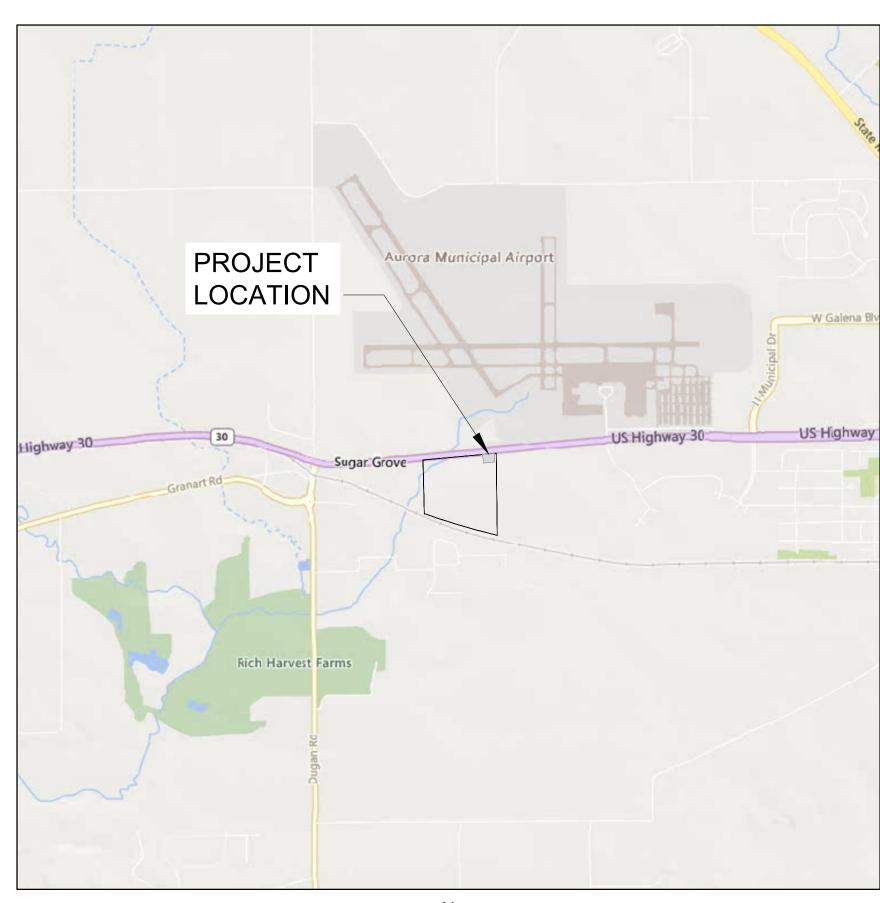
# MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5 VILLAGE OF SUGAR GROVE, IL



VICINITY MAP
SCALE: 1" = 2000'



REFERENCE MAPPING OBTAINED FROM MICROSOFT BING STREET MAI

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AERIAL MAP
SCALE: 1" = 600'



REFERENCE: AERIAL PHOTOGRAPHIC OBTAINED FROM MICROSOFT BING AERIAL IMAGARY



**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025

# AECOM

PROJE

MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

CLI

Middle Mile Infrastructure

CONSULTANT

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive, Suite 500 Greenville, SC 29615 License Number: F-0432 1-864-234-3069 tel www.aecom.com



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I/R	DATE	DESCRIPTION	

PROJECT NUMBER

60645418

SHEET TITLE

COVER SHEET

SHEET NUMBER

### PROJECT NARRATIVE

THE PROJECT IS LOCATED IN VILLAGE OF SUGAR GROVE, ILLINOIS. THE PROJECT INCLUDES THE CONSTRUCTION OF ONE FIBER ILA HUT WITH ASSOCIATED FENCING. GRADING. AND GRAVEL SURFACE.

### **CONSTRUCTION SEQUENCE**

- STEP 1: ENSURE ALL NECESSARY PERMITS ARE ACQUIRED AND CONDUCT A PRE-CONSTRUCTION MEETING WITH THE A/E CONSTRUCTION MANAGER PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
- 2. STEP 2: HOLD PRE-CONSTRUCTION MEETING WITH NECESSARY PARTIES
- 3. STEP 3: INSTALL INITIAL SEDIMENT & EROSION CONTROL BMP's PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
- STEP 4: COMPLETE DEMOLITION, UTILITY INSTALLATION AND ROUGH GRADING AS SHOWN IN CONSTRUCTION PLANS. COMPLETE INSTALLATION OF ABOVE GROUND INFRASTRUCTURE AND FINE GRADING AS SHOWN IN CONSTRUCTION PLANS. ENSURE FINAL STABILIZATION OF ALL DISTURBED SURFACES IS ACHIEVED PRIOR TO DEMOBILIZATION.
- STEP 5: SUBMIT NOTICE(S) OF TERMINATION AS REQUIRED TO ALL APPLICABLE PERMITTING AGENCY(IES)

