTILITY-JOB-NUMBER



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E UTILITIES SHOWN HEREIN ARE FOR THE ONTRACTORS CONVENIENCE ONLY. THERE MAY BE THER UTILITIES NOT SHOWN ON THESE PLANS. THE IGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE ITILITIES WITHIN THE LIMITS OF THE WORK, ALL DAMA MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHABE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

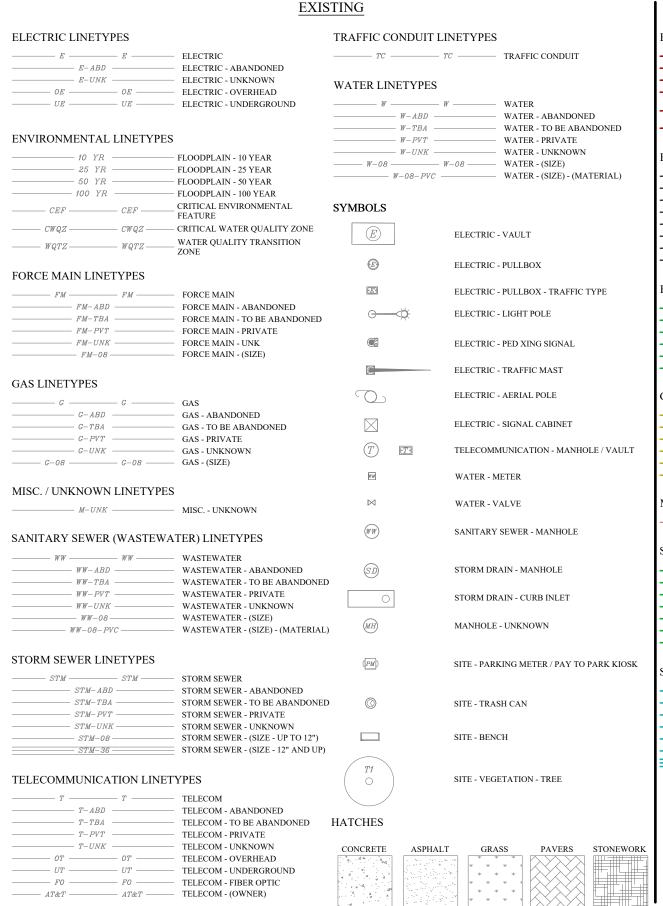
US-CO-7105

MOUNTAIN VILLAGE, 81435 **NEW POLE** 

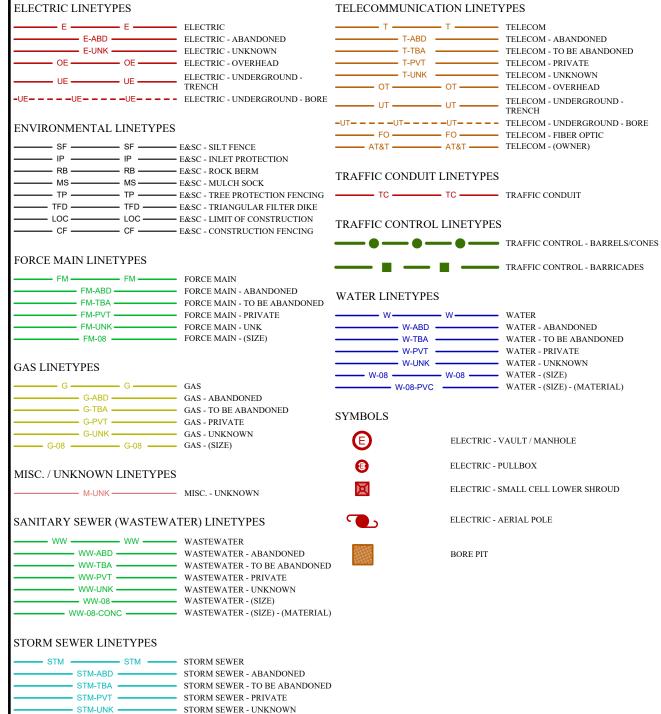
> TITLE SHEET COV-1

**PROPRIETARY** 

# MASTER LEGEND



# PROPOSED

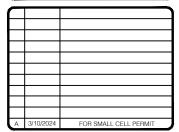




 TBG ID
 US-CO-7105
 I

 DRAWN BY:
 Z. HODGIN

 CHECKED BY:
 B. KAUFFMAN



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PREPARED BY

TORO BLANCO GROUP, LLC WWW.TOROBLANCOGROUP.COM POC: ZACK HODGIN TEL: 828-260-6238 E: ZACK@TOROBLANCOGROUP.COM



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US-CO-7105

Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

LEGEND

UTILITY JOB #: UTILITY-JOB-NUMBER

STM-08 STORM SEWER - (SIZE - UP TO 12")

STORM SEWER - (SIZE - 12" AND UP)



UTILITY JOB #: UTILITY-JOB-NUMBER

SMPA

FOR INSTALLATIONS BY BORE, CONTRACTOR SHALL HAVE ALL BORING EQUIPMENT, BORE PITS AND NEW CONDUIT INSTALLATION TO BE A MINIMUM OF 60-INCH HORIZONTAL DISTANCE FROM EXISTING SMPA MANHOLES, PULL BOXES, AND EXISTING DUCT BANK INFRASTRUCTURE DURING THE COURSE OF BORING OPERATIONS SHOWN ON PLANS.

!!! WARNING - UTILITIES CROSSINGS !!!
CONTRACTOR TO FIELD VERIFY ALL UTILITIES
CROSSINGS TO AVOID CONFLICT (TYP.)

!!! WARNING !!!

OVERHEAD ELECTRIC LINES IN PROJECT AREA.

!!! WARNING !!! GAS LINES IN PROJECT AREA

"" WARNING "

!!! WARNING !!!
UNDERGROUND ELECTRIC LINES IN PROJECT AREA.

1 PHOTO: EX.LAMP POST SCALE: N.T.S.



GENERAL NOTES

1.EXISTING UTILITY LOCATIONS SHOWN ARE SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. SOME UTILITY LINES MAY NOT BE SHOWN. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATION AND PROTECTION OF ALL EXISTING UTILITIES WHETHER SHOWN OR NOT. CONTRACTOR SHALL ALSO UTILITIES WHETHER SHOWN OR NOT. CONTRACTOR SHALL ALSO UTILITIES WHETHER SHOWN OR NOT, DAMAGES BY CONTRACTOR'S ACTIVITIES. DIFFERENCE IN HORIZONTAL OR VERTICAL LOCATION OF EXISTING UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION.

THE HORIZOINAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION.

2.CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS OF STAGING AREAS AND BORE PITS PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON PLANS IS FOR REFERENCE ONLY.

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OF BORING OR EXCAVATING OPERATIONS SHOWN ON

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4.CONTRACTOR TO POT-HOLE ALL CROSSINGS PRIOR
TO BORING OR EXCAVATING BORE PITS AND
LOCATE CITY OF MOUNTAIN VILWATER
INFRASTRUCTURE WITHIN 100' PRIOR TO BORING OR
FYCAVATING

5.CONTRACTOR TO POT—HOLE ALL CROSSINGS PRIOR TO BORING OR EXCAVATING BORE PITS AND LOCATE ANY GAS INFRASTRUCTURE WITHIN 100' PRIOR TO BORING OR EXCAVATING.

PRIOR TO BORING OR EXCAVATING.

6. ANY DISCREPANCIES FROM WHAT IS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.

7. IF THERE ARE TREES WITHIN THE PROJECT LIMITS

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REFER TO / REQUEST FROM TORO BLANCO GROUP,
LLC TREE PROTECTION AND ENVIRONMENTAL
PROCEDURES.
8. REFER TO PARK CITY REQUIREMENTS REGARDING

8. REFER TO PARK CITY REQUIREMENTS REGARDING EXCAVATION SPOILS IN THE R.O.W. (REQUEST FROM TORO BLANCO GROUP, LLC IF NEEDED).

9.CONTRACTOR MUST MAINTAIN A MINIMUM 2 FT
VERTICAL AND 3 FT HORIZONTAL CLEARANCE FROM
OD TO OD ON ALL PARK CITY WATER
INFRASTRUCTURE AND ANY GAS INFRASTRUCTURE.
CONTRACTOR TO POT—HOLE ALL CROSSINGS PRIOR
TO BORING, EXCAVATING, OR DIGGING BORE PITS.

ANY DAMAGE TO CURBS & GUTTERS
SHALL BE RESTORED AS PERCITY OF MOUNTAIN VILLA
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ANY DAMAGEDSIDEWALKS SHALL BE
RESTORED AS PER CITY OF MOUNTAIN VILLA
DEPARTMENT OF PUBLIC WORKS STANDARD.
ALL RESTORATION SHALL BE EQUIVILANT
OREXCEED LOCATION STATUS PRIOR TO
CONSTRUCTION

13. CAUTION: CONTRACTOR SHALL NOT DAMAGE
EXISTING CURR INLET STRUCTURE

EXISTING CURB INLET STRUCTURE.

14. CONTRACTOR SHALL PROVIDE APPROPRIATE
SUPPORT BRACING WHEN EXCAVATING WITHIN 2F1
OF POLES

15. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO FENCES, LANDSCAPING, AND SPRINKLER SYSTEMS ON PRIVATE PROPERTIES, INCLUDING ANY ON CITY OF MOUNTAIN VILLA PROPERTY NOT DEEMED PART OF THE R.O.W. CONTRACTOR SHALL REPAIR TO EXISTING CONDITION OR BETTER.

16. CONTRACTOR SHALL COMPLY WITH CURRENT
OSHA REGULATIN PER STATE OF CO
AND
MOUNTAIN VORDINANCES AND APPROPRIATE
SECTIONS OF SPECIFICATIONS CONCERNING
EXCAVATION, TRENCHING, SHORING, AND BORING.
17. CONTRACTOR MUST OBTAIN PERMISSION
FROM AFFECTED PROPERTY OWNERS FOR ANY
CONSTRUCTION RELATED ACTIVITY THAT MAY
ENCROACH ON ADJACENT PRIVATE PROPERTY.
18. APPROPRIATE EASEMENT/APPROVAL MUST B
SECURED FOR PROJECT AREAS OUTSIDE THE
RIGHT OF WAY. NO WORK SHALL BE PERFORMED ON
PRIVATE PROPERTY UNTIL RIGHT OF ENTRY AND

EASEMENT HAS BEEN OBTAINED.

