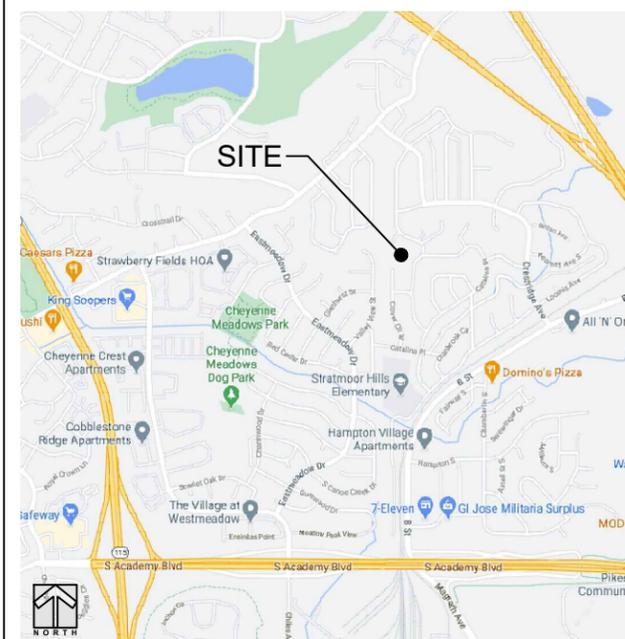




DN04161A

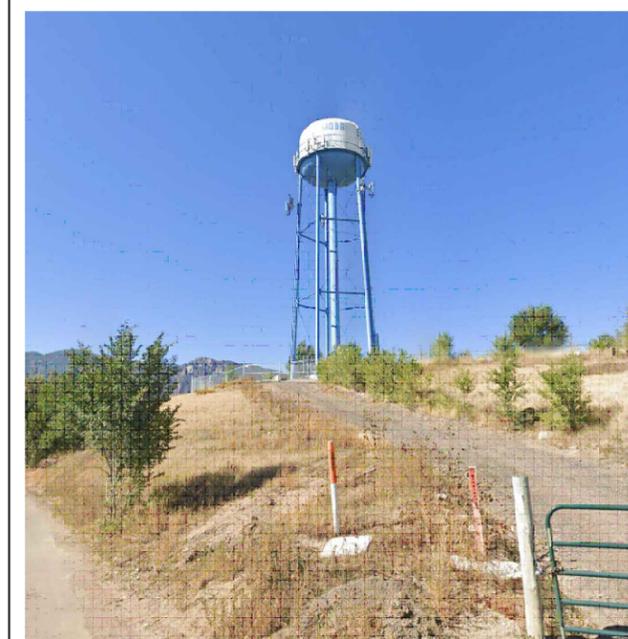
APPROVAL SIGNATURE BLOCK		
<p>The following parties have reviewed these documents.</p> <p>All documents are subject to review by the local zoning/building departments and may impose changes or modifications.</p>		
_____	_____	<input type="checkbox"/> Approved <input type="checkbox"/> Rejected
Project Manager (Print)	Project Manager	_____
_____	_____	<input type="checkbox"/> Approved <input type="checkbox"/> Rejected
RF Engineer (Print)	RF Engineer	_____
_____	_____	<input type="checkbox"/> Approved <input type="checkbox"/> Rejected
Site Acquisition (Print)	Site Acquisition	_____
_____	_____	<input type="checkbox"/> Approved <input type="checkbox"/> Rejected
Construction Manager (Print)	Construction Manager	_____
_____	_____	<input type="checkbox"/> Approved <input type="checkbox"/> Rejected
TMO Quality Assurance (Print)	TMO Quality Assurance	_____

**LOCATION MAP**



**T-Mobile®**  
**HARDENING 2020**  
**STRATMOOR HILLS WATER TOWER**  
**DN04161A**  
 12 EAST CLOVER CIRCLE  
 COLORADO SPRINGS, CO 80906  
 EL PASO COUNTY

**SITE PHOTO**



**T-Mobile®**  
 18400 EAST 22ND AVE. AURORA, CO 80216



PROJECT INFORMATION:  
 SITE NAME:  
**STRATMOOR HILLS WATER TOWER**  
 SITE ID:  
**DN04161A**  
 12 EAST CLOVER CIRCLE  
 COLORADO SPRINGS, CO 80906  
 EL PASO COUNTY

Rev:	Date:	Description:	By:
0	12/16/20	PRELIMINARY	MC
1	01/27/21	100% CONSTRUCTION	MC
2	04/24/21	FINAL STAMPED	MC

**SITE INFORMATION**

SITE TYPE: WATER TOWER  
 SITE NAME: STRATMOOR HILLS WATER TOWER  
 SITE NUMBER: DN04161A  
 SITE ADDRESS: 12 EAST CLOVER CIRCLE  
 COLORADO SPRINGS, CO 80906  
 JURISDICTION: EL PASO COUNTY  
 PARCEL #: 6505104061  
 A.D.A. COMPLIANCE: NOT REQUIRED PER IBC 1103.2.9.

**PER STRATMOOR HILLS WATER & SANITATION DISTRICT  
 HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.**

**PROJECT TEAM**

**APPLICANT:**  
 NAME: T-MOBILE  
 ADDRESS: 18400 EAST 22ND AVENUE  
 CITY, STATE ZIP: AURORA, CO 80216

**A&E FIRM / ENGINEER OF RECORD:**  
 NAME: TELEMtn ENGINEERING  
 ADDRESS: 104 NORTH BROADWAY, SUITE 600  
 CITY, STATE ZIP: DENVER, CO 80203  
 CONTACT: KHRISTOPHER SCOTT, PE  
 PHONE: 303.596.6804

**PROPERTY OWNER:**  
 NAME: STRATMOOR HILLS WATER DISTRICT  
 ADDRESS: 1811 B STREET  
 CITY, STATE ZIP: COLORADO SPRINGS, CO 80906  
 PHONE: 719.576.0311

**SITE ACQUISITION:**  
 NAME: STRYKER SITE SERVICES, LLC  
 ADDRESS: P.O. BOX 1558  
 CITY, STATE ZIP: DENVER, CO 80203  
 CONTACT: CHRIS STRYKER  
 EMAIL: 303.859.0344

**ELECTRICAL ENGINEER:**  
 NAME: TELEMtn ENGINEERING  
 ADDRESS: 104 NORTH BROADWAY, SUITE 600  
 CITY, STATE ZIP: DENVER, CO 80203  
 CONTACT: JOHN KEATING, PE  
 PHONE: 303.437.0510

**INDEX OF SHEETS**

T1	TITLE SHEET
GN1	GENERAL NOTES
A1	OVERALL SITE PLAN
A2	ENLARGED PLAN
A3	EQUIPMENT DETAILS
A4	EQUIPMENT DETAILS
A5	FENCE DETAILS & PLUMBING DIAGRAMS
S1	STRUCTURAL DETAILS
E1	ELECTRICAL SITE & GROUNDING PLAN
E2	ELECTRICAL ONE-LINE DIAGRAM & PANEL SCHEDULE

**PROJECT DESCRIPTION**

CONSTRUCTION AT A T-MOBILE "NON-INHABITABLE" TELECOMMUNICATIONS SITE CONSISTING OF INSTALLING (1) NEW DIESEL GENERATOR INSIDE AN EXISTING FENCED EQUIPMENT COMPOUND WITHIN AN EXISTING LEASE AREA.

GENERATOR INSTALLED PER MANUFACTURER SPECIFICATIONS.

**JURISDICTIONAL INSTALL KITS REQUIRED FOR GENERATOR:**  
 6511-0, 7250-0, 7243-0, 6506-0.  
 COLD WEATHER KIT IS STANDARD.

**CODE COMPLIANCE**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS (WITH LOCAL AMENDMENTS) OF THE FOLLOWING:

**GOVERNING CODES, AS APPLICABLE:**  
 2015 IBC, 2015 IMC, 2015 IECC, 2017 NEC, 2015 IFC & LOCAL FIRE CODES.  
 T-MOBILE DIESEL GENERATOR INSTALLATION IS EXEMPT FROM COLORADO STATE STORAGE TANK REGULATIONS (FOUND AT 7 C.C.R. 1101-14) PER C.R.S. 8-20.5-101(2)(B) "ANY A.S.T. WHOSE CAPACITY IS GREATER THAN 39,999 GALLONS OR LESS THAN 660 GALLONS."



Know what's below.  
 Call before you dig.

**PROPRIETARY NOTES**

- INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THIS PROJECT IS STRICTLY PROHIBITED.
- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS ON SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
- DRAWING SCALES SHOWN ARE ACCURATE WHEN PLOTTED ON 11"x17" SHEET. FOR 24"x36" SHEETS USE APPROPRIATE SCALE FACTOR 2X THAT OF SCALE SHOWN. DIMENSIONS SHOWN TAKE PRECEDENCE.