### **GENERAL NOTES**

- ENSURE THAT ALL REQUIRED PERMITS AND OTHER SUBMITTALS ARE IN HAND PRIOR TO THE COMMENCEMENT OF CONSTRUCTION
- UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE CLIENT WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, DEPTHS, OR FOR COMPLETENESS OF UTILITY INFORMATION. FOR ANY UTILITIES LOCATED DIFFERENTLY THAN SHOWN ON THE PLAN THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND MEET WITH ALL UTILITIES AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY ITS OPERATIONS OR THOSE OF ITS AGENTS. THE CONTRACTOR SHALL HOLD THE CLIENT HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF ITS OWN FORCES OR THAT OF ITS AGENTS. ANY DAMAGES INCURRED SHALL BE THE CONTRACTORS FINANCIAL RESPONSIBILITY.
- 3.1. ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION, OTHER UTILITIES MAY NOT BE SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF WORK.
- 4. CONTACT ILLINOIS 811 PRIOR TO BEGINNING CONSTRUCTION.
- 5. WARNING: OVERHEAD UTILITIES. UNLESS OTHERWISE NOTED FOR RELOCATION, THE CONTRACTOR IS TO WORK UNDER ALL EXISTING OVERHEAD UTILITIES.
- 6. NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR MAY MAKE HIS OWN INVESTIGATION TO DETERMINE SUBSURFACE CONDITIONS.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE HIS OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA THAT IS AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED AND WASTED. GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS AND SPECIFICATIONS DOES NOT IN ANY WAY GUARANTEE THE AMOUNT OR NATURE OF THE MATERIAL WHICH MAY BE ENCOUNTERED.
- ALL INITIAL EROSION, SEDIMENTATION, & POLLUTION CONTROLS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR EMPLOYEES A WORKPLACE FREE FROM RECOGNIZED HEALTH AND SAFETY HAZARDS.
- 10. CONTRACTOR SHALL CLEARLY MARK AND MAINTAIN PROPERTY CORNER MONUMENTATION AND BENCHMARKS AND WILL BE RESPONSIBLE FOR THE COST OF REPLACING THEM IF DISTURBED OR
- 11. THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT AND/OR CONCRETE SURFACES PRIOR TO REMOVAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SAW CUT WIDTH SHALL BE 1 FOOT MINIMUM FROM THE EXISTING EDGE OF PAVEMENT. SAW CUT PAVEMENT SHALL BE REPLACED AS WELL AS ADDITIONAL PAVEMENT REQUIRED TO TIE-IN TO FACE OF PROPOSED CURB AND GUTTER.
- 12. NO DEMOLITION MATERIALS SHALL BE DISPOSED OF ON-SITE. ALL VEGETATION (UNLESS OTHERWISE NOTED). EXISTING ASPHALT PAVEMENT. ORGANICS AND UNSUITABLE BEARING SOILS SHALL BE STRIPPED FROM THE SURFACE WITHIN THE CONSTRUCTION LIMITS AND DISPOSED OF LEGALLY OFFSITE AT A LOCATION APPROVED BY THE LOCAL JURISDICTION FOR THE HANDLING AND DEMOLITION OF
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING THE BORROW MATERIAL NECESSARY AS SPECIFIED SPECIFICATIONS FOR THE CONSTRUCTION OF THIS PROJECT. ALL STRUCTURAL FILL PLACED AS A PART OF THIS PROJECT SHALL BE PLACED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- 14. LIMITS OF PROPOSED SLOPES ARE INDICATED IN THE PLANS, DETAILS AND STANDARD DRAWINGS. THE MAXIMUM SLOPE SHALL NOT EXCEED A 3:1 (HORIZONTAL TO VERTICAL) UNLESS DESIGNATED BY THE ENGINEER. A CUT SLOPE OF 2:1 MAXIMUM WILL BE USED ONLY AS DIRECTED BY THE ENGINEER.
- 15. BACKFILL MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE OPTIMUM COMPACTION FOR ANY SOIL CLASSIFICATION AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D 1557. BACKFILL MATERIAL SHALL BE CLEAN AND FREE OF ROOTS, ROCK OR DELETERIOUS MATTER. CONTRACTOR SHALL CORRECT ANY DAMAGE TO CURBING OR PAVING CAUSED BY TRENCH SETTLEMENT WHICH OCCURS WITHIN 12 MONTHS OF PROJECT ACCEPTANCE.
- 16. THE CONTRACTOR SHALL LEAVE THE SITE IN A CLEAN AND NEAT CONDITION AS WELL AS PERFORM REGULAR MAINTENANCE.
- 17. CONTRACTOR SHALL PROTECT ALL ADJACENT LANDS FROM DAMAGE DURING DEMOLITION WORK, ANY OFF-SITE AREAS DISTURBED SHALL BE RETURNED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION PRIOR TO CONSTRUCTION.
- 18. ALL STRUCTURES NOT LABELED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION. ANY STRUCTURES THAT ARE TO REMAIN THAT ARE DAMAGED SHALL BE REPAIRED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION AT NO ADDITIONAL COST.

### **EROSION CONTROL NOTES**

- 1. PRIOR TO THE LAND DISTURBING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR
- 2. THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO INSURE THAT LAND STRIPPED OF IT'S NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.
- NO STAGING AREAS. MATERIAL STORAGE. CONCRETE WASH OUT AREAS. OR DEBRIS BURN AND BURIAL HOLES SHALL BE LOCATED WITHIN 500 FEET OF DESIGNATED TREE PROTECTION AREAS.
- A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
- 6. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE AND ALL STREAM BUFFERS SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHALL BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS
- PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.
- THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY:
- a. THE CONSTRUCTION EXIT, CONSISTING OF A MINIMUM PAD SIZE OF 20 FEET BY 50 FEET WITH A MINIMUM OF 6" THICK STONE, SHALL BE PLACED AS SHOWN ON THE PLAN. THE STONE SIZE SHOULD CONSIST OF COURSE AGGREGATE BETWEEN 1-1/2" & 3-1/2" IN DIAMETER AND OVERLAID ON A GEOTEXTILE UNDERLINER. THE GEOTEXTILE UNDERLINER SHALL MEET THE REQUIREMENTS OF AASHTO M288-96, SECTION 7.3 SEPARATION REQUIREMENTS.
- IMMEDIATELY AFTER ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXITS, ALL PERIMETER EROSION CONTROL AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
- SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. THE SILT FENCE SHOULD BE PLACED IN ACCORDANCE WITH THE IDOT BUREAU OF DESIGN AND ENVIRONMENTAL MANUAL 41-3.01(b). THE SILT FENCE SHOULD BE KEPT ERECT AT ALL TIMES AND REPAIRED WHEN REQUESTED BY THE SITE INSPECTOR OR THE PROJECT DESIGN PROFESSIONAL OF RECORD. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED DAILY FOR ANY FAILURES. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
- d. INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN. SEE SEPARATE DETAILS FOR SPECIFICS ON TYPE OF INLET PROTECTION SPECIFIED.
- STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
- TREE PROTECTION FENCING/SILT FENCING SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING/SILT FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY
- 9. AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION.
- 10. AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SEDIMENT PONDS AND DIVERSION DIKES AS SHOWN ON THE CLEARING PHASE PLAN TO CONTROL EROSION AND STORM WATER RUN OFF.
- 11. THE DESIGN PROFESSIONAL WHO PREPARED THE EROSION CONTROL PLANS WILL INSPECT THE INSTALLATION OF THE BMP's WITHIN SEVEN DAYS AFTER INITIAL CONSTRUCTION ACTIVITY BEGINS.
- 12. THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL IN AREAS SHOWN ON PLAN WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR
- 13. NO BURN OR BURY PITS SHALL BE PERMITTED ON THE CONSTRUCTION SITE WITHOUT WRITTEN PERMISSION BY THE OWNER.
- 14. ADDITIONAL SILT BARRIERS MUST BE PLACED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL SILT BARRIER INSTALLATION AND SEDIMENT PONDS ARE CONSTRUCTED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
- 15. ALL SILT FENCES MUST MEET THE REQUIREMENTS OF STANDARD DRAWING FOR THE CURRENT ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS.
- 16. ALL ITEMS IN THIS SECTION OF THE SPECIFICATION SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CURRENT ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS.
- 17. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
- 18. ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- 19. SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

### **EROSION CONTROL NOTES**

- 20. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A METHOD WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- 21. CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 22. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
- 23. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- 24. THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

### FINAL PHASE-EROSION CONTROL NOTES

- THE FOLLOWING EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING THE FINAL EROSION CONTROL PHASE OF CONSTRUCTION.
- 2. SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN
- 3. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE.
- 4. ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY
- 5. THE CONTRACTOR SHALL MAINTAIN ALL SEDIMENT PONDS AND EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE PONDS WHEN IT REACHES THE HALF WAY POINT ON THE RISER.
- AFTER CURBING, GRADED AGGREGATE BASE, AND PAVEMENT HAS BEEN INSTALLED, ALL INLET SEDIMENT TRAPS ON SINGLE AND DOUBLE WING CATCH BASINS ALONG WITH ANY CURB INLETS SHALL BE REMOVED AND REPLACED WITH CURB FILTER INLET PROTECTION. SEE SEPARATE DETAIL FOR ADDITIONAL INFORMATION.
- 7. ALL ROADWAY AND PARKING SHOULDERS SHOULD BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED BEHIND CURBS.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1-3" OF STONE, AS CONDITIONS ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO PUBLIC ROADWAY OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- 10. THE CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY
- 11. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AS DIRECTED BY THE ON SITE INSPECTOR OR THE CIVIL ENGINEER.
- 12. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- 13. THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

DETAIL

10 / SCALE

DETAIL REFERENCES

**DETAIL NUMBER** 

**APPEARS** 

IS NOTED

SHEET WHERE DETAIL

SHEET WHERE DETAIL-

DETAIL IS TYPICAL AT

MULTIPLE PLACES.