19. FOR TRENCHES GREATER THAN 4FT IN DEPTH, CONTRACTOR SHALL PROVIDE TRENCH SAFETY PLANS BY ENGINEER PRIOR TO BEGINNING CONSTRUCTION FOR APPROVAL. CONTRACTOR MUST COMPLY WITH OSHA SPECIFICATIONS AND CITY OF MOUNTAIN V STANDARDS FOR TRENCHING, BACKFILLING, EXCAVATION, AND SHORING

REQUIREMENTS.

20. THE EXISTING GROUND SURFACE IS BASED ON CITY OF MOUNTAIN 'GIS DATA PROVIDED PRIOR TO THIS PLAN'S DATE.

21. SOND CONTACT CITY OF MOUNTAIN V
TRANSPORTATION DEPARTMENT PRIOR TO
CONNECTING TO ANY TRAFFIC SIGNAL EQUIPMENT,
DEPARTMENT OF PUBLIC WORKS PRIOR TO
CONNECTING TO ANY LIGHT POLE EQUIPMENT, REAL
TIME CRIME CENTER PRIOR TO DISCONNECTING OR
CONNECTING TO ANY EXISTING CAMERA EQUIPMENT,
AND SMPA PRIOR TO CONNECTING TO ANY
ELECTRICAL EQUIPMENT.

Toro Blanco
Group
PHONE: 678-818-3797

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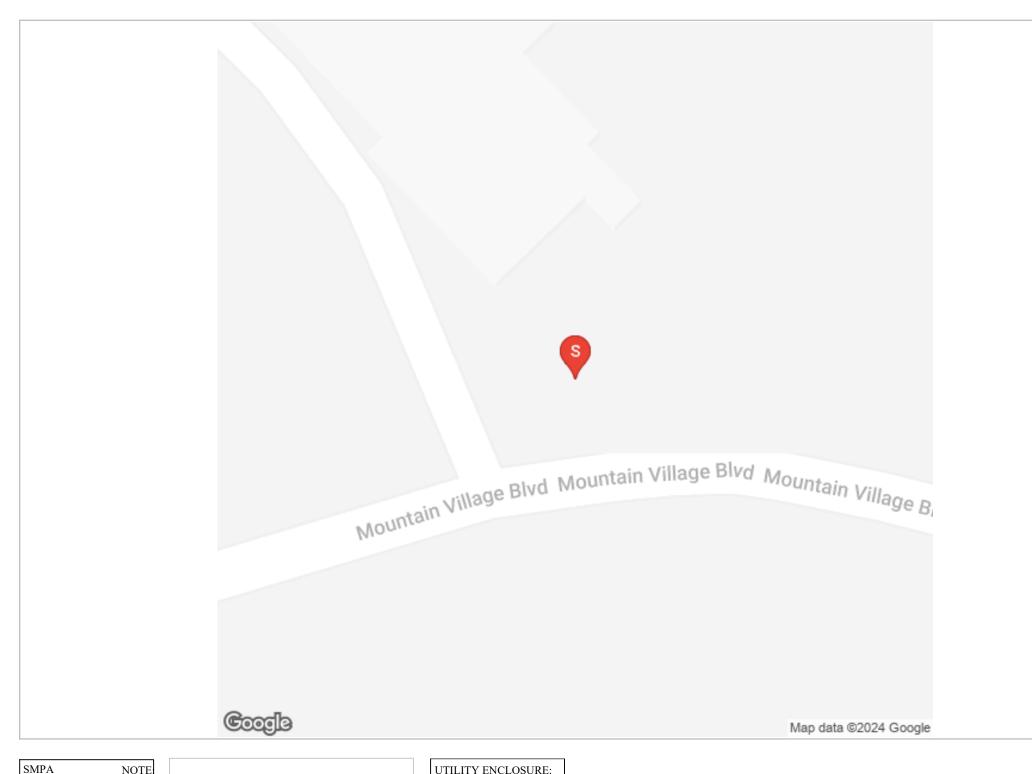
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Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

EXHIBIT

MAP: AERIAL SITE LOCATION
SCALE: N.T.S.



LEGEND - w ---- WATER LINE STORM — DRAIN LINE ——s——s——s—— **sewer line** — GAS LINE — GAS — RIGHT OF WAY NEW OVHD POWER EXISTING OVHD POWER EXISTING UNGD STREETCAR **GUY WIRE** 

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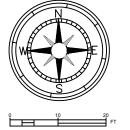
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Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

> SITE PLAN SP-2

UTILITY ENCLOSURE:

POTENTIAL FUTURE SUBSURFACE CLIMATE CONTROLLED ENCLOSURE TO BE INSTALLED WITHIN 20' OF THE PROPOSED POLE SITE FOR ADDITIONAL FUTURE EQUIPMENT STORAGE.

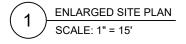


!!! WARNING - UTILITIES CROSSINGS !!! CONTRACTOR TO FIELD VERIFY ALL UTILITIES CROSSINGS TO AVOID CONFLICT (TYP.)

!!! WARNING !!! OVERHEAD ELECTRIC LINES IN PROJECT AREA.

!!! WARNING !!! GAS LINES IN PROJECT AREA.

!!! WARNING !!! UNDERGROUND ELECTRIC LINES IN PROJECT AREA.



FOR INSTALLATIONS BY BORE, CONTRACTOR SHALL HAVE

ALL BORING EQUIPMENT, BORE

HORIZONTAL DISTANCE FROM

EXISTING SMPA MANHOLES, PULL BOXES, AND

INFRASTRUCTURE DURING THE

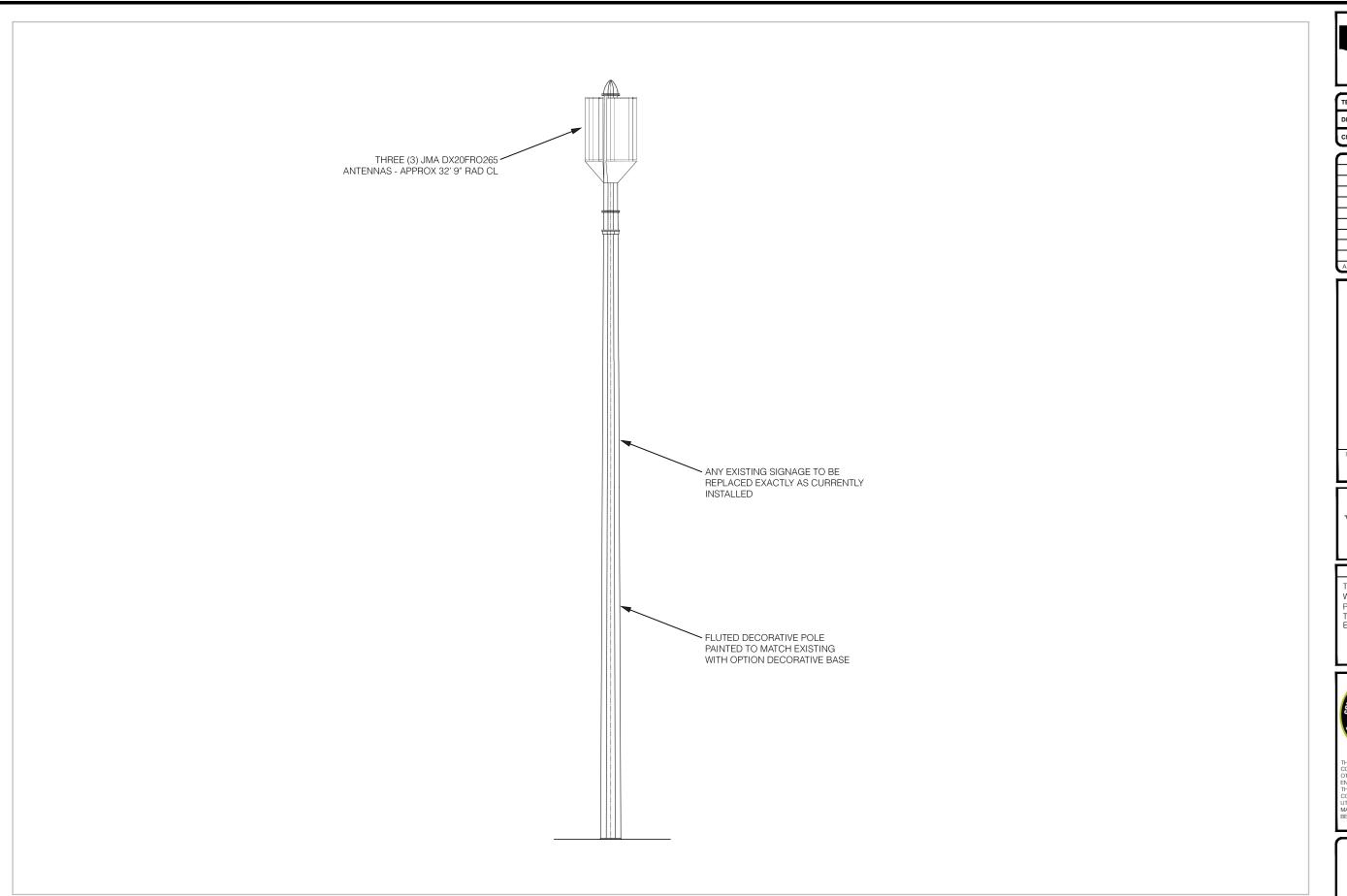
COURSE OF BORING OPERATIONS SHOWN ON PLANS.