**REFERENCE DOCUMENTS**

- GENERAC RD048 INSTALL SPECIFICATION SHEET (DATED 5.10.2018)
- GENERAC OWNERS MANUAL FOR STATIONARY GENERATORS (DATED 7.24.2018)
- GENERAC OWNERS MANUAL FOR AUTOMATIC TRANSFER SWITCH (DATED 2.22.2018)

**GENERAL CONTRACTOR NOTES**

- CALL 811 TWO BUSINESS DAYS BEFORE DIGGING. THE CONTRACTOR SHALL NOTIFY ONE CALL TO LOCATE ALL UNDERGROUND FACILITIES BEFORE DIGGING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO STAY CLEAR OF ALL UNDERGROUND FACILITIES.
- THIS DRAWING SET MAY NOT SHOW ALL UNDERGROUND PIPING & UTILITIES. THE CONTRACTOR SHALL EXERCISE CAUTION DURING ALL EXCAVATION & CONSTRUCTION ACTIVITIES. ANY SUB-SURFACE ITEMS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITIONS.

PLANS PREPARED BY:



LICENSURE NO:



DRAWN BY: CHK BY: APV BY:

MC	CS	KS
----	----	----

Sheet Title:

**TITLE SHEET**

Sheet Number:

**T1**

## GENERAL NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)  
OWNER - T-MOBILE
- THIS FACILITY IS AN UNMANNED WIRELESS COMMUNICATION EQUIPMENT FACILITY.
- PRIOR TO SUBMISSION OF BIDS, THE BIDDING CONTRACTOR/SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE T-MOBILE CONSTRUCTION MANAGER AND ENGINEER/A&E FIRM.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING BID, ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS, AND PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAVE NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER RESPONSIBLE OF THE PROJECT.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER AND T-MOBILE. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING DAMAGED AREAS.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPLACING OR REPAIRING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. CONTACT UTILITY LOCATE SERVICE @ 811.
- A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONTRACTOR SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT DRAWINGS TO THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT AT THE CONCLUSION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE AND ACCEPTED BY THE PROJECT OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
- ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST BUILDING CODE AND ALL OTHER GOVERNING CODES. WHERE DISCREPANCIES ARISE THE MOST RESTRICTIVE CODE SHALL GOVERN.
- THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA REQUIREMENTS.
- STORED MATERIALS SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
- THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, AND TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
- ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED.
- NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
- THE CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS HAVING A MINIMUM 2A:10-B:C RATING WITHIN 75 FEET OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.
- MATERIALS TESTING SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
- ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
- ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
- BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY CONSTRUCTION EFFORT AS REQUIRED BY THE GOVERNING AGENCY.
- ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT BE NOTIFIED FOR CLARIFICATIONS.
- UNLESS OTHERWISE NOTED THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNERS DESIGNATED LOCATION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.
- ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (FY = 36KSI) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (FY = 35KSI). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED TOUCH-UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
- CONSTRUCTION SHALL COMPLY WITH "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."

32. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH T-MOBILE. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

33. SINCE THE CELL SITE IS ACTIVE, ALL THE SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

34. APPLICABLE BUILDING CODES:  
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, FOURTEENTH EDITION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

## SITE WORK

- THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS, AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.
- BACKFILLING AT THE NEW TRENCHES SHALL BE OF CLEAN, MEETING THE REQUIREMENTS OF (AASHTO NO. 89) GRANULAR MATERIAL SOIL. BACKFILLING SHALL BE DONE IN 8 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED TO SPECIFIED COMPACTION PERCENTAGE PER ASTM D1557 (90% MIN). ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER.
- ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
- SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR OWNERS REPRESENTATIVE AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

## SITE STORM WATER RUNOFF CONTROL

- SUFFICIENT BMP'S MUST BE IMPLEMENTED TO PREVENT SILT, MUD, OR OTHER CONTRACTOR DEBRIS FROM BEING TRACKED INTO THE ADJACENT STREET(S) OR STORM WATER CONVEYANCE SYSTEM DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONTRACTOR ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY SUCH DEBRIS THAT MAY BE IN THE STREET AT THE END OF EACH WORK DAY OR AFTER A STORM EVENT THAT CAUSES A BREACH IN THE INSTALLED CONTRACTOR BMP'S.
- A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS THAT ARE TO BE POURED INTO PLACE IN THE SITE.
- ALL EROSION/SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN WORKING ORDER AT ALL TIMES.
- ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONTRACTOR ACTIVITY MUST BE PROTECTED AGAINST EROSION & SEDIMENT TRANSPORT AT ALL TIMES.
- THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.

## NATURAL GAS PIPING

- ALL WORK SHALL COMPLY WITH MECHANICAL CODE, NFPA 54, "NATIONAL FUEL GAS CODE" & APPLICABLE PARTS OF NFPA 58, "LIQUEFIED PETROLEUM GAS CODE" & NFPA 70, "NATIONAL ELECTRICAL CODE" FOR ELECTRICAL CONNECTIONS BETWEEN WIRING AND ELECTRICALLY OPERATED CONTROL DEVICES.
- ABOVE GROUND PIPE SHALL BE ASTM A54 STEEL PIPE, TYPE E, ELECTRIC-RESISTANCE WELDED OR TYPE S, SEAMLESS; GRADE B SCHEDULE 40; BLACK.
- FITTINGS SHALL BE MALLEABLE-IRON THREADED FITTINGS, ASME B16.3, CLASS 150 STANDARD PATTERN, WITH THREADED ENDS CONFORMING TO ASME B1.20.1.
- UNDERGROUND PIPING SHALL BE SDR 11 POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS IN CONFORMANCE WITH THE 2009 EDITION OF ASTM D 2513.
- JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.
- VALVES SHALL BE ASME B16.33, 150 PSIG WOG, BRONZE BODY, BRONZE PLUG, SQUARE HEAD, TAPERED-PLUG TYPE, WITH THREADED ENDS CONFORMING TO ASME B1.20.1.
- CLOSE EQUIPMENT SHUTOFF VALVES BEFORE TURNING OFF GAS TO PREMISES OR SECTION OF PIPING. PERFORM LEAKAGE TESTING TO DETERMINE THAT ALL EQUIPMENT IS TURNED OFF IN THE AFFECTED PIPING SECTION.
- INSTALL SHUTOFF VALVE, DOWNSTREAM FROM GAS METER, OUTSIDE BUILDING AT GAS SERVICE ENTRANCE.
- PIPING INSTALLATIONS:

CONCEALED LOCATIONS: EXCEPT AS SPECIFIED BELOW, INSTALL CONCEALED GAS PIPING IN AIRTIGHT CONDUIT CONSTRUCTED OF SCHEDULE 40, SEAMLESS, BLACK STEEL PIPE OR SCHEDULE 40, PVC DWV PIPE WITH WELDED JOINTS. VENT CONDUIT TO OUTSIDE AND TERMINATED WITH SCREENED VENT CAP. INSTALL AS SHOWN ON DRAWINGS.

ABOVE CEILING LOCATIONS: GAS PIPING MAY BE INSTALLED IN ACCESSIBLE SPACES, SUBJECT TO APPROVAL OF AUTHORITIES HAVING JURISDICTION, WITH OR NOT SUCH SPACES ARE USED AS PLENUMS. DO NOT LOCATED VALVES IN SUCH SPACES.

IN WALLS: GAS PIPING WITH WELDED JOINTS AND PROTECTIVE WRAPPING MAY BE INSTALLED IN MASONRY WALLS, SUBJECT TO APPROVAL OF AUTHORITIES HAVING JURISDICTION.

IN VERTICAL PIPE CHASES: CHASES SHALL NOT CONTINUE ABOVE CEILINGS.

PROHIBITED LOCATIONS: DO NOT INSTALL GAS PIPING IN WALLS OR UNDER FLOORS, EXCEPT IN ACCESSIBLE ABOVE CEILING SPACES AS SPECIFIED ABOVE, TURNING PASSING THROUGH PARTITIONS OR WALLS; AND IN VENTED SLEEVES AS INDICATED ABOVE AND ON DRAWINGS.



PROJECT INFORMATION:

SITE NAME:  
**STRATMOOR HILLS WATER TOWER**

SITE ID:  
**DN04161A**

12 EAST CLOVER CIRCLE  
COLORADO SPRINGS, CO 80906  
EL PASO COUNTY

Rev:	Date:	Description:	By:
0	12/16/20	PRELIMINARY	MC
1	01/27/21	100% CONSTRUCTION	MC
2	04/24/21	FINAL STAMPED	MC



DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:

**GENERAL NOTES**

Sheet Number:

**GN1**

THIS DRAWING SET WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT SURVEY. OVERALL SITE PLAN AND LAND INFORMATION DERIVED FROM EXISTING CONSTRUCTION DRAWINGS, GIS, AERIAL IMAGES AND SITE PHOTOS.