USED TO INDICATE THAT — TYP

14. UPON COMPLETION OF THE PROJECT AND RECEIPT OF "CERTIFICATE OF OCCUPANCY", THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.

**PROJECT** 

**MMI - UNMANNED ILA UTILITY BUILDING** ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

CLIENT

Middle Mile Infrastructure

CONSULTANT

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive, Suite 500 Greenville, SC 29615 License Number: F-0432 1-864-234-3069 tel www.aecom.com



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SHEET TITLE

**GENERAL NOTES** 

**SHEET NUMBER** 

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025



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DEMOLITION

MATCH THE ELEVATION OF THE EXISTING.

4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE OF ALL FINISHED GRADE SURFACES.

5. SEE GENERAL NOTES, SHEET 2.

Length: 251.92' Radius: 117470.83' —
Delta: 0°07'22" Tangent: 125.96'
Chord: 251.92' Course: N84° 35' 52.81"E

Course In: N5° 20' 26.02"W Course Out: S5° 27' 48.36"E

RP North: 1973645.1421' East: 934328.1837'
End North: 1856707.9638' East: 945512.6383'

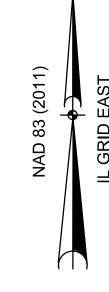
EASEMENT, PROPERTY, AND RIGH-OF-WAY LINES

L=688.12' R=114632.00'-

EXISTING CMP =

N84°35'53"E

255.29'



LEGEND				
LEGEND	LEGEND			
	WORK LIMIT LINE			
	PROPERTY LINE			
	RIGHT OF WAY LINE			
— <i>— 765</i> — —	EXISTING MAJOR CONTOUR			
— <i>— 761</i> — —	EXISTING MINOR CONTOUR			
760	PROPOSED MAJOR CONTOUR			
761	PROPOSED MINOR CONTOUR			
	PROPOSED EASEMENT LINE			
x	FENCE LINE			
	GRAVEL			
4 4 4	CONCRETE			

		Point Tabl	е	
Point #	Description	Elevation	Northing	Easting
1	EOG	706.71	1856519.7433	945285.772
2	EOG	706.13	1856635.3362	945275.458
3	EOG	706.68	1856645.6142	945384.132
4	EOG	706.68	1856647.4974	945404.043
5	EOG	706.19	1856656.9732	945504.234
6	EOG	706.78	1856539.8120	945505.607
7	EOG	707.27	1856529.7776	945395.689
8	EOG	706.74	1856538.5664	945305.297
9	EOG	706.56	1856574.4173	945302.023
10	EOG	706.67	1856576.5689	945325.592
11	EOG	706.85	1856540.7179	945328.865
12	EOG	706.93	1856542.0816	945343.803
13	EOG	706.75	1856577.9325	945340.530
14	EOG	706.87	1856580.0841	945364.099
15	EOG	707.05	1856544.2332	945367.371
16	EOG	706.44	1856592.0090	945295.310
17	EOG	706.33	1856612.9221	945293.401
18	EOG	706.36	1856613.4221	945298.878
19	EOG	706.32	1856621.3889	945298.151
20	EOG	706.36	1856622.1162	945306.118
21	EOG	706.40	1856614.1494	945306.8458
22	EOG	706.60	1856617.7856	945346.677
23	EOG	706.71	1856596.8726	945348.586
36	EOC	702.00	1856697.5082	945379.516
37	EOC	702.00	1856699.4891	945399.418
38	ECR	700.98	1856707.7366	945374.171
39	EOC	699.98	1856711.1875	945363.159
40	EG	700.88	1856712.1831	945363.065
41	EG	701.08	1856714.4667	945387.957
42	EG	701.20	1856716.7867	945412.845
43	EOC	701.20	1856715.7858	945412.940
44	ECR	701.59	1856710.4219	945402.824
45	BOLLARD	706.50	1856647.8347	945385.946
46	BOLLARD	706.50	1856649.2618	945401.882
47	BOLLARD	706.69	1856643.2857	945402.417
48	BOLLARD	706.69	1856641.8587	945386.481
49	INV OUT	699.70	1856705.3843	945364.844
50	INV IN	700.20	1856710.6770	945412.5929

# **AECOM**

**PROJECT** 

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+			
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1/1	DATE	DESCRIPTION	

### **PROJECT NUMBER**

60645418

SHEET TITLE

**GRADING PLAN** 

SHEET NUMBER

GRAPHIC SCALE: 1" = 20'

### **GRADING NOTES**

- 1. CONSTRUCT SITE TO PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN USING SUITABLE MATERIAL. GRADES SHOWN ARE TOP OF FINAL GRADE.
- 2. CONTRACTOR SHALL BE AWARE OF EXISTING UTILITY LINE(S) DURING DRIVEWAY CULVERT INSTALLATION.
- 3. ALL NEW PAVEMENT/GRAVEL ABUTTING EXISTING PAVEMENTS/GRAVEL SHALL