PITS AND NEW CONDUIT INSTALLATION TO BE A

MINIMUM OF 60-INCH

EXISTING DUCT BANK

UTILITY JOB #: UTILITY-JOB-NUMBER



POLE DRAWINGS

SCALE: NTS

EXISTING ATTACHMENTS: ANY AND ALL EXISTING ATTACHMENTS (TO INCLUDE, BUT NOT BE LIMITED TO, LAMPS, BANNERS, CAMERAS, SIGNAGE, ETC.) TO BE REPLACED IN AN IDENTICAL MANNER AND MAINTAIN ALL EXISTING HEIGHTS AND INSTALLATION CRITERIA UNLESS OTHERWISE NOTED.

Toro Blanco
Group
PHONE: 678-818-3797

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CHECKED BY:		B. KAUFFMAN

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VERTICAL BRIDGE REIT, LLC 750 PARK OF COMMERCE DR, SUITE 200 BOCA RATON, FL 33487

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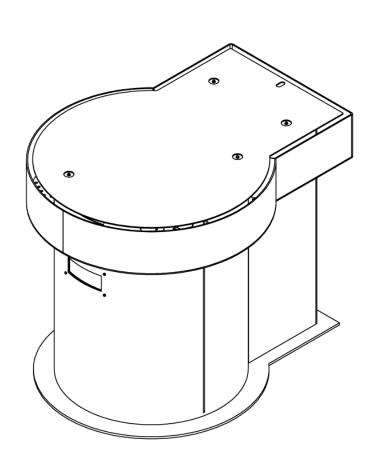
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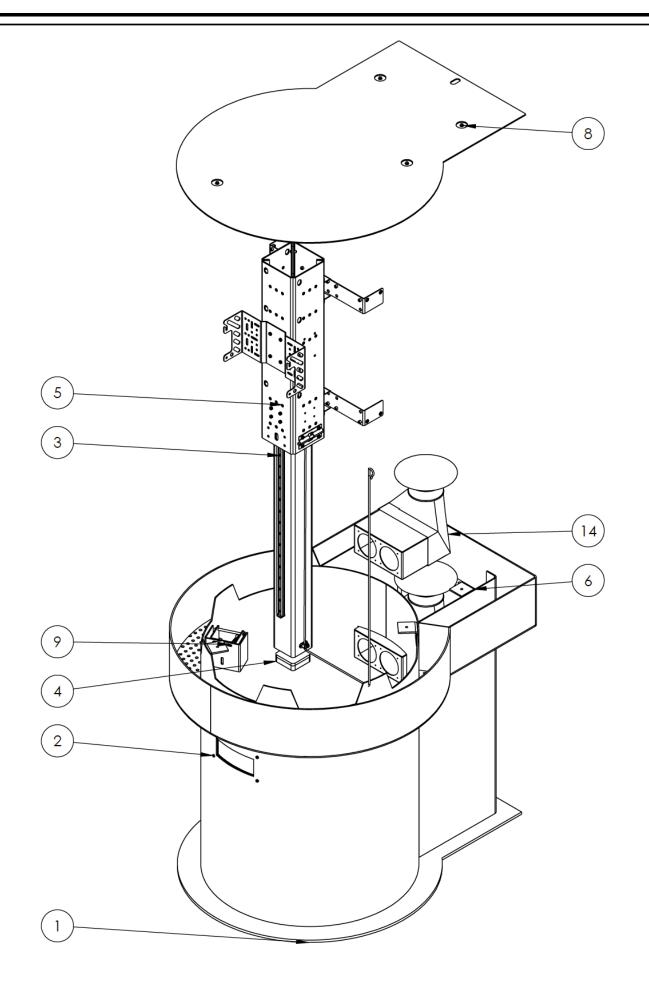
Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

POLE DRAWINGS EV-1

ITEM NO.	Title	Part Number	Configuration	Material	Thickness/Gauge	QTY.
1	VAULT TUBE BASE PLATE_REV02_CAD REV03	OE000000-P00-00	4 FT	Plain Carbon Steel	0.5	1
2	VAULT TUBE ASSEMBLY	OE000000-A00-00	Default	N/A	N/A	1
3	RISING PLATFORM ASSEMBLY_CAD REV03	OE000000-A00-00	Default	N/A	N/A	1
4	SQUARE TUBE ANCHOR BLOCK_CAD REV03	OE000000-A00-00	Default	N/A	N/A	1
5	RISING PLATFORM ASSEMBLY_update_CAD REV03	OE000000-A00-00	Default	N/A	N/A	1
6	FRENCH DRAIN BOX ASSEMBLY	OE000000-A00-00	Default	N/A	N/A	1
7	3071T7_Mounted Pulley for Rope-for Horizontal Pull_CAD REV03	307177	307177	Steel		1
8	VAULT LID ASSEMBLY	OE000000-A00-00	Default	N/A	N/A	1
9	WINCH ASSEMBLY	OE000000-A00-00	Default	N/A	N/A	1
10	8694T41_Low-Pressure Aluminum Threaded Adapter	8694T41	8694T41	6061 Aluminum		1
11	91255A639_Button Head Hex Drive Screw	91255A639	91255A639	Alloy Steel		1
12	MOCK LID SENSOR	OE000000-P00-00	Default	Material <not specified=""></not>	N/A	1
13	WATER PUMP 3X5_REV02_REV03	OE000000-P00-00	Default	Material <not specified=""></not>	N/A	2
14	INTAKE DUCTING ASSEMBLY	OE000000-A00-00	Default	N/A		2
15	TOP PERIMETER AND PERFORATION ASSEMBLY	OE000000-A00-00	Default	N/A	N/A	1



	REVISIONS		
REV.	DESCRIPTION	DATE	APPROVED
00		8/31/2023	CJB

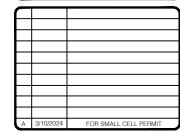




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 Z. HODGIN

 CHECKED BY:
 B. KAUFFMAN



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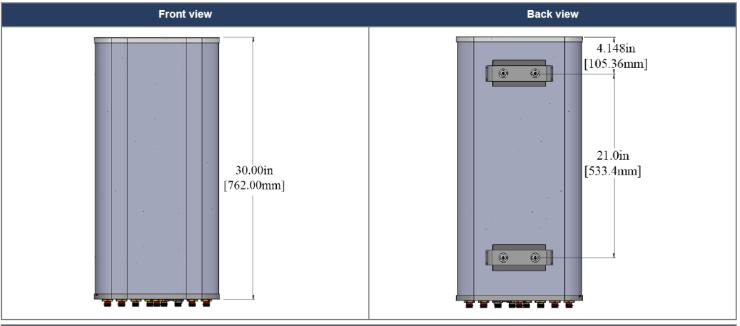
SUB-SURFACE VAULT **EV-2** 

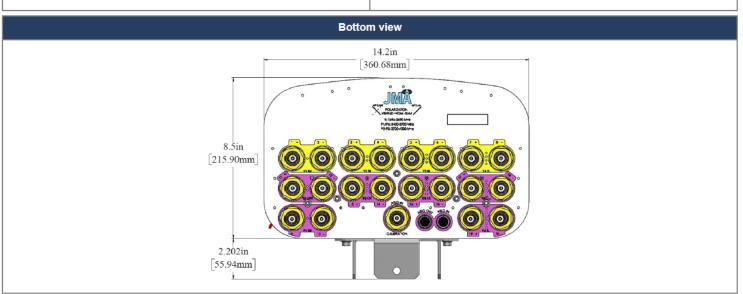


# DX20FRO265-01

# NWAV™ 2F Panel Antenna

Mechanical specifications			
Dimensions height/width/depth, inches (mm)	30/ 14.2/ 8.5 (762/ 360.7/ 215.9)		
No. of RF input ports, connector type, and location	20 x 4.3-10 female, bottom & 1 cal x 4.3-10 female, bottom		
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)		
Net antenna weight, lb (kg)	33 (15.0)		
Weight with supplied pipe mount bracket, lb (kg)	38.1 (17.3)		
Shipping weight, lb (kg)	43 (19.5)		
Rated wind survival speed, mph (km/h)	150 (241)		
Frontal wind loading @ 150 km/h, lbf (N)	22.3 (99.4)		





Ordering information			
Antenna model	Description		
DX20FRO265-01	2F panel antenna, 20 ports, (8) 1695-2690 zero degrees EDT, (4) 3400-3700 zero degrees EDT, (8) 3700-4200 with 2-12° RET, 4.3-10 & SBT		
Mounting kit (included)	91900318 BRACKET KIT, range of mechanical up/down tilt -2° to 12°		



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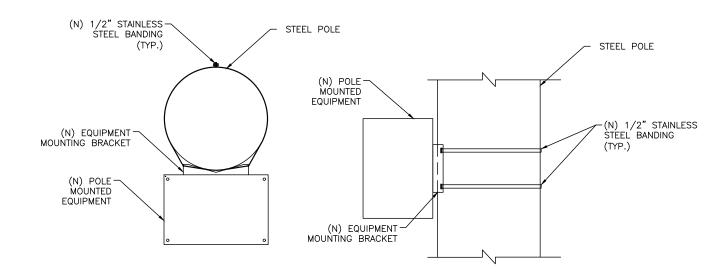
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**EQUIPMENT DETAILS** 

\*ALL STAINLESS STEEL BANDING AND ASSOCIATED HARDWARE TO BE PAINTED TO MATCH POLE



**TOP VIEW** 

**SIDE VIEW** 

**EQUIPMENT MOUNTING DETAILS** SCALE: N.T.S.



ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES — ADHESIVE VINYL OR PLACARD
STRAPPED WITH SS TIES ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SIGN PLACEMENT:
AFFIX TO THE STRUCTURE 3-4' BELOW THE COMMERCIAL RF ANTENNA(S) SIZE APPROX. 8" x 5"

# **ANTENNA SIGNAGE**

OWNER / OPERATOR NOTE: SITE ID LABEL TO BE AFFIXED AT OR NEAR THE POINT OF POWER CONNECTION WITH TZeS241 LABELING TAPE OR EQUIVALENT BLACK ON WHITE LABELING TAPE OF AT LEAST 18mm WIDTH WITH EXTRA—STRENGTH ADHESIVE. USE ANY COMPATIBLE P—TOUCH LABEL MAKER. TEXT SHOULD BE PRINTED IN ALL CAPS WITH A MINIMUM HEIGHT

TORO BLANCO GROUP, LLC In case of Emergency Contact: E-mail: info@toroblancogroup.com Phone: (504) 321-3971 Please Reference Site ID Site ID VB ID US-CO-7105 US-CO-7105 FCC ID TBD

**EMERGENCY CONTACT SIGN** 

TORO BLANCO GROUP, LLC POLE MOUNTING SIGNS SCALE: N.T.S.