HAND DIGGING REQUIRED FOR TRENCH EXCAVATION. EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH. ALL PROPOSED UNDERGROUND UTILITY TRENCHES SHALL BE HAND-EXCAVATED. GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF, PHYSICAL DAMAGE TO, OR REPAIR OF EXISTING UNDERGROUND CONDUIT INCLUDING RESTORATION OF SERVICE.

**T-Mobile**  
 18400 EAST 22ND AVE. AURORA, CO 80216

**STRYKER**  
 (SITE SERVICES, LLC)

PROJECT INFORMATION:  
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PLANS PREPARED BY:

**TeleMtn**  
 ENGINEERING

104 BROADWAY, SUITE 600, DENVER, CO 80203

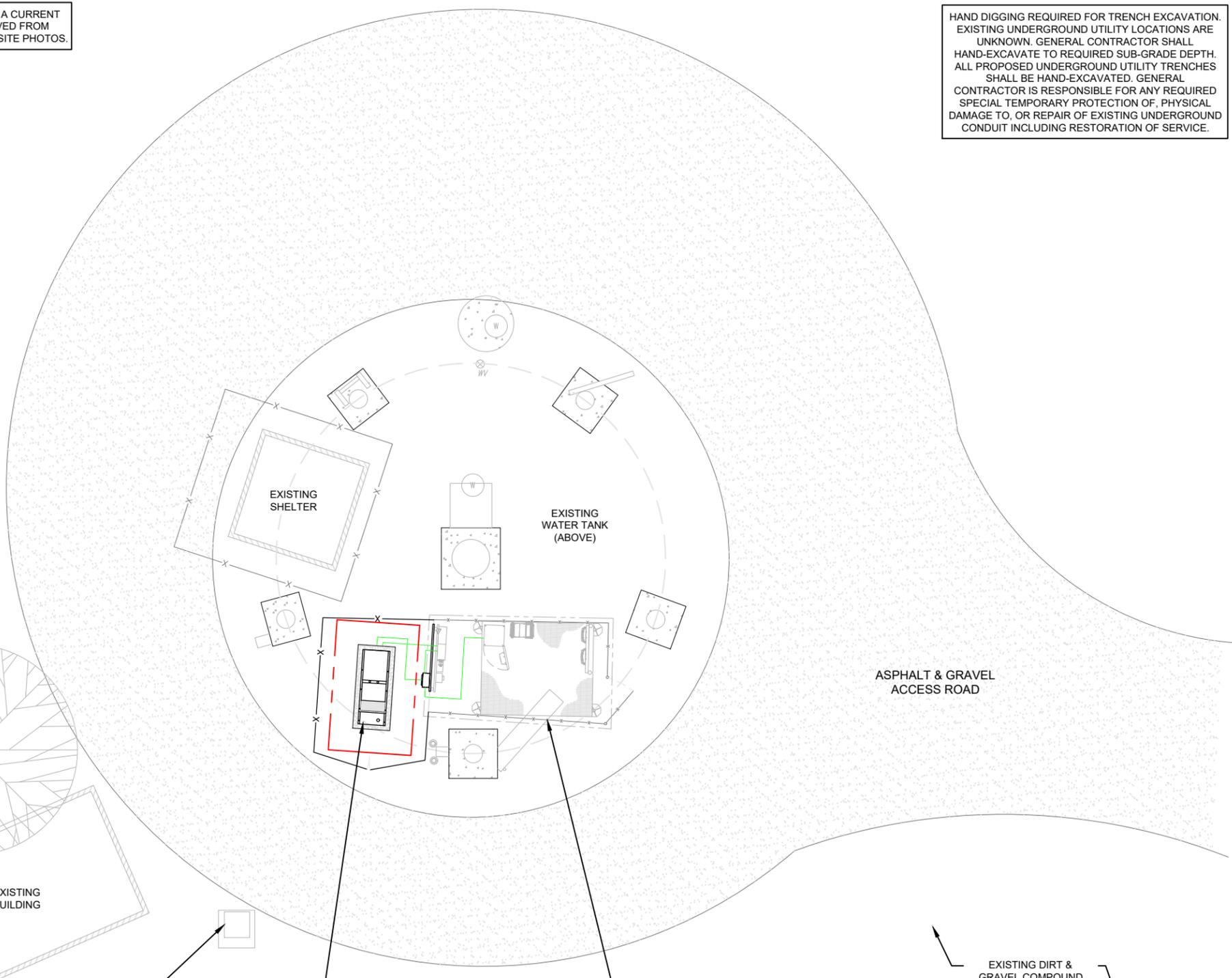
LICENSURE NO:

CHRISTOPHER JAMES SCOTT  
 34610  
 04/26/2021  
 PROFESSIONAL ENGINEER

DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:  
**OVERALL  
 SITE  
 PLAN**

Sheet Number:  
**A1**



EXISTING DIRT & GRAVEL COMPOUND (BY WATER DEPARTMENT)

PER STRATMOOR HILLS WATER & SANITATION DISTRICT - HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.

EXISTING TREE

EXISTING BUILDING

EXISTING TRANSFORMER

NEW T-MOBILE DIESEL GENERATOR ON NEW T-MOBILE CONCRETE SLAB (SEE SHEET A2)

EXISTING WATER TANK (ABOVE)

EXISTING T-MOBILE LEASE AREA WITH EQUIPMENT ON EXISTING PLATFORM (SEE SHEET A2)

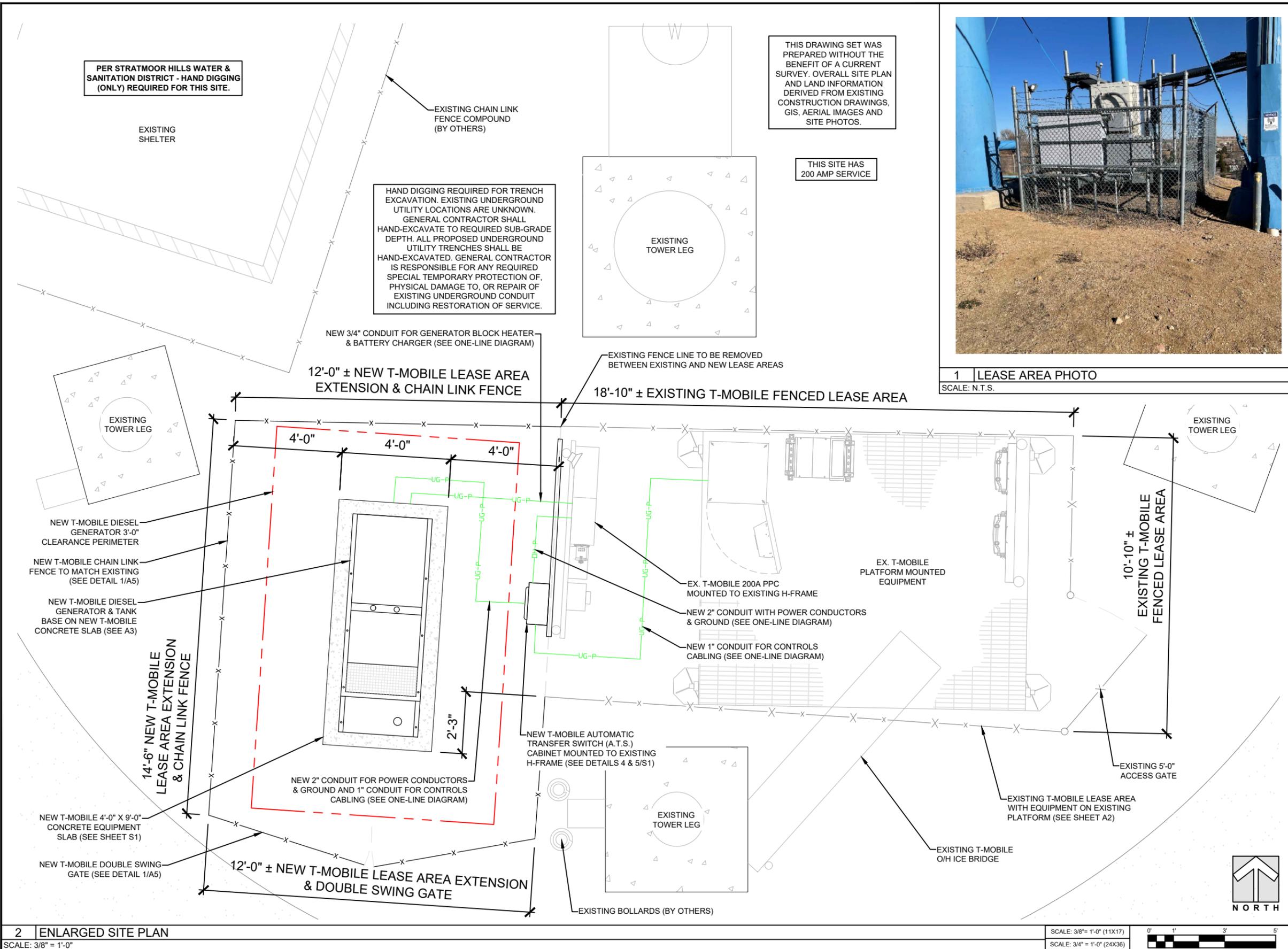
ASPHALT & GRAVEL ACCESS ROAD

EXISTING DIRT & GRAVEL COMPOUND (BY WATER DEPARTMENT)