INSTALL 59.5 LF

14"X23" RCP CULVERT

W/ BROKEN YELLOW

LEGEND

ECR - END OF CURVE RADIUS

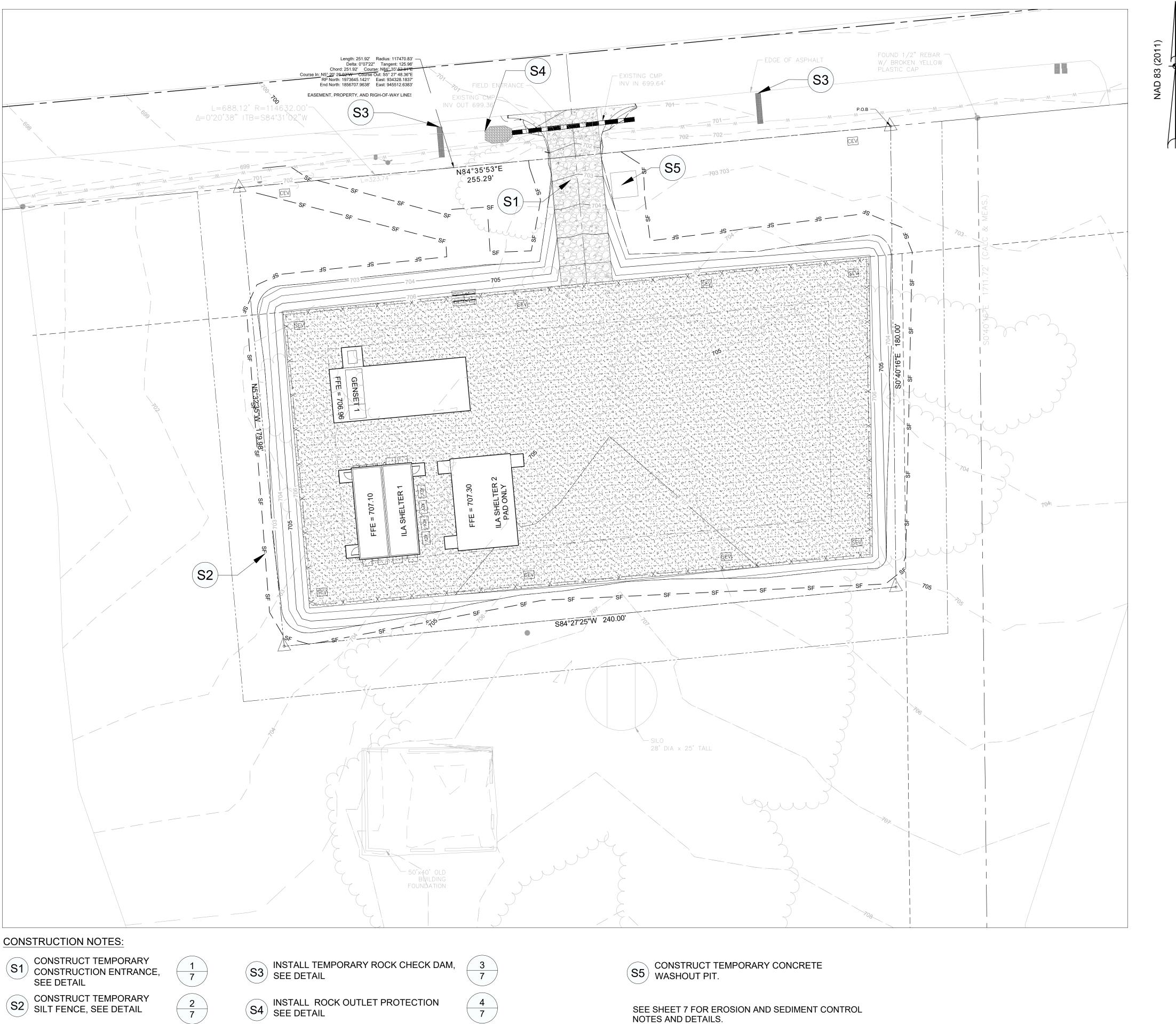
EG - EXISTING GROUND ELEVATION

EOC - EDGE OF CONCRETE

EOG - EDGE OF GRAVEL

SPOT - FINISHED GRADE

(TIE TO EXISTING POINT)



WORK LIMIT LINE

PROPERTY LINE

PROPERTY LINE

EXISTING MAJOR CONTOUR

PROPOSED MAJOR CONTOUR

PROPOSED MAJOR CONTOUR

PROPOSED MINOR CONTOUR

X 760.50

PROPOSED SPOT ELEVATION

SILT FENCE

CONSTRUCTION ENTRANCE

### **EROSION CONTROL NOTES**

- 1. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
- 2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES, IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- 3. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
- 4. SEE GENERAL NOTES, SHEET 2.
- 5. SEE EROSION CONTROL DETAILS, SHEET 7.

# AECOM

**PROJECT** 

### MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

CLIENT

Middle Mile Infrastructure

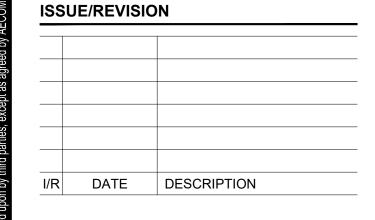
CONSULTANT

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive, Suite 500 Greenville, SC 29615 License Number: F-0432 1-864-234-3069 tel www.aecom.com



REGISTRATION

NOT FOR CONSTRUCTION



PROJECT NUMBER

60645418

SHEET TITLE

EROSION CONTROL PLAN

SHEET NUMBER

20' 40'
GRAPHIC SCALE: 1" = 20'

ISSUE FOR BID PLANS

DATE OF ISSUE: 10/10/2025

ر ا NOTES:

- 1. Filter fabric shall meet the requirements of material specification 592 GEDTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
- 2.Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
- 3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
- 4.If wash racks are used they shall be installed according to the manufacturer's specifications.

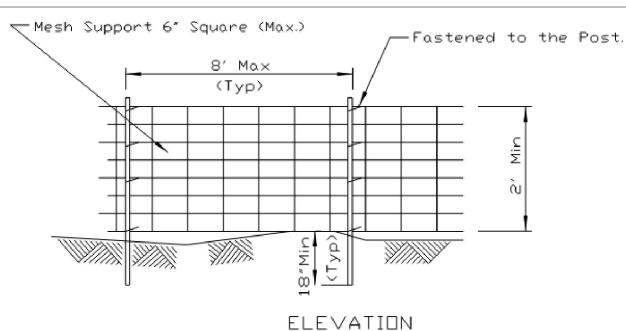


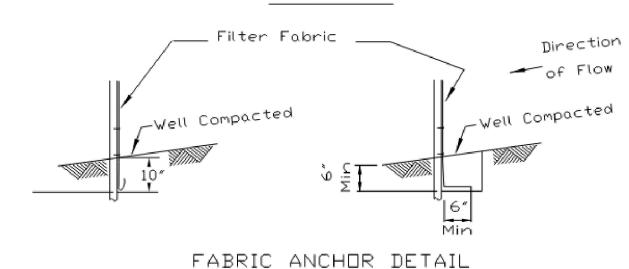
### **GRASSING NOTES**

- Lawn Grass Mix. Lawn grass seed shall be fresh, clean, new crop seed; mechanically premixed to the specified proportions. Lawn grass seed shall be a blend of the following: Kentucky Bluegrass, 80%, Rye Grass, 20%; planted at a rate of 3.0 pounds per 1000 square feet.
- Standards. Grass seeds shall comply with "Standards of Official Seed Analysts of North America," published by the Association of Official Seed Analysts, most recent edition; for 85% purity, 80% germination and 1% (maximum) weed seed (68% PLS).
- Delivery. Seed shall be delivered to the site in original unopened containers, bearing the dealer's guaranteed analysis and germination percentage and a certificate or stamp or release by a County agriculture commissioner.
- Seed to be applied by hydraulic method shall be mixed with wood fiber mulch, fertilizer and polymer at 50 pounds per 100 square feet.
- Fertilizer: Recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated by
- Water: Clean, fresh and free of substances or matter which could inhibit vigorous growth of