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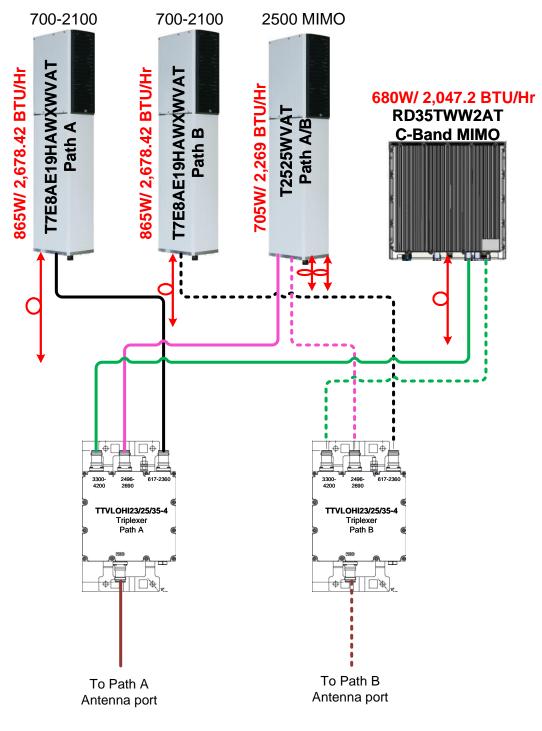
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Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

**EQUIPMENT DETAILS** 

# oDAS Remote Group



Total Wattage: 3,115W Total BTU/Hr: 9,673.04 BTU/Hr

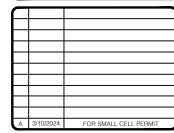
Remote sizes:

Qty 3: 41.73"H X 7.28"W X 10.75"D Qty 1: 15.4"H X 15.9"W X 7.8"D

Drawing not to Scale



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5.0	Z. HODO
CHECKED BY:	B. KAUFFM



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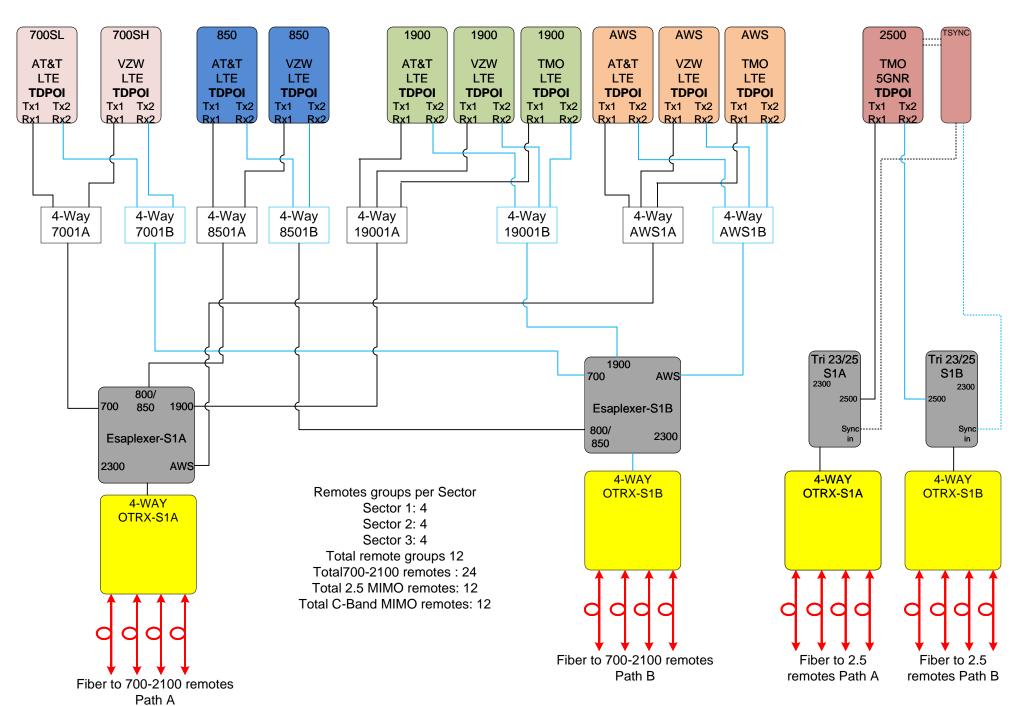
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**EQUIPMENT DETAILS** 

# oDAS Block Diagram (Sector 1 Shown)

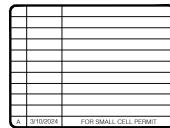




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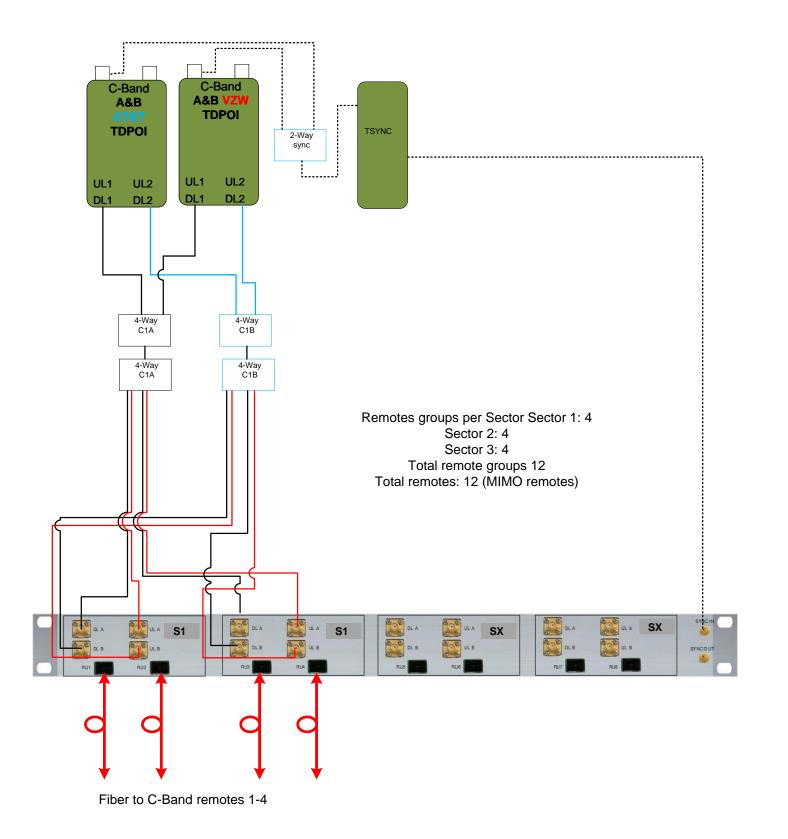
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**EQUIPMENT DETAILS** 

# 40W C-Band Block Diagram (Sector 1 Shown)

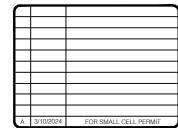




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Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

**EQUIPMENT DETAILS** 

### **GENERAL FOUNDATION & EMBEDMENT NOTES**

REINFORCED CONCRETE NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- 2. BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.
- 3. TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL AND LEVEL WITH GRADE
- 4. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- 5. ALL SITECAST CONCRETIE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI WITHIN 28 DAYS. CONTINUOUS INSPECTION AND TESTING IS NOT REQUIRED, THE CONTRACTOR MAY SUBSTITUTIE 5000 PSI FOR HIGH EARLY STRENGTH.

SLUMP - 4" MIN. / 6" MAX.

AIR ENTRAINMENT - 2% TO 3% BY VOLUME

CL.ASSES OF CONCRETE

28 DAY MAX.

0.55

CLASS STRENGTH WATIER/CEMENT
(PSI) RATIO

TYPE 1 4000

- 6. CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS. MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETIER. CONDUIT HEIGHT ABOVE CONCRETIE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.
- 7. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETIE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES UNLESS PRIOR APPROVAL FROM THE ENGINEER IS GRANTED. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES UNLESS PRIOR APPROVAL FROM THE ENGINEER IS GRANTED. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATIER THAN 36 INCHES IF INSTALLED IN BREAKER RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- 8. ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETAWC IMMEDIATIELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
- BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETIE BASES BEFORE INSTALLATION OF CABLE OR WIRE. ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METTALIC OR PLUGGED IF NONMETALLIC. WHEN REQUIRED TO CONNECT NONMETAWC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTIER FITTINGS, U.L LISTIED FOR ELECTRICAL USE, SHALL BE USED.
- 10.REINFORCING STEEL SHALL CONFORM TO ASTM A515, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL FABRIC UNLESS NOTED OTHERWISE, SPLICES FOR REBAR SHALL BE CLASS 'B' AND ALL HOOKS SHALL BE STANDARD, UNO. STAGGER SPLICES UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST TWO FULL MESHES, UNO.
- 11.THE FOLLOWING MINIMUM CONCRETIE COVER SHALL BE PROVIDED FOR REINFORCING STIEEL UNLESS OTHERWISE NOTIED ON DRAWINGS:

- 12.MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4"
- 13.IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETIE BASE IN LAYERS OF 1 FOOT OR LESS.
- 14.INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTIEN SPECIFICATIONS, THE ANCHOR BOLTS, DOWEL, OR RODS SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS, NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETIE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL. IF THE MANUFACTURERS SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 15.WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.
- 16.WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE, THE WIRES SHALL BE USED.
- 17.ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.
- 18.MECHANICAL VIBRATION IS REQUIRED ON ALL SLABS TO REDUCE THE HONEYCOMB EFFECT UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
- 19.THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATION PRIOR TO POURING THE SLAB, REFER TO SHELTER MANUFACTURER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION



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THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FITEL COCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK ALL DAMA MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHABE THE SOLE RESPONSIBILITY OF THE CONTRACTOR SHABE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

FOUNDATION DETAILS

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#### PLAN NOTES:

- 1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE—SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
- 2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
- 3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT—TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
- 4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
- 5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.