1 OVERALL SITE PLAN  
 SCALE: 1" = XX'-0"

SCALE: 1" = 30'-0" (11X17)  
 SCALE: 1" = 15'-0" (24X36)



1 LEASE AREA PHOTO  
SCALE: N.T.S.

2 ENLARGED SITE PLAN  
SCALE: 3/8" = 1'-0"

SCALE: 3/8" = 1'-0" (11X17)  
SCALE: 3/4" = 1'-0" (24X36)

**T-Mobile**  
18400 EAST 22ND AVE. AURORA, CO 80216

**STRYKER**  
SITE SERVICES, LLC

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PLANS PREPARED BY:

**TeleMtn ENGINEERING**  
104 BROADWAY, SUITE 600, DENVER, CO 80203

LICENSURE NO:

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MC	CS	KS

Sheet Title:  
**ENLARGED SITE PLAN**

Sheet Number:  
**A2**



**RD048 | 3.4L | 48 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency



**Standby Power Rating**  
 48 kW, 60 KVA, 60 Hz



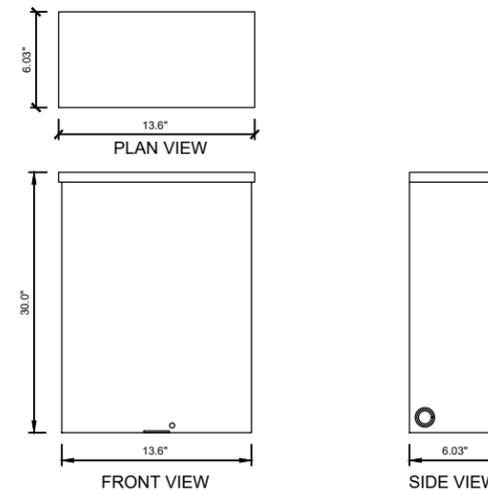
**ENGINE SPECIFICATIONS**

General	
Make	Generac
Cylinder #	4
Type	In-Line
Displacement - in <sup>3</sup> (L)	3.4 (207.48)
Bore - in (mm)	3.86 (98)
Stroke - in (mm)	4.45 (113)
Compression Ratio	18.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	Cast Iron GHV
Piston Type	Aluminum
Engine Governing	
Governor	Electronic
Frequency Regulation (Steady State)	±0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Full Flow Spin-On Canister
Crankcase Capacity with Filters- qt (L)	7.4 (7.0)

Cooling System	
Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed- rpm	2,029
Fan Diameter - in (mm)	22 (559)
Fuel System	
Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	7.94/0.31 (ID)
Fuel Filtering (microns)	25

Engine Electrical System	
System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	Group 27F
Battery Voltage	12 VDC
Ground Polarity	Negative

1 DIESEL GENERATOR SPECIFICATIONS  
 SCALE: NOT TO SCALE



GENERAC RXSW200A3 AUTOMATIC TRANSFER SWITCH	
PROPERTY	VALUE
AMPS	200
VOLTAGE	120/240, 1Ø
LOAD TRANSITION TYPE	OPEN TRANSITION SERVICE RATED (AUTOMATIC)
ENCLOSURE TYPE	NEMA/UL 3R
UL RATING	UL
WITHSTAND RATING	22,000 AMPS
LUG RATING	250 MCM - #6
LENGTH	30.0"
WIDTH	13.6"
DEPTH	6.03"
WEIGHT	39 LBS

NOTES: SERVICE RATED (RXSW) SWITCHES ARE HOUSED IN AN ALUMINUM NEMA/UL TYPE 3R ENCLOSURE.

2 AUTOMATIC TRASFER SWITCH (A.T.S.) SPECIFICATIONS  
 SCALE: NOT TO SCALE

- GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE FROM RADIATOR IS NOT RECIRCULATED.
- RECOMMENDED MINIMUM PERIMETER (3 FT) AND VERTICAL OVER EXHAUST (5 FT) CLEARANCE FOR SITE LOCATION.
- ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES.
- 10' MINIMUM DISTANCE FROM EXHAUST TO ANY OPERABLE OPENING IN A BUILDING. (IMC-09)
- 5' MINIMUM DISTANCE FROM GENERATOR TO ANY STRUCTURE HAVING COMBUSTIBLE WALLS (LESS THAN 1 HOUR RATED) OR ANY OPENINGS IN WALLS. (NFPA - 37)

3 GENERATOR NOTES  
 SCALE: NOT TO SCALE



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 SITE ID:  
**DN04161A**  
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 COLORADO SPRINGS, CO 80906  
 EL PASO COUNTY

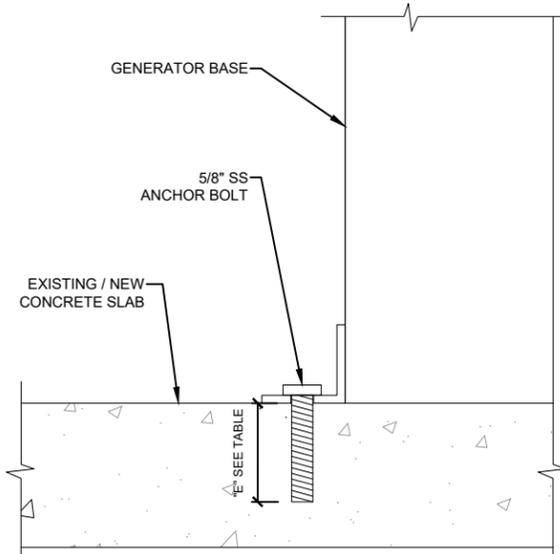
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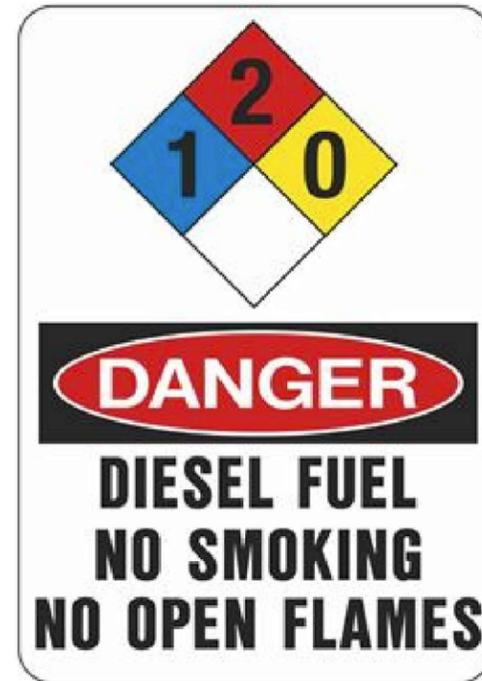
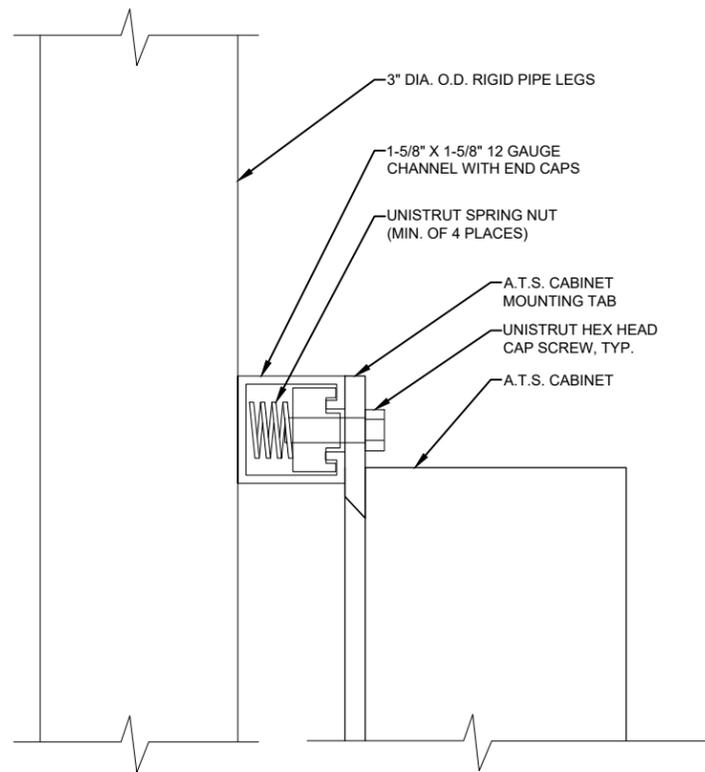
Sheet Title:  
**EQUIPMENT DETAILS**

Sheet Number:  
**A3**



ANCHOR INFORMATION		
BOLT DIAMETER	HOLE DIAMETER	"E" EMBEDMENT
0.625"	0.66"	3.125"

\* VERIFY WITH GENERATOR MANUFACTURER FOR MOUNTING HOLE LOCATIONS.