### **GENERAL DETAIL NOTES**

- DETAILS 1, 2, 3, AND 4: SOURCE: ILLINIOS DEPARTMENT OF ENVIRONMENTAL QUALITY (IDEQ), DEPARTMENT OF WATER QUALITY, ILLINOIS URBAN MANUAL, PRACTICE STANDARDS, FEBRUARY 2020. https://illinoisurbanmanual.org/
- REFER TO IDEQ STANDARD SPECIFICATIONS AS SPECIFIED IN THE DETAILS





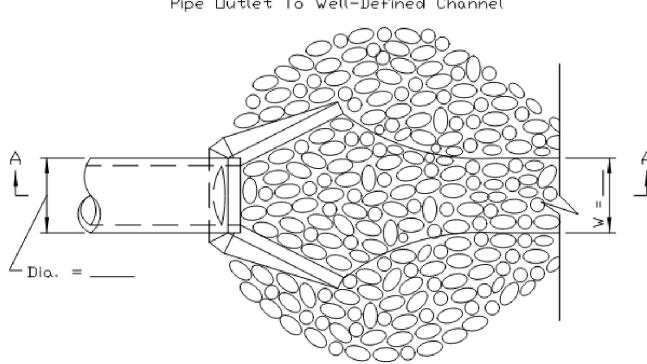
STATIC SLICE INSTALLATION TRENCH INSTALLATION

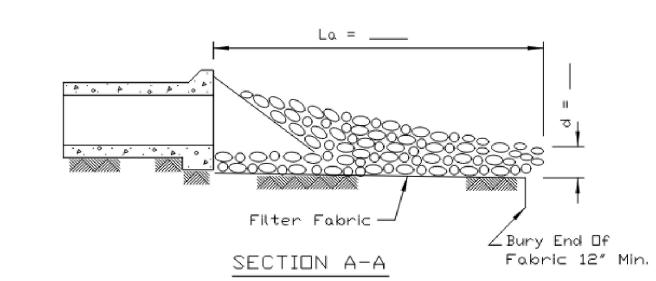
NOTES:

- 1. Silt Fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization. Silt fence shall be placed on the flattest area available.
- 2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1, Class 2.
- 3. Fence posts shall be either standard steel post or wood post 2"X2" nominal.
- 4. Wire mesh may be omitted if post spacing is 5' on center or less.



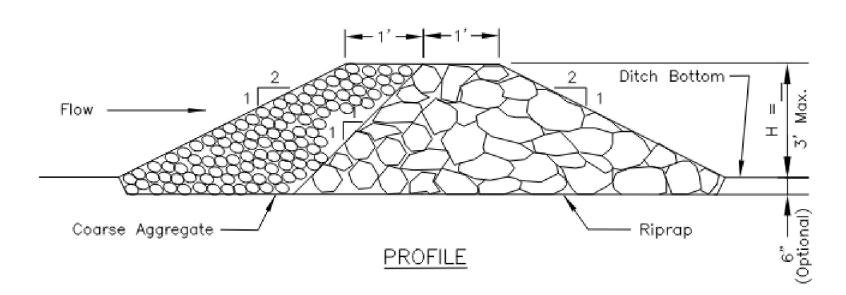
Pipe Dutlet To Well-Defined Channel

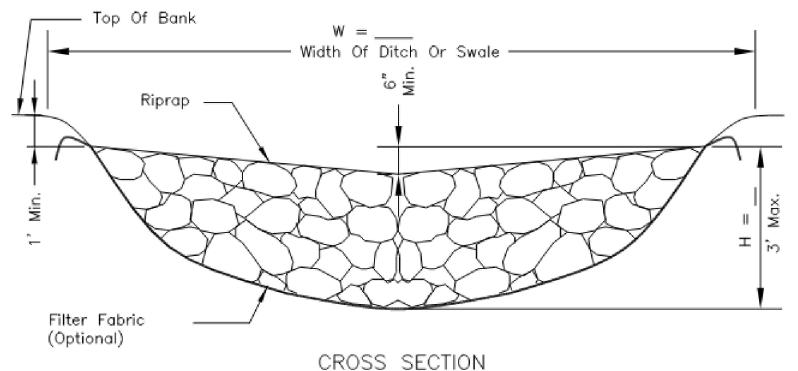




- 1. The filter fabric shall meet the requirements in material
- specification 592 GEOTEXTILE Table 1 or 2, Class I, II or III. 2. The rock riprap shall meet the IDOT requirements for the following
- 3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.







CENTERLINE LOOKING DOWNSTREAM

- 1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2. Class I. II. or IV and shall be placed over the cleared area prior to the placing of rock.
- 2. Coarse aggregate shall meet one of the following IDOT gradations, CA-1, CA-2, CA-3, or CA-4.
- 3. Riprap shall meet IDOT gradation RR-3 or RR-4 and meet Quality Designation A.
- 4. Coarse aggregate and riprap shall be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
- 5. For added stability, the base of the dam may be keyed 6 inches into the soil.
- 6. See plans for spacing of dams and H dimensions.
- 7. Maximum drainage area to each dam is 10 acres. 8. ROCK CHECK DAM-COARSE AGGREGATE IL-605CA may be used for drainage areas under 2 acres.



**PROJECT** 

MMI - UNMANNED ILA **UTILITY BUILDING** ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