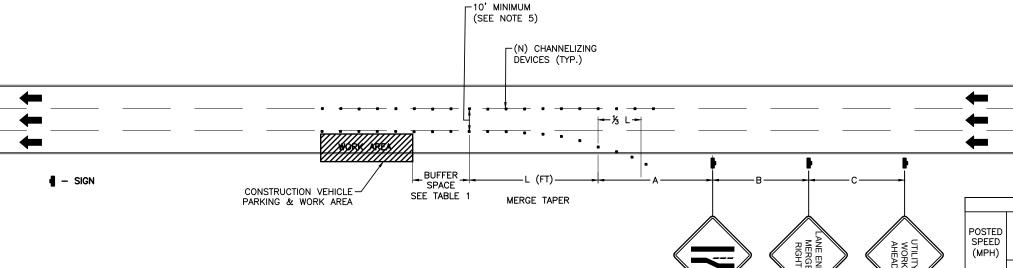


	TABLE 1				
POSTED SPEED (MPH)		DISTANCE BETWEEN SIGNS		TAPER	BUFFER
	Α	В	С	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'
NOTES:					

- A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
- B) CONTRACTOR TO VERIFY (E) SPEED LIMIT.

  C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
- D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.
- E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 18, SHEET TC-2.

VEHICULAR TRAFFIC CONTROL PLAN -LANE MERGE

SCALE: NOT TO SCALE

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Group
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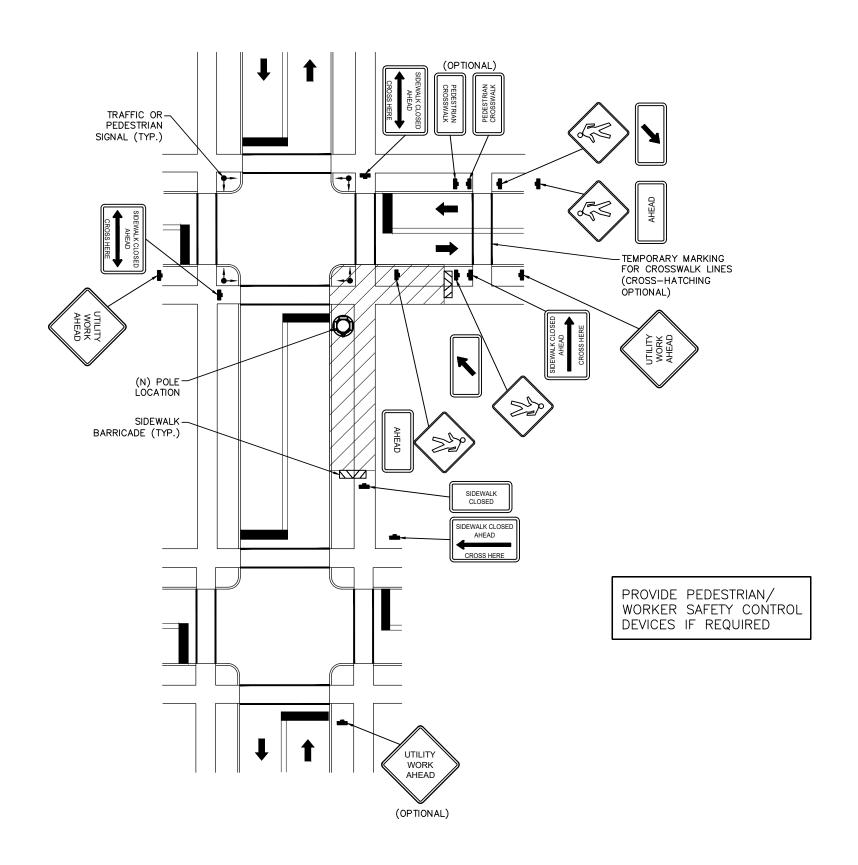
Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 NEW POLE

VEHICULAR TCP
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#### TRAFFIC CONTROL GENERAL NOTES

- I. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS
  AND PROCEDURES SHALL COMPLY WITH LOCAL
  JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC
  CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
- 2. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
- 3. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
- 4. SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART VI "TEMPORARY TRAFFIC CONTROL", AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
- 5. ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.
- 6. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
- CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE (E) TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
- 8. ALL (E) ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE (N) TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE—CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
- 9. CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMEN" OR POLICE SUPERVISION, IF REQUIRED.
- 10. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
- 11. WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
- 12. CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
- 13. THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
- 14. DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
- 15. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
- 16. THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
- 17. WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
- 18. TAPER LENGTHS ARE CALCULATED AS FOLLOWS: L= WS²/60 (40 MPH AND HIGHER) OR L2= WS (OVER 40 MPH), WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH).



PEDESTRIAN TCP

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TORO BLANCO GROUP, LLC

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FOR THE "ONE CAL CENTER" IT'S THE

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TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

**SCALE: NOT TO SCALE** 

TCP-2

## STANDARD SITE PLANS NOTES:

#### ORDINANCE REQUIREMENTS

- ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE A SITE PLAN AMENDMENT AND APPROVAL FROM THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT
- ALL SIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE LAND
- THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE
- RECLAIMED WATER SERVICE WILL BE PROVIDED BY THE CITY OF MOUNTAIN VIL
- FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, A ROW EXCAVATION PERMIT

#### COMPATIBILITY

- HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
- THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 D.B.A. AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.

- THE CITY OF MOUNTAIN FIRE DEPARTMENT REQUIRES ASPHALT OR CONCRETE PAVEMENT PRIOR TO CONSTRUCTION AS AN "ALL-WEATHER DRIVING SURFACE." ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED/RE-INSTALLED FOR 80 000 LB LIVE-VEHICLE LOADS ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
- 10. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 13 FEET, 6 INCHES FOR FULL WIDTH OF ACCESS DRIVE.

#### CONSTRUCTION NOTES

- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF MOUNTAIN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN
- CONTRACTOR SHALL CALL THE ONE CALL CENTER FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W
- 13. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.

#### AMERICANS WITH DISABILITIES ACT

THE CITY OF MOUNTAIN HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

## GENERAL CONSTRUCTION NOTES:

- CONTRACTOR MUST OBTAIN UTILITY EXCAVATION PERMITS. FOR EACH RIGHT-OF-WAY EXCAVATION, FROM THE CITY OF MOUNTAIN DEPARTMENT PUBLIC WORKS PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL PROVIDE A ONE CALL CENTER CONFIRMATION NUMBER
- PRIOR TO ANY DIRECTIONAL DRILLING OR BORING, CONTRACTOR MUST CONTACT THE CITY OF MOUNTAINDEPARTMENT OF PUBLIC WORKS.
- CITY OF MOUNTAINUTH ITIES REQUIRE A MINIMUM 2' (FOOT) VERTICAL AND 3' (FOOT) HORIZONTAL SEPARATION DISTANCE, MEASURED FROM OUTER DIAMETER TO OUTER DIAMETER. ANY VARIANCE FROM CITY UTILITIES MUST BE OBTAINED IN WRITING AND SUBMITTED TO THE CITY OF MOUNTAIN DEPARTMENT OF PUBLIC WORKS.
- ALL STREET TRENCH REPAIRS ARE TO BE DONE IN ACCORDANCE WITH CITY OF
- UNLESS OTHERWISE SPECIFIED ON PLANS, ALL TRENCH REPAIR IN UNFINISHED SURFACES TO BE DONE IN ACCORDANCE WITH CITY OF MOUNTAIN STANDARD
- VERIFY THE LOCATION OF UNDERGROUND UTILITIES AT LEAST 100' (FEET) IN ADVANCE OF ALL PROPOSED UTILITY CROSSINGS, AND ALSO LOCATIONS WHERE THE PROPOSED FACILITIES ARE DEPICTED TO RUN PARALLEL TO AND WITHIN FIVE FEET OF EXISTING FACILITIES.

- CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE INSTALLATION OF ANY FACILITY WITHIN A DRAINAGE EASEMENT OR STREET R.O.W. THE METHODS OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S R.O.W. MUST BE APPROVED PRIOR TO START OF THE BACKFILL
- FOR SLOPES OR TRENCHES MORE THAN FIVE (5) FEET IN DEPTH: ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY OF MOUNTAIN STANDARD SPECIFICATIONS AND APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COPIES OF THE OSHA STANDARDS MAY BI PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE, INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA.
- CONTRACTOR MUST OBTAIN ALL LOCATES PRIOR TO CONSTRUCTION. VERIFY THE LOCATION OF UNDERGROUND UTILITIES AT LEAST 100FT IN ADVANCE OF ALL PROPOSED UTILITY CROSSINGS, AND ALSO AT LOCATIONS WHERE THE PROPOSED FACILITIES ARE DEPICTED TO RUN PARALLEL TO AND WITHIN 5FT OF
- ALL LABOR TO BE PERFORMED IN ACCORDANCE WITH THE LATEST OSHA FANDARDS, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY
- TRENCH BACKFILL TO BE ADEQUATELY COMPACTED. CONTRACTOR IS RESPONSIBLE FOR TRENCH BACKFILL STABILITY. ANY AND ALL SETTLEMENT OR FROSION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE LINTIL
- CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO EXISTING UTILITIES, STREET, SIDEWALK, CURB AND GUTTER AND GRADE.
- CONTRACTOR SHALL USE STANDARD DETAIL FOR TRENCH REPAIR IN
- TRENCH & STREET RESTORATION TO BE DONE AS FOLLOWS: ALL STREET RESTORATION TO BE DONE IN ACCORDANCE WITH APPLICABLE STANDARD DETAILS AND/OR AS APPROVED BY THE DIRECTOR
- ANY DAMAGE TO SIDEWALK OR CURB AND GUTTER TO BE REPAIRED WITH
- 17. ANY DAMAGE TO DRIVEWAY TO BE REPAIRED WITH STANDARD DETAILS.
- WATER, WASTE WATER & STORM UTILITIES REQUIRE A MINIMUM HORIZONTAL SEPARATION OF 3FT, AND MINIMUM VERTICAL SEPARATION BY 2FT, MEASURED FROM EDGE TO EDGE INVOLVED FACILITIES. ALL OTHER UTILITIES REQUIRE 2 FOOT SEPARATION HORIZONTALLY AND VERTICALLY
- ANY DAMAGE TO PRIVATE UTILITIES, INCLUDING BUT NOT LIMITED TO IRRIGATION LINES SHALL BE REPAIRED IN A TIMELY MANNER AT
- CONTRACTOR MUST NOT CHANGE THE CONSTRUCTION METHOD WITHOUT OBTAINING PRIOR APPROVAL FROM DESIGN ENGINEER, AND ROW
- IN ROW: CONTRACTOR IS NOT ALLOWED TO MOVE THE PROPOSED ALIGNMENT BY A MEASUREMENT OF 2FT OR GREATER. ANY MOVEMENT OF PROPOSED ALIGNMENT BY A MEASUREMENT GREATER THAN 2FT MUST BE APPROVED THROUGH MAYOR'S OFFICE OF UTILITIES.
- CONTRACTOR IS URGED TO CONTACT THE ENGINEER FOR ANY CLARIFICATION THAT MAY BE NECESSARY, ALL CONSTRUCTION AND INSTALLATION TO BE IN ACCORDANCE WITH STANDARDS.
- EXISTING INFRASTRUCTURE LAYOUT WAS OBTAINED FROM RECORDS RESEARCH & GEOPHYSICAL FEATURES IN THE FIELD, & MAY OR MAY NOT BE ACCURATE NOR COMPLETE. CONTRACTOR IS RESPONSIBLE TO VERIFY & LOCATE ALL LITILITIES & OTHER OBSTRUCTIONS PRIOR TO COMMENCING
- CONTRACTOR MUST CONTACT ROW MANAGEMENT TO SCHEDULE A PRE-BORE INSPECTION PRIOR TO ANY BORING IN ROW. ADDITIONALLY, CONTRACTOR MUST CONTACT ROW MANAGEMENT FOR BACKFILL INSPECTION PRIOR TO ANY BORE PIT AND/OR TRENCH BACKFILL THAT COMES WITHIN PRIVATE PROPERTY MUST BE PREAPPROVED BY ASSOCIATED PROPERTY OWNER AND DOCUMENTED IN WRITING
- CONTRACTOR SHALL CONTACT GENERAL PERMIT OFFICE TO SCHEDULE FINAL INSPECTION FOR UNFINISHED SURFACE RESTORATION

## DEVELOPER INFORMATION

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NAME: ZACK HODGIN | PHONE: 828-260-6238 OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS

NAME CONTRACTOR TBD PERSON OR FIRM RESPONSIBLE FOR

FROSION/SEDIMENTATION CONTROL MAINTENANCE

NAME CONTRACTOR TBD
PERSON OR FIRM RESPONSIBLE FOR

TREE/NATURAL AREA PROTECTION MAINTENANCE

# RIGHT OF WAY MANAGEMENT STANDARD

- 1. CONTRACTORS AND THEIR SUBCONTRACTORS MUST BE LICENSED BY THE CITY
- OF MOUNTAIN FOR CONDUCTING WORK WITHIN THE RIGHT OF WAY. CONTRACTOR MUST OBTAIN RIGHT OF WAY EXCAVATION PERMITS FROM RIGHT OF WAY MANAGEMENT DIVISION, FOR EACH STREET PRIOR TO COMMENCEMENT OF WORK. PLEASE CALL FOR ADDITIONAL INFORMATION REGARDING PERMITTING PROCESS AND THE MOST CURRENT RIGHT OF WAY PERMITTING FEE SCHEDULE
- FOR WORK AT SIGNALIZED INTERSECTIONS CONTRACTOR MUST DIAL 311 TO INITIATE A CITIZENS SERVICE REQUEST (CSR) FOR THE TRAFFIC SIGNALS GROUP; TO COORDINATE AND GAIN APPROVAL A MINIMUM OF 1 WEEK PRIOR TO CHANGE OF PROJECT LOCATION OF PHASE.
- CONTRACTOR SHALL HAVE AN APPROVED RIGHT OF WAY PERMIT ON SITE AT ALL TIMES WHEN WORKING IN THE ROW.
- CONTRACTOR MUST DIAL 311 TO INITIATE A CITIZENS SERVICE REQUEST (CSR) FOR RIGHT OF WAY MANAGEMENT A MINIMUM OF 1 WEEK PRIOR TO THE
- CONTRACTOR MUST PROVIDE TRAINING CERTIFICATION OF A COMPETENT PERSON THAT WILL BE RESPONSIBLE FOR THE TRAFFIC CONTROL PLACEMENT, TO RIGHT OF WAY INSPECTOR, PRIOR TO START OF WORK
- STORAGE OF EQUIPMENT AND/OR MATERIAL WITHIN THE ROW.
  - STORAGE OF EQUIPMENT IN THE ROW IS PERMISSIBLE ONLY WITHIN THE CURRENT LIMITS OF THE LONG-TERM OR INTERMEDIATE-TERM CLOSURES AND SHALL BE LIMITED TO THE EQUIPMENT REQUIRED FOR THE CURRENT WORK ACTIVITY. THIS EQUIPMENT SHALL BE PROTECTED BEHIND BARRICADES.
  - STORAGE OF MATERIAL IN THE ROW IS PERMISSIBLE ONLY WITHIN THE CURRENT LIMITS OF THE LONG-TERM OR INTERMEDIATE-TERM CLOSURES AND SHALL BE LIMITED TO NO MORE THAN THE MATERIAL REQUIRED FOR THREE DAYS OF PRODUCTION THIS MATERIAL SHALL BE PROTECTED BEHIND WATER-FILLED BARRIERS.
  - c. EQUIPMENT OR MATERIAL STORED IN THE ROW SHALL NOT CREATE A VISUAL BARRIER TO TRAFFIC
- NO MORE THAN ONE WORK ZONE LOCATION MAY BE SET AT ONE TIME.
- PEAK HOURS FOR ARTERIAL AND COLLECTOR STREETS ARE 6AM TO 9AM AND 4PM TO 6 PM, MONDAY THROUGH FRIDAY. NO DISRUPTION OR REDUCTION OF ACTIVE ROADWAY OR PEDESTRIAN ROUTE CAPACITY SHALL OCCUR DURING THESE TIMES, UNLESS ALLOWED BY TRAFFIC CONTROL PLAN.
- EXCAVATIONS SHALL BE BACKFILLED OR PLATED WHEN REQUIRED TO OPEN IMPACTED TRAFFIC LANES. FOR EXCAVATIONS EXCEDDING A TRANSVERSI WIDTH OF 6 FEET. THE CONTRACTOR SHALL PROVIDE AN ENGINEERED PLAN TO THE OWNER'S REPRESENTATIVE FOR REVEIW BY RIGHT OF WAY MANAGEMENT
- 11. EXISTING SIDEWALKS AND BEATEN PATHS SHALL BE MAINTAINED AS ADA COMPLIANT THROUGHOUT THE PROJECT DURATION WITH THE EXCEPTION OF FINAL FLATWORK AND UTILITY TIE-INS. ANY WORK OVERHEAD WITHIN 25 FEET OF EXISTING PEDESTRIAN PATHWAYS WILL REQUIRE PEDESTRIAN COVERED WALKWAYS. SIDEWALK CLOSURES FOR MAJOR SIDEWALK IMPROVEMENTS HAVE A 14-DAY MAXIMUM PERIOD AND SHALL BE COMPLETED IN PHASES AS TO NOT CLOSE MORE THAN ONE BLOCK AT A TIME.
- "ROAD WORK AHEAD" AND "CONSTRUCTION ENTRANCE AHEAD" SIGNS MUST BE PLACED AT ALL APPROACHES TO STABILIZED CONSTRUCTION ENTRANCE. SEE THE CITY OF MOUNTAIN STANDARD DETAILS FOR SIGN SPACING
- DRIVEWAYS SHALL NOT BE CLOSED FOR MORE THAN 3 CONSECUTIVE CALENDAR DAYS.
  ADA COMPLIANCE SHALL BE MAINTAINED THROUGH STABILIZED
- CONSTRUCTION ENTRANCE.
- BARRIER SHALL BE PLACED WITHIN GUIDELINES SET FORTH BY THE TMUTCD CRASH TESTING REQUIREMENTS (NCHRP REPORT 350) FOR THAT PARTICULAR BARRIER USED. ANY MODIFICATIONS TO THAT TESTING APPLICATION SHALL BE APPROVED BY THE ENGINEER OF RECORD.
- .FOR OVERNIGHT PROTECTION OF WORK ZONES WITHIN THE ROW, REFER TO CITY OF MOUNTAIN 'STANDARD SERIES DETAILS.

ALL CHANNELIZING DEVICES IN ACCORDANCE WITH CITY OF MOUNTAIN V

- ALL TEMPORARY PAVING SHALL CONFORM TO CITY OF MOUNTAIN
- STANDARD DETAILS INITIAL AND PHASE CHANGE TRAFFIC CONTROL CHANGES SHALL BE
- INSTALLED ON THE WEEKENDS. THE NAME AND TELEPHONE NUMBER OF THE CONTRACTOR OR SUPPLIER SHALL BE SHOWN ON THE NON-REFLECTIVE SURFACE OF

# STREET REPAIR NOTES:

- TRENCH REPAIR: USE THE APPROPRIATE 1100S SERIES DETAILS FOR TRENCH REPAIRS: 1100S-2 (FLEXIBLE BASE AND AN ASPHALT SURFACE), 1100S-3 (CONCRETE OR ASPHALT OVERLAID CONCRETE) 1100S-5 (FILLI DEPTH ASPHALT STREETS) CLSM SHALL BE SUBSTITUTED FOR BACKFILL AND FLEXIBLE BASE REPLACEMENT PER THE DETAIL NOTES.
- SURFACE RESTORATION: WHEN CUTS ARE OVER 300 LINEAR FEET IN LENGTH, OCCUR WITHIN THE DAPCZ AREA, OR WITHIN PROTECTED STREET SEGMENTS, SURFACE PAVEMENT RESTORATION IS REQUIRED. THIS INVOLVES THE REMOVAL AND REPLACEMENT OF SURFACE ASPHALT IN AREAS AFFECTED BY THE STREET CUTS AS DETERMINED BY 1100S-7. THE REPLACEMENT ASPHALTIC CONCRETE SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON THE STREET'S FUNCTIONAL CLASSIFICATION. FOR LOCAL OR RESIDENTIAL STREETS, REPLACE A MINIMUM 2 INCHES HMAC TYPE D. FOR COLLECTOR OR ARTERIAL STREETS, REPLACE A MINIMUM OF 3 INCHES HMAC TYPE C (SEE ITEM 340S, SECTION 340S.4).
- CONCRETE PAVEMENTS: ACTUAL RESTORATION LIMITS ARE DETERMINED BY JOINT LOCATIONS. FOR COMPOSITE PAVEMENTS (CONCRETE PAVEMENT WITH AN ASPHALTIC CONCRETE OVERLAY) USE 1100S-3 FOR TRENCH REPAIR AND USE 1100S-7 FOR DETERMINATION OF ASPHALT SURFACE RESTORATION.