\* INSTALL RATED FIRE EXTINGUISHER & SIGNS PER LOCAL JURISDICTION REQUIREMENTS.

1 CONCRETE ANCHOR DETAIL

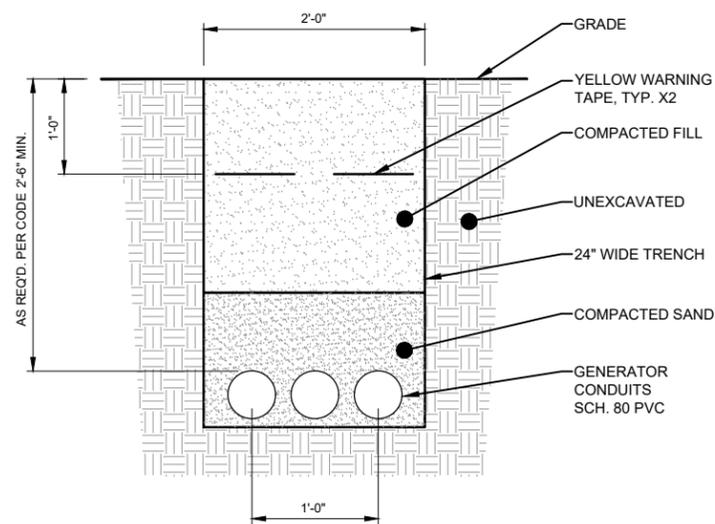
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2 H-FRAME MOUNTING DETAIL

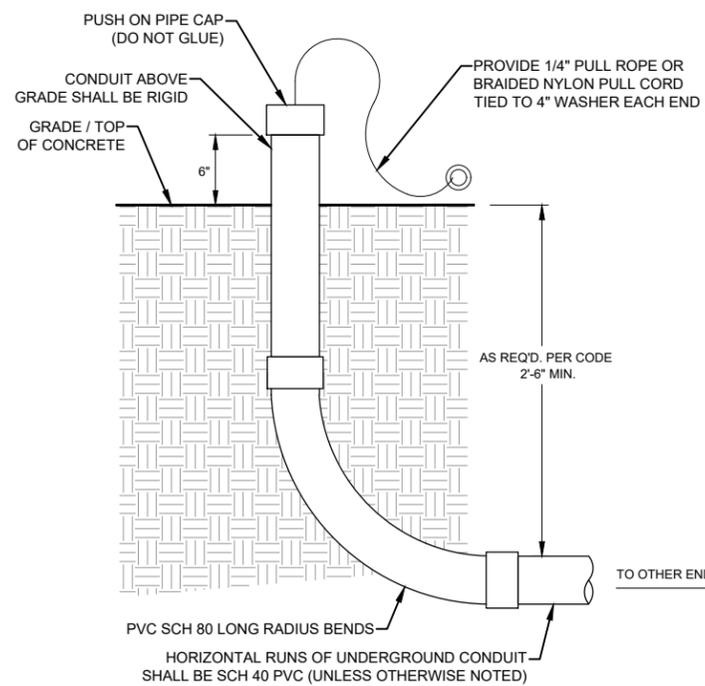
SCALE: NOT TO SCALE

3 DIESEL FUEL WARNING SIGN

SCALE: NOT TO SCALE



\* HAND DIG TRENCH.



\* SCH. 80 SHALL BE USED UNDER TRAFFIC BEARING AREAS.

PER STRATMOOR HILLS WATER & SANITATION DISTRICT - HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.

4 CONDUIT TRENCH DETAIL

SCALE: NOT TO SCALE

5 STUB-UP DETAIL

SCALE: NOT TO SCALE

6 NOT USED

SCALE: NOT TO SCALE

**T-Mobile**  
18400 EAST 22ND AVE. AURORA, CO 80216



PROJECT INFORMATION:  
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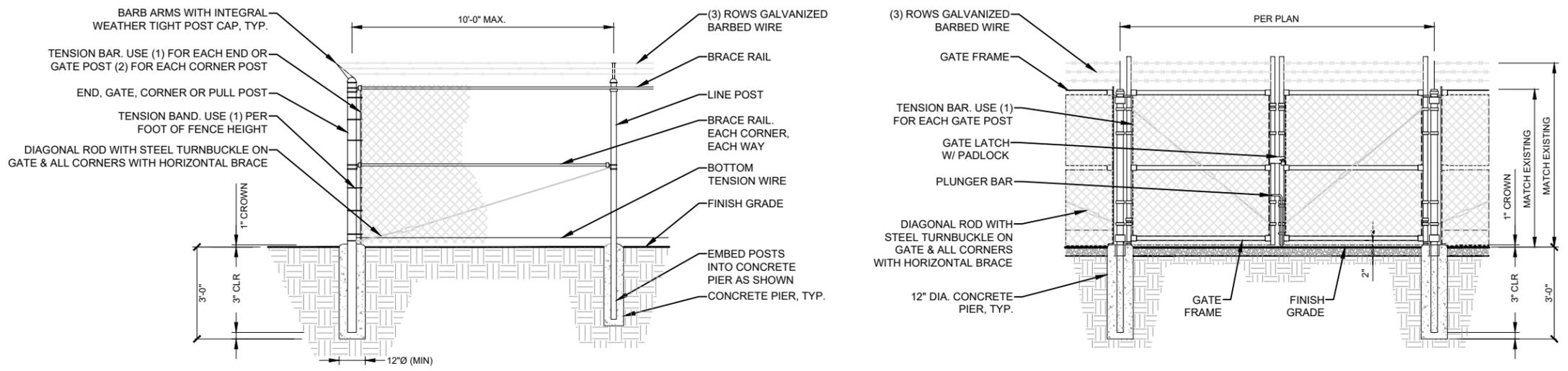
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**EQUIPMENT  
DETAILS**

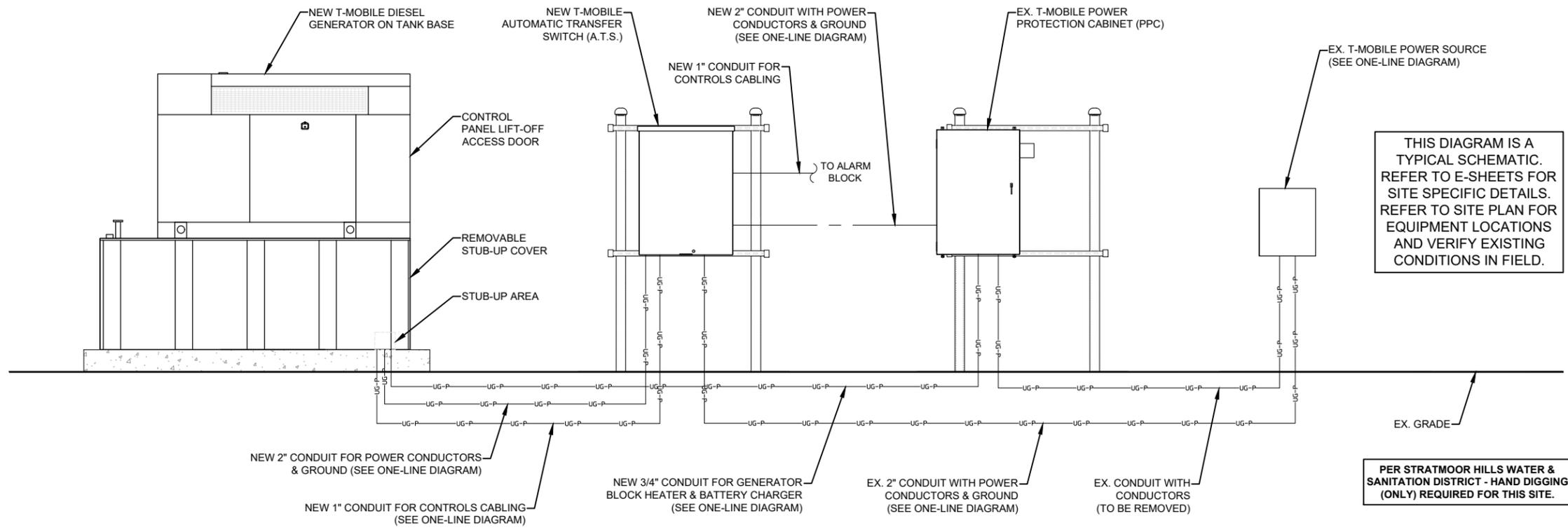
Sheet Number:

**A4**

CHAIN-LINK GATE/FENCE SPECIFICATIONS:		NOTES
(INSTALL FENCING PER ASTM F567 / SWING GATES PER ASTM F900)		
GATE POST	4.500" O.D. SCHEDULE 40 PIPE FOR GATE WIDTHS UP TO 6 FEET, PER ASTM F1083.	POST & FENCE PIPE SIZES ARE FENCE INDUSTRY STANDARD. ALL PIPE TO BE GALV. (HOT-DIP, ASTM A120 GRADE "A" STEEL). CROSS BRACE ALL POSTS EXCEPT INTERMEDIATES.
LINE POST	2.375" O.D. SCHEDULE 40 PIPE PER ASTM F1083. 10'-0" MAX. SPACING BETWEEN POSTS.	
CORNER POST	3.500" O.D. SCHEDULE 40 PIPE PER ASTM F1083.	
TOP RAIL/BRACE RAIL	1.875" O.D. SCHEDULE 40 PIPE, PER ASTM F1083.	
GATE FRAME	1.875" O.D. SCHEDULE 40 PIPE, PER ASTM F1083.	
GATE LATCH	1.375" O.D. PLUNGER ROD W/ LATCH & LOCK.	CONTRACTOR TO INSTALL (2) GATE HOLDBACKS TO HOLD GATE OPEN DURING USE.
FABRIC		
TIE WIRE	MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.	
TENSION WIRE	7 GA. GALVANIZED STEEL.	
BARBED WIRE	DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA. 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.	LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENTS SHALL BE COMPLIED WITH IF REQUIRED.



1 CHAIN LINK FENCE & GATE DETAIL  
SCALE: NOT TO SCALE



2 TYPICAL ELECTRICAL CONDUIT SCHEMATIC  
SCALE: NOT TO SCALE

**T-Mobile**  
18400 EAST 22ND AVE. AURORA, CO 80216

**STRYKER**  
SITE SERVICES, LLC

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ENGINEERING  
104 BROADWAY, SUITE 600, DENVER, CO 80203

LICENSURE NO:

**COLORADO LICENSED**  
CHRISTOPHER JAMES SCOTT  
34610  
04/26/2021  
PROFESSIONAL ENGINEER

THIS DIAGRAM IS A TYPICAL SCHEMATIC. REFER TO E-SHEETS FOR SITE SPECIFIC DETAILS. REFER TO SITE PLAN FOR EQUIPMENT LOCATIONS AND VERIFY EXISTING CONDITIONS IN FIELD.

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MC	CS	KS

Sheet Title:  
**CHAIN LINK FENCE & TYPICAL ELECTRICAL CONDUIT SCHEMATIC**

Sheet Number:  
**A5**

**CONCRETE & REINFORCING STEEL NOTES**

1. ALL CONCRETE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI 318) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND (ACI 301) STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ASTM A184 AND ASTM A185.
2. MINIMUM ALLOWABLE CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH THE AMERICAN SOCIETY FOR TESTING AND MATERIALS METHODS STANDARDS ASTM C172, ASTM C31 AND ASTM C39 UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDING WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNLESS OTHERWISE NOTED.
4. DETAILING SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCED CONCRETE STRUCTURES (ACI STD-318/SP-66(04): ACI DETAILING MANUAL - 2004.
5. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" IN ACCORDANCE WITH ACI 301 SECTION 4.2.2 UNLESS OTHERWISE NOTED.
6. REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN POSITION. LOCATION OF REINFORCEMENT SHALL BE INDICATED ON THE DRAWINGS, CONCRETE COVER SHALL BE 3" MINIMUM.
7. TOP OF FOUNDATION TO HAVE A "BRUSH FINISH"
8. EXPOSED FINISH SURFACE IS NOT TO HOLD WATER.
9. ALL SURFACES ARE TO BE CLEANED OF ANY RESIDUAL CONCRETE FROM SPLASHING OR SPILLS.

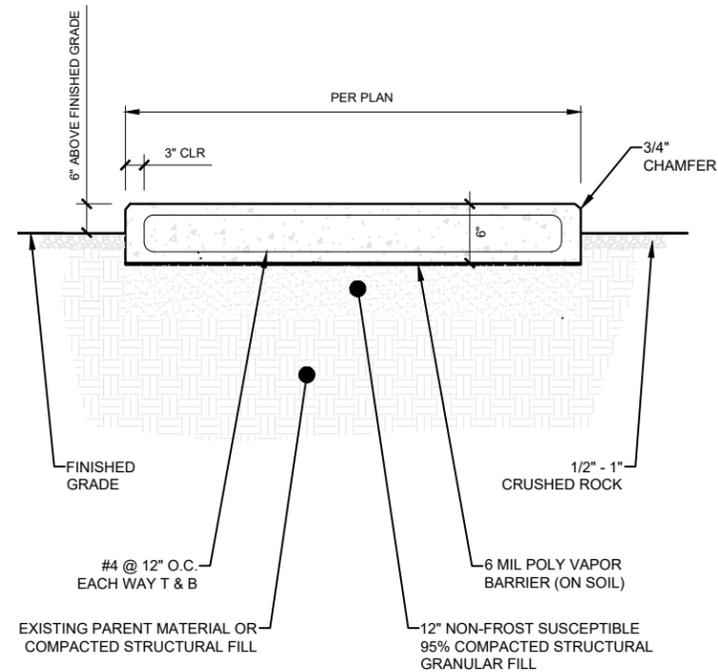
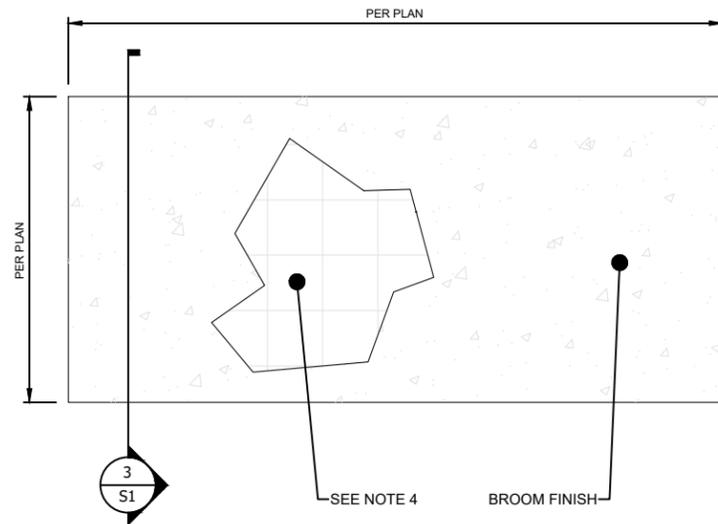
**SOIL COMPACTION FOR SLAB ON GRADE NOTES**

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL. EXPOSE UNDISTURBED NATURAL SUBGRADE, AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL OR ENGINEER IS ACCEPTABLE.
3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DENSITY PER ASTM D 698.
4. COMPACTED SUB BASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED TO 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
5. AS AN ALTERNATIVE TO ITEMS 2 & 3, PROOF ROLL THE SUB GRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUP VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADEDE GRANULAR FILL AND BE COMPACTED AS STATED ABOVE.

**SOIL COMPACTION EQUIPMENT**

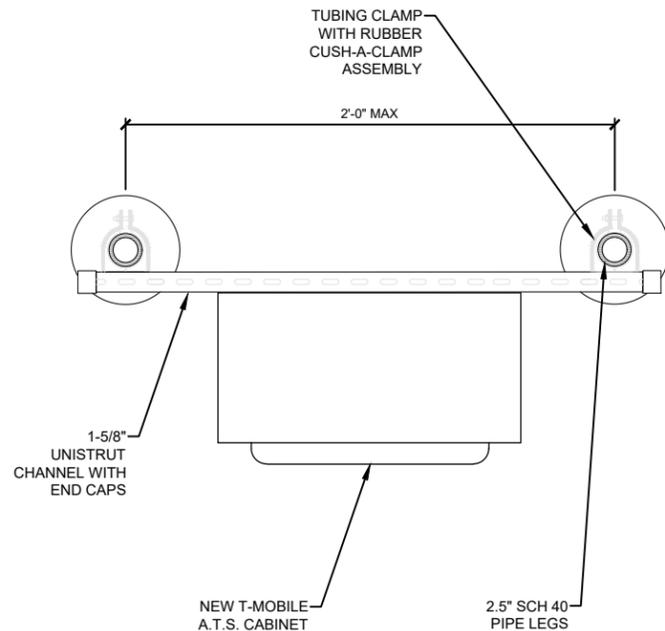
1. HAND-OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR

1. 6" CONCRETE SLAB.
2. DRAINAGE - SLOPE GRADE AWAY FROM EQUIPMENT/SHELTER MIN. 1/2" PER FOOT MIN. 5'-0".
3. REFER TO SITE PLAN FOR PAD ORIENTATION.
4. CONTRACTOR OPTION: #4 REBAR AT 12" ON CENTER EACH WAY AT 2" CLEAR OF SLAB BOTTOM OR WWF6X6-W1.4XW1.4 TOP & BOTTOM W/2" MIN. COVER.