**CLIENT** 

Middle Mile Infrastructure

CONSULTANT

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**REGISTRATION** 

NOT FOR CONSTRUCTION

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**PROJECT NUMBER** 

60645418

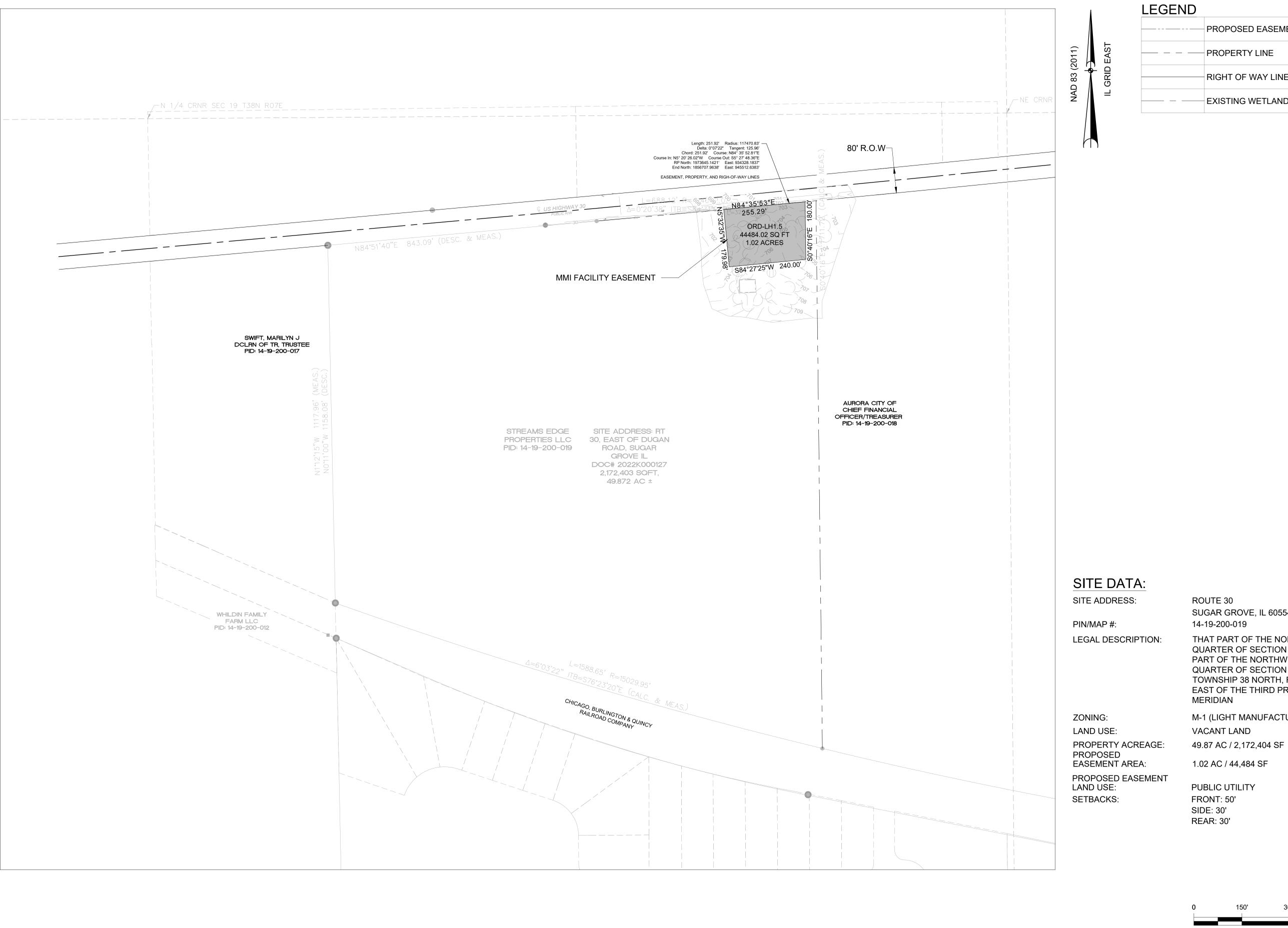
**SHEET TITLE** 

**EROSION CONTROL NOTES &** DETAILS

SHEET NUMBER

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025



LEGEND PROPOSED EASEMENT LINE PROPERTY LINE RIGHT OF WAY LINE

**ROUTE 30** 

MERIDIAN

SIDE: 30'

1.02 AC / 44,484 SF

GRAPHIC SCALE: 1" = 150'

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025

14-19-200-019

SUGAR GROVE, IL 60554

THAT PART OF THE NORTHEAST QUARTER OF SECTION 19 AND PART OF THE NORTHWEST QUARTER OF SECTION 20,

TOWNSHIP 38 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL

M-1 (LIGHT MANUFACTURING)

EXISTING WETLANDS

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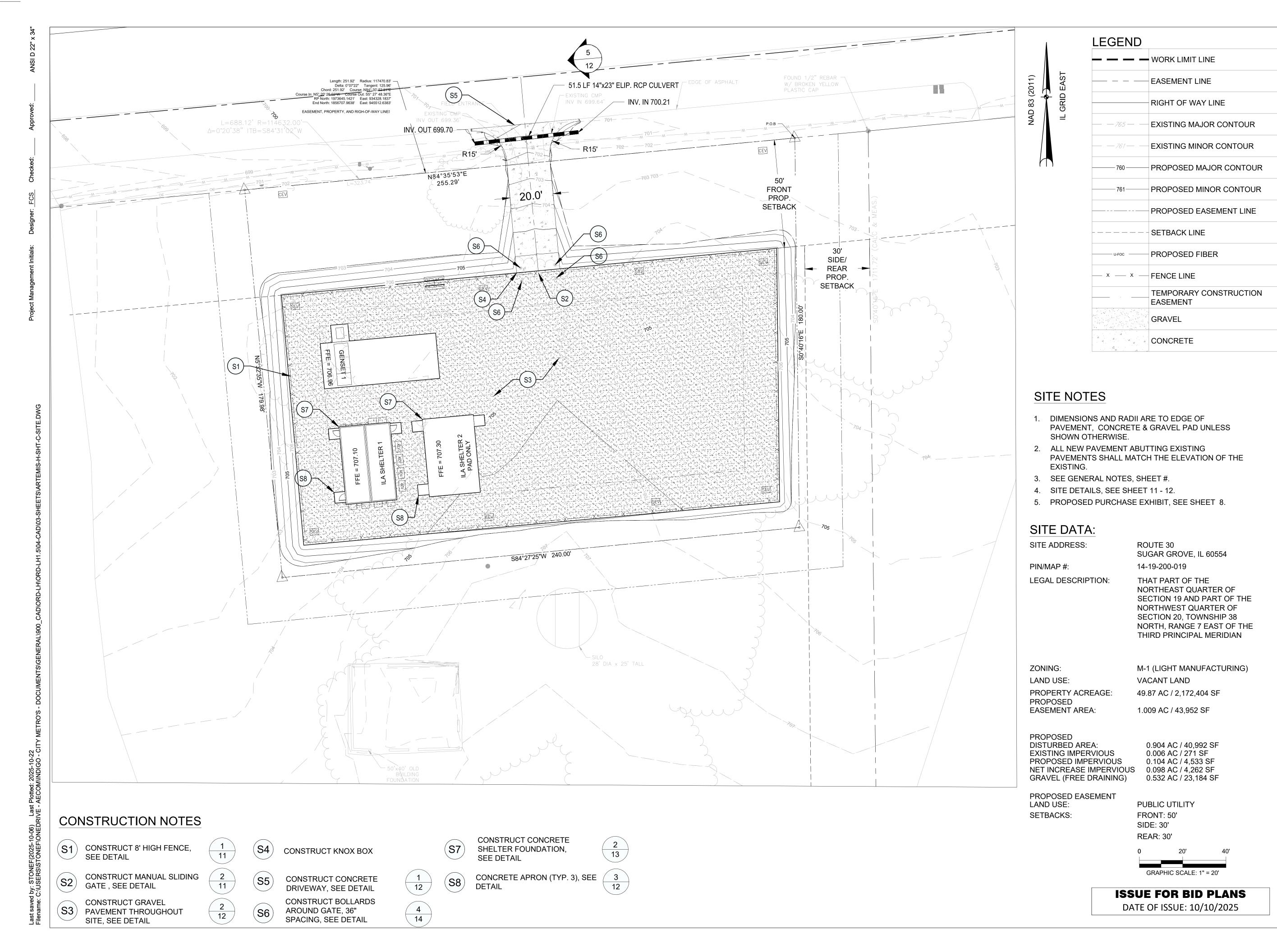
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SHEET TITLE