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US-CO-7105

Mountain Valley Blyd & cross pa MOUNTAIN VILLAGE, 81435 **NEW POLE** 

> **SITE PLAN NOTES** GN-1

PROPRIFTARY

#### SMPA GENERAL NOTES:

## SAFETY & RELIABILITY:

- 1 CONTRACTOR SHALL ASSUME ALL SMPA POLES ARE PART OF AN OVERHEAD ELECTRICAL DISTRIBUTION SYSTEM, AND POWER LINES ATTACHED TO THESE POLES ARE PRESUMED ENERGIZED AT
- 2. ALL WORKERS SHALL BE QUALIFIED TO WORK ON OR NEAR ELECTRIC DISTRIBUTION LINES.
- 3. ALL WORK ABOVE COMMUNICATIONS SPACE ON POLES SHALL ONLY BE PERFORMED BY CONTRACTORS PRE-APPROVED BY SMPA TO PERFORM SUCH WORK.
- 4. UNOBSTRUCTED CLIMBING SPACE MUST BE MAINTANED AT ALL TIMES.
- 5 RE AND EME COMPLIANCE MUST BE MAINTAINED WITH ALL APPLICABLE STANDARDS
- OR CITY PERSONNEL MAY HALT ANY WORK, AT ANY TIME, IF A SAFETY 6. SMPA VIOLATION IS OBSERVED.
- 7. SERVICE PROVIDERS SHALL MAKE AND MAINTAIN ITS ATTACHEMENTS IN A SAFE CONDITION IN ACCORDANCE WITH ALL APPLICABLE STANDARDS
- 8 SERVICE PROVIDERS SHALL BE RESPONSIBLE FOR ALL TREE TRIMMING NECESSARY FOR THE SAFE AND RELIABLE INSTALLATION, USE AND MAINTENANCE OF ITS ATTACHEMENTS
- 9. SERVICE PROVIDERS SHALL NOT CAUSE DAMAGE TO SMPA FACILITIES OR OPERATIONS SERVICE PROVIDERS SHALL IMMEDIATELY INFORM SMPA

#### **SMPA** CLEARANCE AND SPACING REQUIREMENTS:

- 10. THE CLEARANCE AT THE POLE IS 40-INCH BETWEEN THE LOWEST ELECTRICAL CONDUCTOR AND THE HIGHEST COMMUNICATION CABLE
- 11. 12-INCH SPACING BETWEEN ATTACHMENTS AT THE POLE IS REOUIRED
- 12. THE MID-SPAN VERTICAL CLEARANCE IS 30-INCH BETWEEN THE LOWEST ELECTRICAL CONDUCTOR AND THE HIGHEST COMMUNICATION CABLE
- 13. 6-INCH MID SPAN BETWEEN ATTACHEMENTS IS REQUIRED
- 14. THE LOWEST ALLOWABLE CLEARANCE FROM THE GROUND TO LOWEST ATTACHEMENT IS 15'-6" IF WITHIN THE CITY OF SMPA RIGHT-OF-WAY
- 15. CLEARANCE FOR CITY AND COUNTY ROADS MUST BE MAINTAINED BY THEIR REQUIREMENTS
- 16. THE LOWEST ALLOWABLE CLEARNACE FOR RALROAD TRACKS CROSSINGS IS 24 FEET FROM LOWEST ATTACHEMENT TO THE TOP OF RAILROAD TRACKS

## POLE ATTACHEMENT STANDARDS:

- 17. WIRELINE ATTACHEMENTS MUST BE PLACED AND REMAIN IN THE COMMUNICATION SPACE AT ALL TIMES
- 18. ATTACHEMENTS TO STEEL, CONCRETE, OR FIBERGLASS DISTRIBUTION POLES MUST BE CLAMPLED OR BANDED TO THE POLES WITH STAINLESS STEEL STRAPS
- 19. SERVICE PROVIDERS SHALL PROVIDE ALL ANCHORS AND GUYING NECESSARY TO ACCOMODOATE THE ADDITIONAL STRESS AND LOAD PLACED UPON A POLE BY ITS ATTACHEMENTS

ANCHOR

- 20. A LICENSEE MAY NEVER ATTACH ITS GUY TO AN SMPA
- 21. SIDEWALK GUYS ARE PROHIBITED UNLESS SPECIFICALLY AGREED TO IN WRITING BY LICENSEE , ON A CASE BY CASE BASIS
- 22. COMMUNICATIONS SERVICE DROPS SHALL BE CONNECTED 15-INCHES FROM THE POLE TO THE ATTACHER'S CABLE MAIN SUPPORTING MESSENGER
- 23. RISERS MAXIMUM OF 3 RISERS PER POLE INCLUDING SMPA
- 24. ALL POLE LOADING ANALYSIS AND OTHER ENGINEERING DOCUMENTS MUST BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CO
- 25. ATTACHEMENTS TO TRANSMISSION POLE IS PROHIBITED UNLESS THE TRANSMISSION POLE HAS DISTRIBUTION UNDER BUILD.

#### WIRELESS ATTACHEMENTS STANDARDS

- 26. NETWORK NODES AND RELATED EQUIPMENT INSTALLED ON POLES SHALL NOT EXCEED DIMENSIONS AND SPECIFICATIONS DESCRIBED IN CO LOCAL GOVERNEMNT CODE UNLESS OTHERWISE APPROVED IN WRITING BY SMPA
- 27. LICENSEE SHALL POST ITS NAME, LOCATION IDENTIFYING INFORMATION, AND EMERGENCY TELEPHONE NUMBER IN AN AREA ON THE CABINET OF THE NETWORK NODE THAT IS VISIBLE TO THE PUBLIC.
- 28. LICENSEE SHALL NOT PLACE COMMERCIAL ADVERTISING ON ANY OF ITS FACILITIES OR INFRASTRUCTURE
- 29. NETWORK NODES MAY ONLY BE INSTALLED ON POLES LOCATED IN THE PUBLIC RIGHT OF WAY AND THAT ARE BUCKET TRUCK ACCESSIBLE. EXCEPTIONS MUST BE EVALUATED ON A CASE BY CASE BASIS AND APPROVED BY SMPA
- 30. NETWORK NODES MAY BE INSTALLED ONLY ON IN LINE TANGENT POLES OR SERVICE POLES THAT DO
- NOT HAVE SUPPLY EQUIPMENT INSTALLED 31POWER SUPPLIES MAY NOT BE MOUNTED ON A POLE OR CONNECTED DIRECTLY TO SMPA
- DISTRIBUTION SYSTEM. ALL BATTERIES, POWER SOURCES, RADIO HEADS, OR OTHER QUIPMENT REQUIRED TO SUPPORT A NETWORK NODE MUST BE INSTALLED AS GROUND FURNITURE
- 32. SMPA MAY REOUIRE A LICENSEE TO INSTALL A NEW POLE TO PROVIDE A FIVE FOOT
- (5'CLEARANCE ABOVE SMPA FACILITIES TO ACCOMMODATE A NETWORK NODE TO BE INSTALLED ON THE TOP OF SMPA POLES. THE USE OF POLE-TOP EXTENSIONS IS PROHIBITED. THE
- 33NSTALLATION OF POLES TALLER THAN SIXTY FEET (60') OR LARGER THAN CLASS 2 WILL BE CONSIDERED
- 34. SERVICE PROVIDERS MAY NOT INSTALL OVERHEAD CABLES ON A STREET LIGHT POLE. ALL CABLES, INCLUDING POWER AND FIVER OPTIC, CONNECTING TO THE NETWORK NODE SHALL BE PLACED IN CONDUIT THAT IS TO BE BURIED BELOW GROUND.
- 35. LICENSEE'S INSTALLATION SHALL NOT BLOCK OR HINDER ACCESS TO HANDHOLD COVERS.
- 36. DISCONNECTS SHALL BE LOCKED WITH DUAL ACCESS LOCK BAR WITH A CARRIERS LOCK AND SMPA
- 37. RISERS ON STREET LIGHT AND STEEL POLES SHALL USE BOLT-A-BRANDS AND ATTACHE CONDUIT TO BANDS
- 38. THROUGH BOLTS SHALL BE USED TO ATTACH SERVICE PROVIDERS WIRELESS ATTACHEMENTS