**1 STRUCTURAL NOTES**

SCALE: NOT TO SCALE

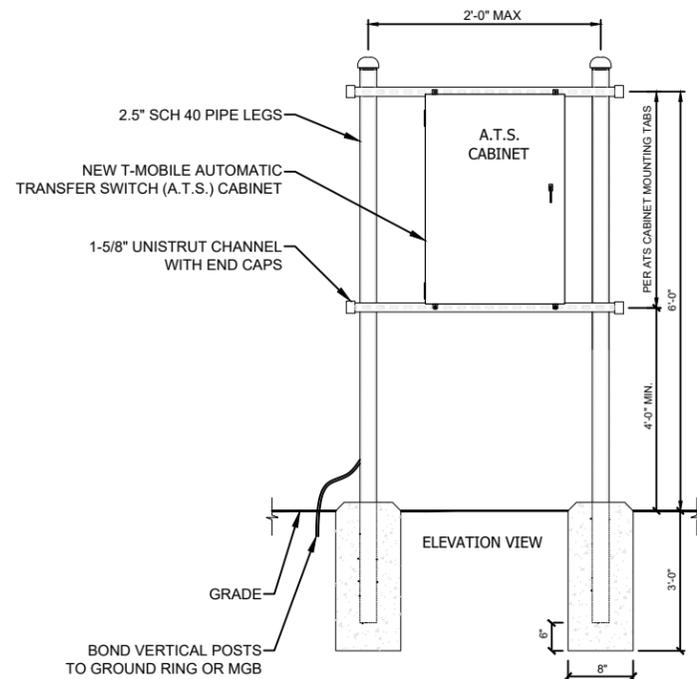


**4 H-FRAME PLAN**

SCALE: NOT TO SCALE

**2 CONCRETE SLAB PLAN**

SCALE: NOT TO SCALE



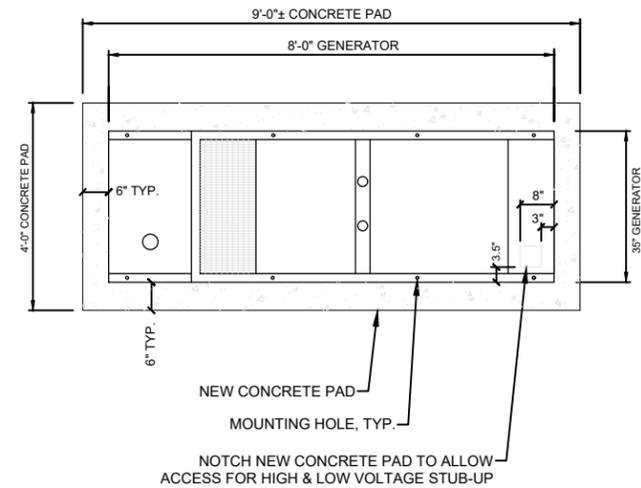
**5 H-FRAME ELEVATION**

SCALE: NOT TO SCALE

**3 CONCRETE SLAB SECTION**

SCALE: NOT TO SCALE

1. GENSET UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
2. STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS, CIRCUIT BREAKER, NEUTRAL AND CUSTOMER CONNECTION OPENING. (SEE MANUFACTURERS SPECIFICATIONS)



**6 GENERATOR PLACEMENT ON CONCRETE SLAB - DIESEL**

SCALE: NOT TO SCALE



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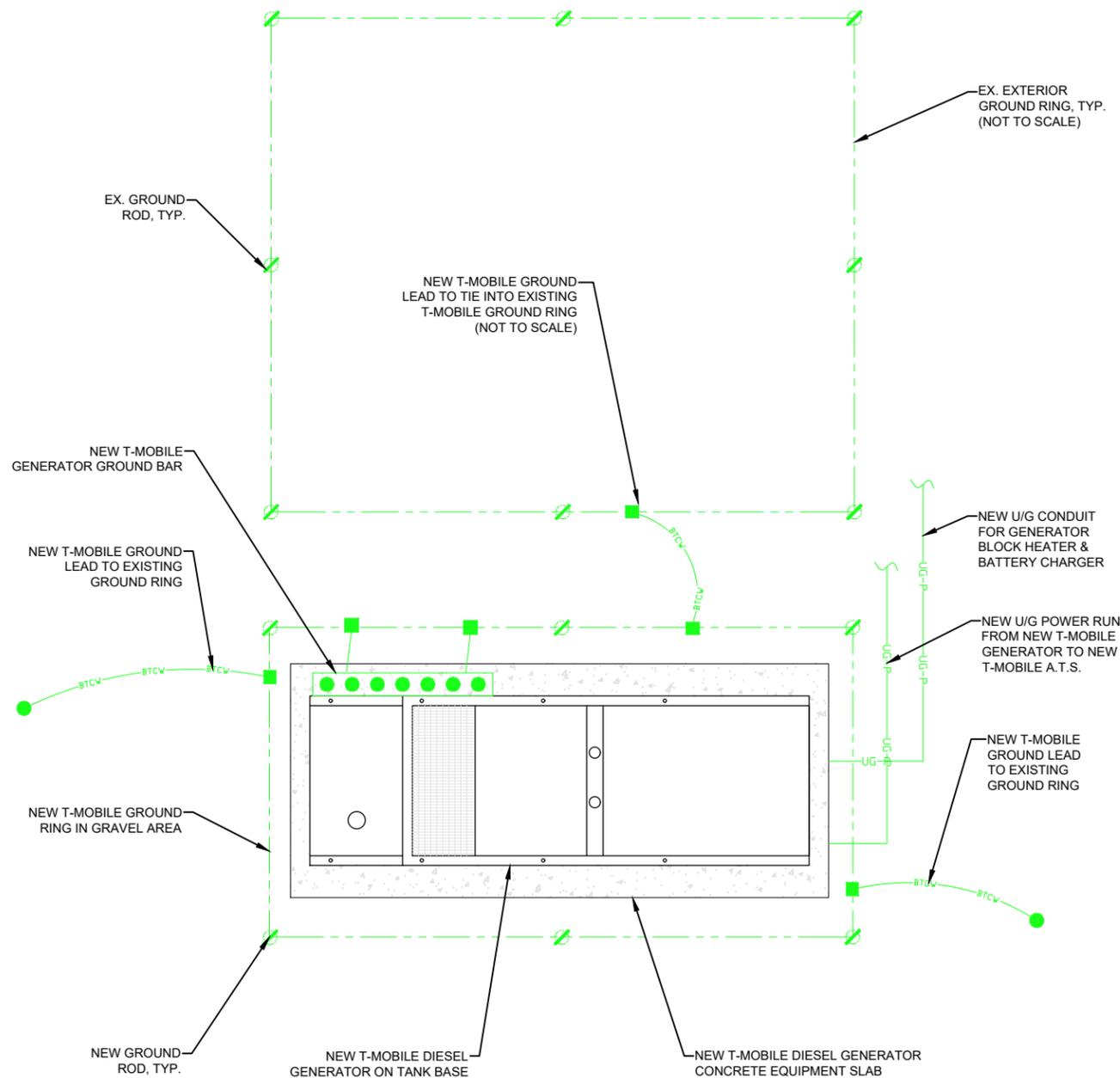
**STRUCTURAL  
 DETAILS  
 (AS NEEDED)**

Sheet Number:

**S1**

THIS IS A SCHEMATIC REPRESENTATION ONLY. SEE SITE PLAN FOR FINAL EQUIPMENT LAYOUT. OBSERVE NEC AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.

PER STRATMOOR HILLS WATER & SANITATION DISTRICT - HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.



GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE AN APPROVED, COMPLETE AND OPERATING ELECTRICAL SYSTEM.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING REQUIRED BUILDING PERMITS AND THE COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE OF A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION AS REQUIRED BY NEC.
8. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE A NEMA 3R ENCLOSURE.
9. CONTRACTOR TO CONFIRM THAT ALL EXISTING ELECTRICAL EQUIPMENT / RATINGS ARE INSTALLED PER NEC AND LOCAL CODES.
10. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR ARE INSTALLED PROPERLY IF DISTURBED DURING CONSTRUCTION.
11. FOR ALL INTERNAL WIRING AND ARRANGEMENT, REFER TO DRAWINGS AND SPECIFICATIONS PROVIDED BY THE EQUIPMENT MANUFACTURER.
12. PROVIDE SIGNS AT THE SERVICE ENTRANCE EQUIPMENT INDICATING THAT THE SITE HAS ON-SITE AUTOMATIC START STANDBY GENERATOR IN ACCORDANCE WITH NEC ARTICLE 702.8.
13. PROVIDE CIRCUIT BREAKERS FOR ATS AND PPC / PANEL AS REQUIRED.
14. IF NEW H-FRAME IS REQUIRED, BOND TO EXISTING GROUND RING WITH #2 SOLID CU TINNED CONDUCTOR.
15. ALL TRENCHING SHALL BE HAND DUG.
16. REPAIR ANY DAMAGE TO EXISTING GROUND RING DURING TRENCHING OPERATIONS.
17. SEE GROUNDING DETAILS AND CADWELD GENERATOR GROUND TO EXISTING GROUND RING.