PROPOSED EASEMENT EXHIBIT



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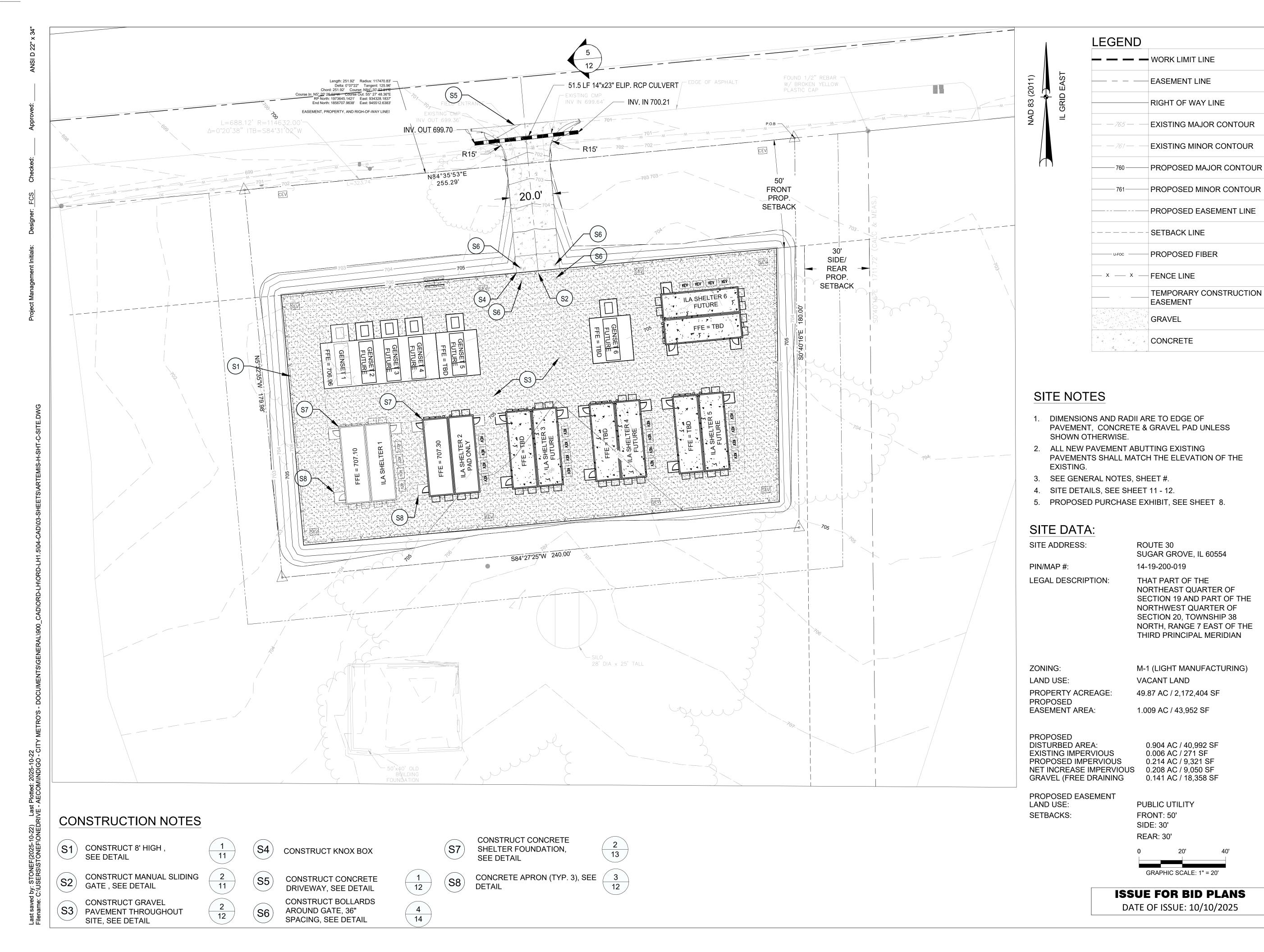
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DATE	DESCRIPTION	