## **ELECTRICAL GENERAL NOTES:**

- 1. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE TORO CONSTRUCTION MANAGER AND SCHEDULE THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REOUIREMENTS.
- 2. CONTRACTOR SHALL COORDINATE WITH A WEEK IN ADVANCE FOR THE WILL PERFORM ALL WORK ASSOCIATED TO THEIR PROPOSED WORK. OWNED AND MAINTAINED PROPOSED ELECTRICAL LINE, MANHOLE AND PULL BOX, EXCEPT FOR INSTALLING THE 3-INCH CONDUIT PER DRAWINGS.
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK
- 4 CONTRACTOR SHALL INSTALL ALL FOLIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OF REGULATIONS TAKE PRECEDENCE.
- 5 CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES EQUIPMENT, IMPROVEMENTS, PIPING ETX. AND IMMEDIATE REPAIR, TO NEW CONDITION, ANY DAMAGE THAT OCCURS DURING CONSTRUCTION AT THE SOLE COST OF THE CONTRACTOR.
- 6. IN DRILLING HOLES, OR CORING, INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE LOCATED BY THE CONTRACTOR USING APPROPRIATE METHODS AND EQUIPMENT PRIOR TO ANY DRILLING OR CORING OPERATIONS IN EXISTING CONCRETE.
- 7 CONTRACTOR SHALL REPAIR TO NEW CONDITION ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
- 8. CONTRACTOR SHALL SEAL PENETRATIONS THROUGH FIR RATED ASSEMBLIES OR MATERIALS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS AND SYSTEMS THAT MEET OR EXCEED THE RATING OF THE ASSEMBLY IN WHICH THE NEW PENETRATION IS PLACED.
- 9. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALI DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAIN SPOTS, DUST, OR SMUDGES OF ANY NATURE, CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITMES UNTIL COMPLETION OF CONSTRUCTION.
- 10. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERES RECOMMENDATIONS.
- 11. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE PER STATE BUILDING STANDARDS CODE AND STATE CODE OF REGULATIONS SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHERIN THE FINISHED WORK WILL NOT COMPLY PER STATE CODE OF REGULATIONS, A SCOPE OF WORK DETAILING AND SPECIFYING THE REOUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK. A CHANGE ORDER REQUEST FOR THAT SCOPE SHALL BE SUBMITTED TO THE TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.
- 12. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE, ANY CORRECTIVE WORK SHALL BE COMPLETED AT THE SOLE COST OF THE CONTRACTOR.
- 13. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- 14. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING FLECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EOUIP., ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF THEIR BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
- 15. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC. ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION, AND POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT ARE NOT BE LIMITED TO:
- A) UL UNDERWRITERS LABORATORIES
- B) NEC NATIONAL ELECTRICAL CODE
- C) NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
- D) OSHA OCCUPATIONAL SAFETY AND HEALTH ACT
- E) SBC STANDARD BUILDING CODE
- F) SFPA NATIONAL FIRE PROTECTION AGENCY
- G) ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- H) IEEE INSTITUTE OF ENECTRICAL AND ELECTRONICS ENGINEERS
- I) ASTM AMERICAN SOCIETY FOR TESTING MATERIALS
- 16. REFER TO THE CITY APPROVED SITE PLANS AND ELEVATIONS FOR EXACT LACATIONS OF ALL EOUIPMENT AND CONFIRM WITH TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER ANY SIZES AND LOCATIONS WHEN NEEDED.
- 17. EXISTING SERVICES: CONTRACTOR SHALL NOT INTEERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
- 18. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS

- SUCH AS THE: LUG SIZE RESTRICTIONS CONDUIT ENTRY SIZE OF TRANFORMERS SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER PRIOR TO BEGINNING ANY WORK.
- 19. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION, UNLESS OTHERWISE NOTED.
- 20. OULTET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THERADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLUSURES FOR OTHER CLASSIFIED AREAS.
- 21. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- 22. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT.
- 23. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY FUNCTIONAL AND SHALL BE APPROVED BY THE TORO BLANCO GROUP, LLC CONSTRUCTION AND LOCAL JURISDICTION. ANY DEFICIENCIES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR AT THE SOLE COST OF THE CONTRACTOR.
- 24. ALL WORK SHALL BE COORDINATED WITH OTHER TRADE TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- 25. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THERIEN.
- 26. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- 27. REFER TO LOCAL JURISDICTION STANDARDS AND DETAILS FOR TRENCHING AND EXCAVATION REQUIREMENTS.
- 28. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS TEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REOUIREMENTS OF THE NEC, NEMA AND IECE.
- 29 CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURER'S CATALOG INFORMATION OF ANY/ALL EQUIPMNET AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- 30. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER UPON FINAL ACCEPTANCE.
- 31 THE ELECTRICAL CONTRACTOR SHALL LAREL ALL PANELS WITH ONLY TYPE WRITTEN DIRECTORIES, ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL
- 32. DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-MAKE AND OUICK-BREAK ENCLOSURES. AS REQUIRED BY EXPOSURE TYPE.
- 33. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND KNOWN AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS. SHALL BE TREATED - NO SUBSTITUTIONS.
- 34. RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TX2 -1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID COUDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'COLD GALV'.
- 35. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
- 36. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, UNLESS OTHERWISE NOTED, 600 VOLT, COLOR CODED, USE SOLID CONDUCTORS FOR WIRE UP TO AND INCUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
- 37 CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
- 38 SERVICE: AS SPECIFIED ON THE DRAWINGS OWNER OF OWNER'S AGENT WILL APPLY FOR POWER, ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE CONTRACTOR.
- 39. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONTUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
- 40. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.
- 41. CONTRACTOR SHALL PALCE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRC" OR "BURIED TELECOM"
- 42. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL



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US-CO-7105

Mountain Valley Blvd & cross pa MOUNTAIN VILLAGE, 81435 **NEW POLE** 

> **ELEC NOTES** GN-2

#### **GROUNDING NOTES:**

- 1. ALL HARDWARE SHALL BE 3-16 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND, AS SPECIFIED, BEFORE MATTING. ALL HARDWARE SHALL BE STAINLESS STEFL; ½N INCH DIAMETER OR SIZED TO MATCH COMPONENTS OR LOG SIZE.
- 2. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
- 3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING
- 4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- 6. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #6
  GROUND WIRES. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING
  DEOLUDEMENTS
- 7. ALL GROUND CONNECTIONS SHALL BE #6 AWG, UNLESS OTHERWISE NOTED. USE SOLID COPPER, BLACK JACKETED WIRE ON NON WOOD POLES AND SOLID TINNED COPPER, BARE (NO JACKET) WIRES ON WOOD POLES. BLACK WIRES WILL USE A SINGLE STRIPE OF GREEN ELECTRICAL TAPE WITHIN 12" OF THE CONNECTION POINTS TO IDENTIFY AS GROUNDING WIRE.
- 8. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS
- 9. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM OF 30" BELOW GRADE 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE COMPACTED AS REOURED BY LIRISDICTION STANDARDS AND DETAILS
- 10. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
- 11. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
- A.BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER
- B.CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS)
- C.ONE (1) OR (2) HOLES TINNED COPPER COMPRESSION (LONG BARRELE) FITTINGS.
- 12. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSES MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHER-PROOFED WITH HEAT SHRINK.
- 13. ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS).
- 14. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

### TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

- RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT TESTING WILL COMPLY WITH CURRENT INDUSTRY STANDARDS AND OR THOSE STANDARDS OF THE EQUIPMENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
- 2. CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT THAT MEET INDUSTRY STANDARDS OR THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
- 3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
- 4. ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT WILL BE REQUIRED TO HAVE BEEN TRAINED AND OR CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENTS AND BACK HAUL EQUIPMENT.
- 5. ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.
- $6.\,\mathrm{GPS}$  EQUIPMENT (WHEN REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING, DOING SO WILL DAMAGE THE GPS UNIT.
- 7. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED DESIGNED TESTING REPRESENTATIVE.
- 8. EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPROPRIATE AUTHORITY HAS BEEN NOTIFIED AND GIVES APPROVAL TO ENERGIZE THE EQUIPMENT.

## ADDITIONAL SITE WORK NOTES:

- 1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- 2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO TORO BLANCO GROUP, LIC CONSTRUCTION MANAGER AT COMPLETION OF PROJECT.
- 3. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION.
- 4, CONTRACTOR SHALL VERIFY ALL (E) UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR TORO BLANCO GROUP, LLC CONSTRUCTION MANAGER FOR RESOLUTION AND INSTRUCTIONS, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATE HOT LINE. SUCH AS 811, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
- 5. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK, ANY COST RELATED TO ADJUSTING EXISTING STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.
- 6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.

- 7. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS
- 8. REFER TO LOCAL JURISDICTIONS STANDARDS, SPECIFICATIONS AND DETAILS FOR BACKFILL AND PAVEMENT REPLACEMENTS.
- 9. CONTRACTOR SHALL CLEAN ENTIRE SITE AFFER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRASH, WEEDS, BRUSH, EXCESS FILL, OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
- 10. REFER TO LOCAL JURISDICTION'S STANDARDS AND DETAILS FOR TREE PROTECTION REQUIREMENTS.
- 11. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION

## ADDITIONAL ENVIRONMENTAL NOTES:

- 1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED APPROVED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
- 3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES AS REQUIRED BY THE LOCAL JURISDICTION WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION
- 4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REOUIRED IN ANY AREAS SUBJECT TO EROSION.
- 5. THE CONTRACTION IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
- 7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM, ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
- 8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE SHALL BE IN ACCORDANCE WITH LOCAL JURISDICTION AND WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTION LAND DISTURBANCE.
- 9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE BUT IS NOT LIMITED TO SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
- 10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.
- 11. CONTRACTOR TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEWER SYSTEM.
- 12. CONTRACTOR TO INSTALL INLET PROTECTIONS TO ALL IMPACTED INLETS WITHIN 300 FT OF PROJECT AREA PER LOCAL JURISDICTIONS STANDARDS AND DETAILS.



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 DRAWN BY:
 Z. HODGIN

 CHECKED BY:
 B. KAUFFMAN

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IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT



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TORO BLANCO GROUP, LLC WWW.TOROBLANCOGROUP.COM POC: ZACK HODGIN TEL: 828-260-6238 E: ZACK@TOROBLANCOGROUP.COM



IF YOU DIG DIAL 811 FOR THE "ONE CALL CENTER" IT'S THE LAW

THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE RIGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK, ALL DAMAC MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHALL BE THE SOLD RESPONSIBILITY OF THE CONTRACTOR SHALL BE THE SOLD RESPONSIBILITY OF THE CONTRACTOR.

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GROUNDING NOTES

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