	PANELBOARD		AGP AC POWER
	DISCONNECT		DC POWER
	UTILITY METER OR SUBMETER		O/H AC POWER
	GENERATOR OR SPECIAL RECEPTACLE		U/G AC POWER
	TINNED COPPER OR GALVANIZED STEEL GROUND BAR		A/G TELEPHONE RUN
	COPPER CLAD GROUND ROD		U/G FIBER
	COPPER GROUND ROD WITH INSPECTION SLEEVE (TEST WELL)		U/G TELEPHONE RUN
	CHEMICAL GROUND ROD (CHEMROD)		HIGH VOLTAGE POWER
	MECHANICAL CONNECTION (LUG CRIMP OR C CLAMP)		GAS LINE
	COMPRESSION TYPE CONNECTION		U/G WATER LINE
	EXOTHERMIC CONNECTION (CADWELD)		HYBRID LINE
	BRANCH CKT. HOMERUN TO PANEL. @ INDICATES PANEL, # INDICATES CKT. NO.		BURIED GROUND RING
	PANELBOARD OR SWITCHGEAR		INS. STRANDED COPPER
	COMBINATION MOTOR STARTER		BARE STRANDED COPPER
	FUSED DISCONNECT		COMBINATION METER & MAIN BREAKER
	UNFUSED DISCONNECT		STANDALONE METER
	DISCONNECT WITH BREAKER		MOTOR
	FUSED SWITCH (INSIDE SWITCHBOARD)		GENERATOR
	CIRCUIT BREAKER (INSIDE SWITCHGEAR)		SPLICE BOX, JUNCTION BOX, OR HANDHOLE
	POTENTIAL TRANSFORMER		GUTTER OR WIREWAY
	CURRENT TRANSFORMER		AUTOMATIC OR MANUAL TRANSFER SWITCH
	GROUND		ELECTRICAL SERVICE WEATHERHEAD
	FEEDER KEY		TELEPHONE SERVICE WEATHERHEAD
			GENERATOR PLUG
			CONDUIT ADAPTER OR COUPLING

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Sheet Title:  
**ELECTRICAL SITE PLAN, GROUNDING PLAN & NOTES**

Sheet Number:  
**E1**

**NOTES:**

- EXISTING CONDUIT, CONDUCTORS, AND OTHER ITEMS SHOWN ARE AS DESCRIBED TO THE BEST OF THE KNOWLEDGE OF THE ENGINEER, BASED UPON PHOTOGRAPHS AND/OR PREVIOUS DRAWINGS. IF FIELD CONDITIONS DEVIATE SUBSTANTIALLY FROM WHAT IS SHOWN HERE, DRAWINGS AND CALCULATIONS MAY NEED TO BE UPDATED.
- FINAL TRANSFORMER LOCATION AND SIZING PER XCEL ENERGY. IF A DIFFERENT TRANSFORMER IS INSTALLED, OR IT IS INSTALLED IN A DIFFERENT LOCATION, FAULT CALCULATIONS AND LABELING SHOULD BE REVISED BY ENGINEER.
- ACTUAL VALUES FOR FAULT CURRENT SHOWN IN DETAIL 2.
- CONDUIT SUBJECT TO FOOT TRAFFIC SHALL BE GRC. FINAL CONDUIT RUN TO CABINET SHALL BE LTFC.



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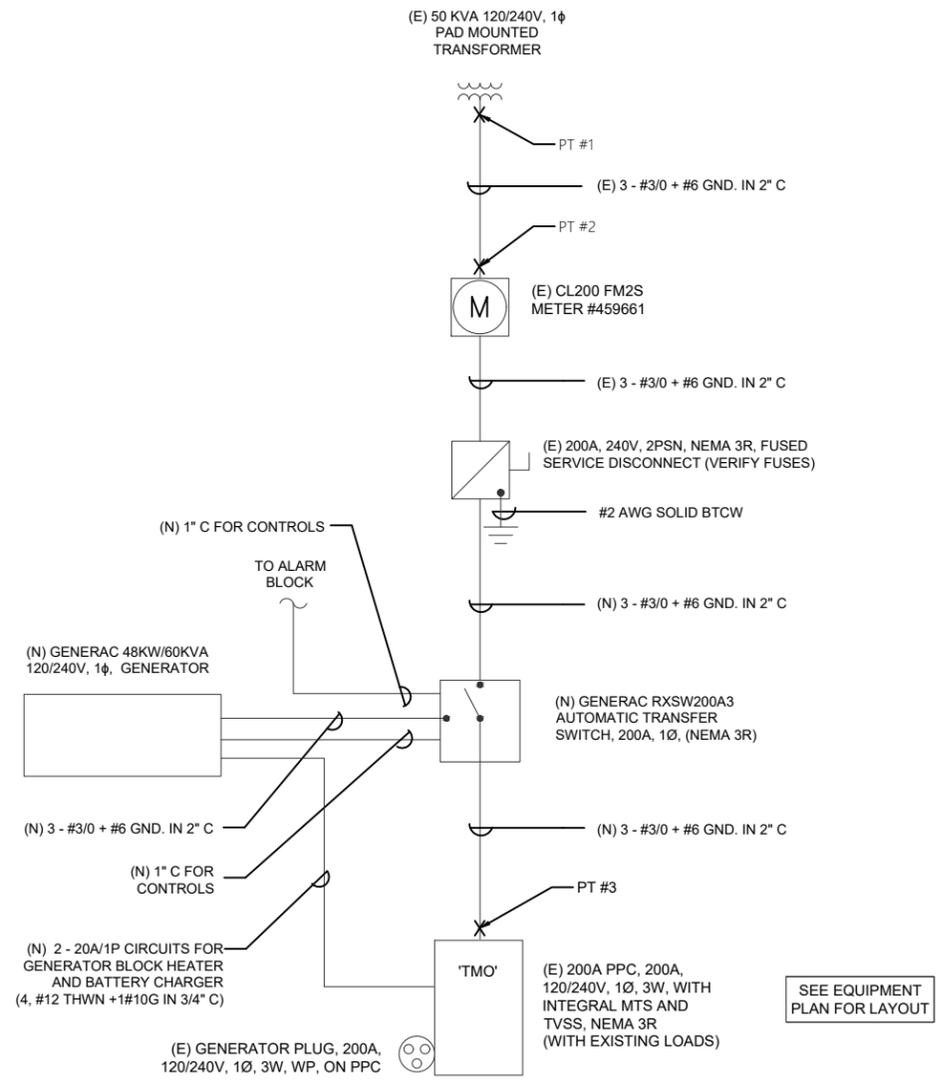
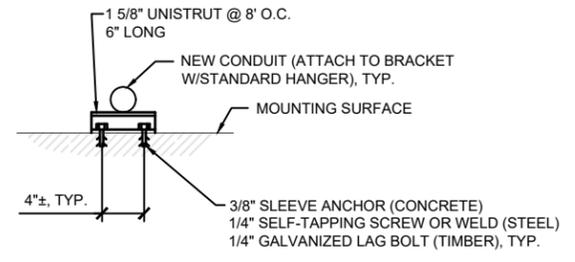
**ONE-LINE DIAGRAM  
 PANEL SCHEDULES  
 & CALCULATIONS**

Sheet Number:

**E2**

Single Phase Xfmr Power source	Xfmr(kVA)	Pole/Pad	V <sub>(L-L)</sub>	V <sub>(L-N)</sub>	Phases	Available fault current				I <sub>sc</sub> (A) L-L	
Pt. 1: Point of delivery	50	Pad	240	120	1						14,800
Fault Current location	# of Runs	Conductor	V <sub>(L-L)</sub>	V <sub>(L-N)</sub>	2=non-met	L <sub>n</sub> (ft)	C <sub>n</sub>	F <sub>(L-L)</sub>	M <sub>(L-L)</sub>	I <sub>sc</sub> (A) L-L	
Pt. 2: Meter/200A disconnect	1	#3/0	240	120	2	35	13923	0.31	0.7634	11,298	
Pt. 3: T-Mobile 200A PPC	1	#3/0	240	120	1	5	12844	0.0367	0.9646	10,898	

**2 | FAULT CALCULATIONS**



**1 | ELECTRICAL ONE-LINE DIAGRAM**  
 SCALE: NOT TO SCALE

**3 | CONDUIT DETAIL**  
 SCALE: NOT TO SCALE