PROJECT NUMBER

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SHEET TITLE

SITE PLAN - INITIAL BUILD



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**PROJECT** 

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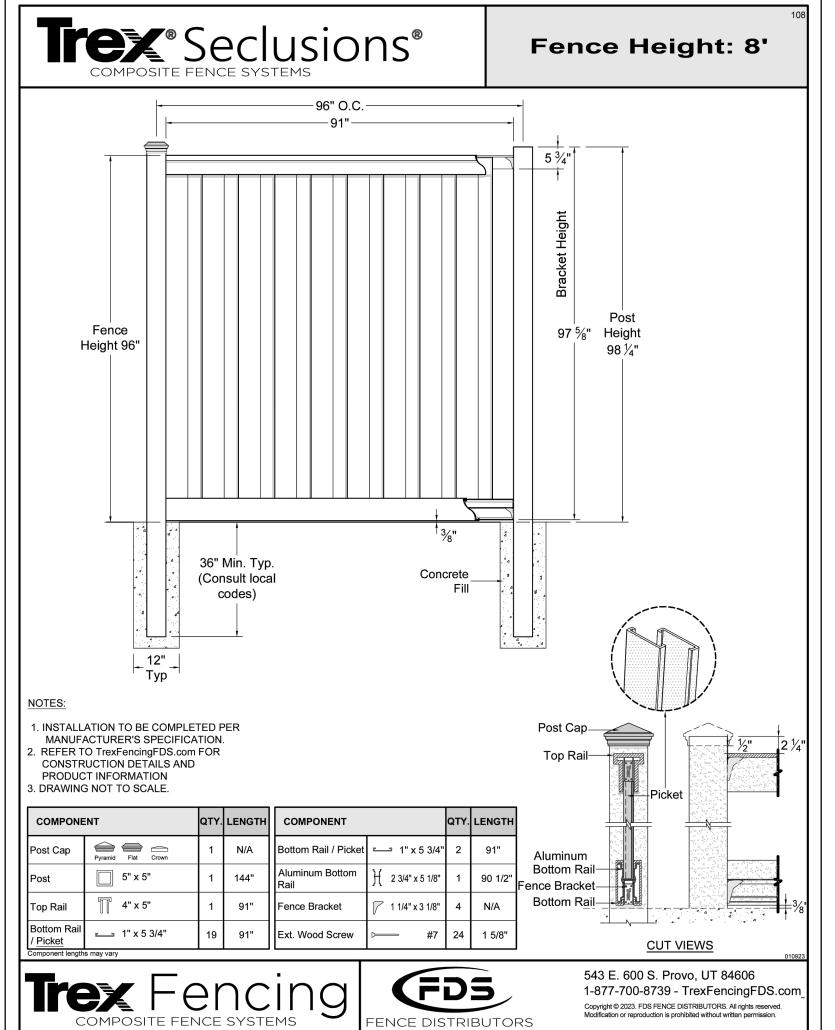
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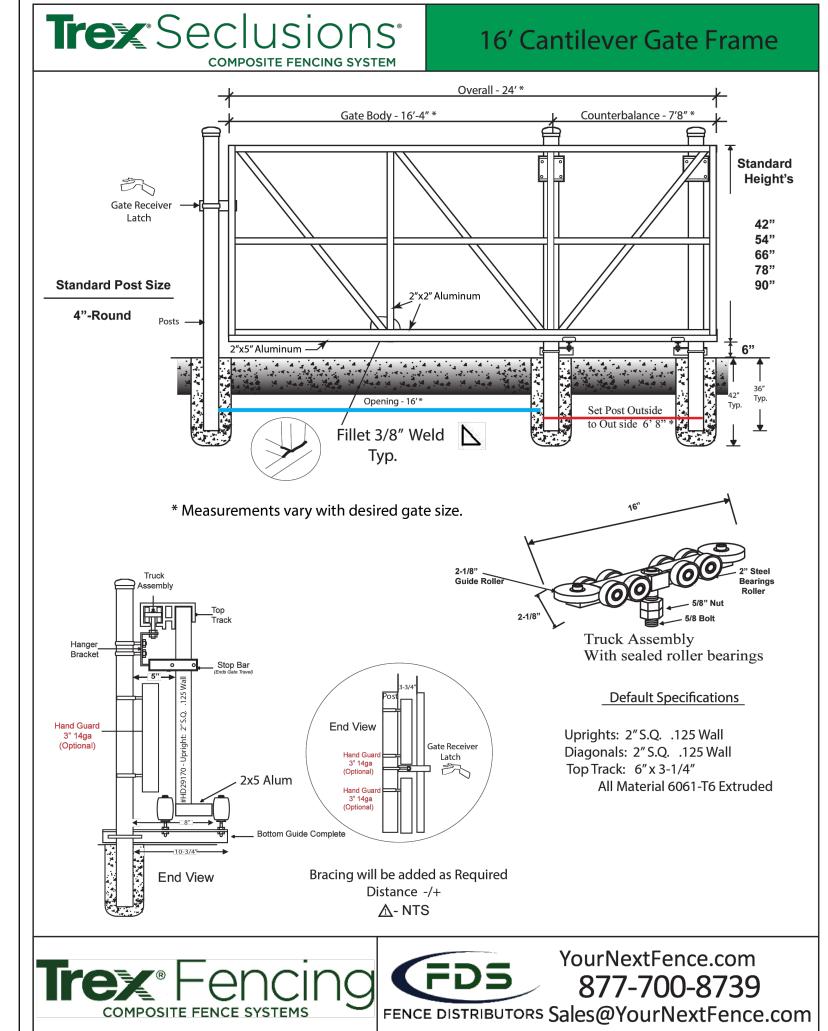
SHEET TITLE

SITE PLAN - FUTURE BUILD

SHEET NUMBER













**PROJECT** 

MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

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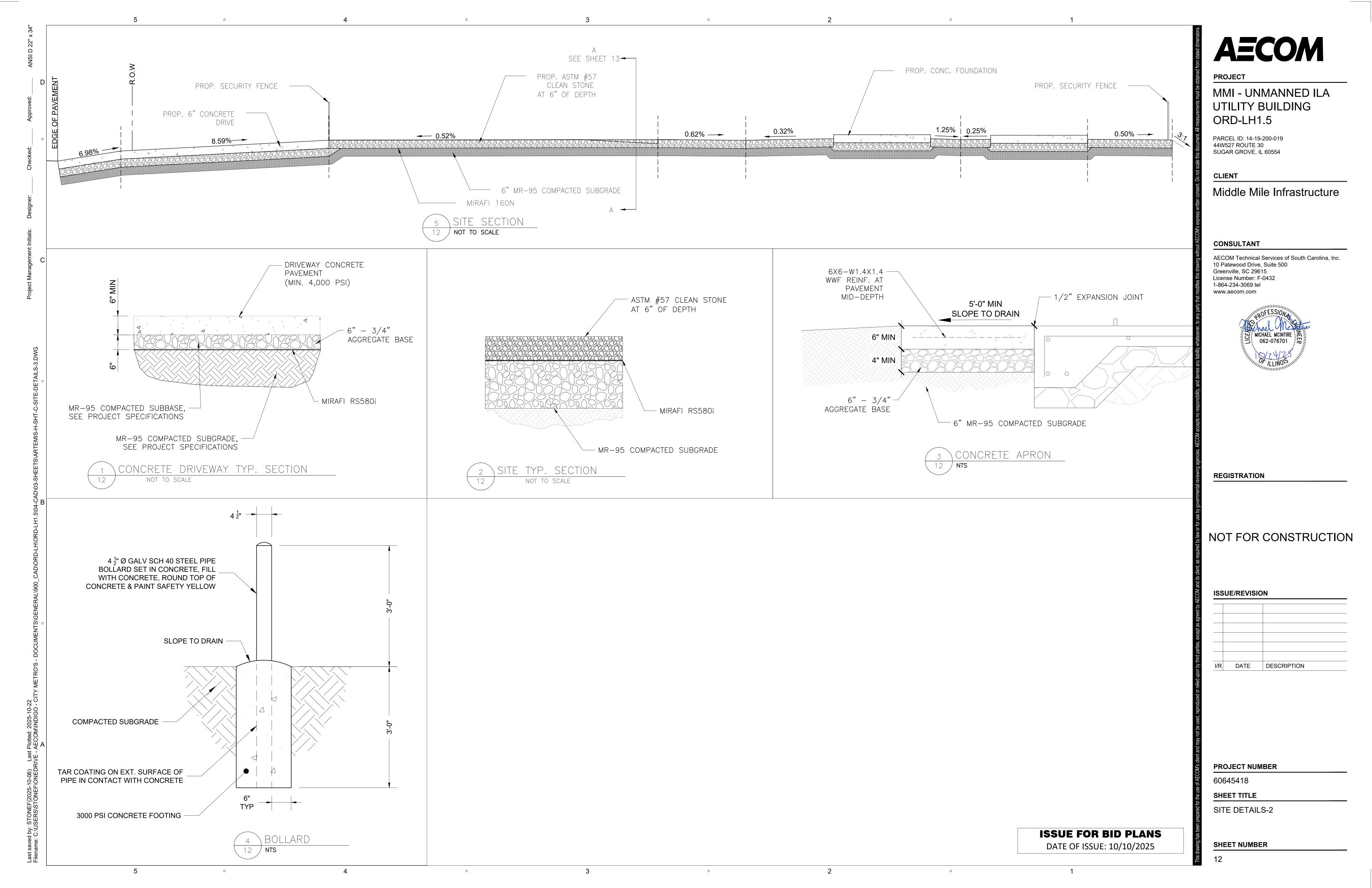
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SITE DETAILS-1

SHEET NUMBER

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025

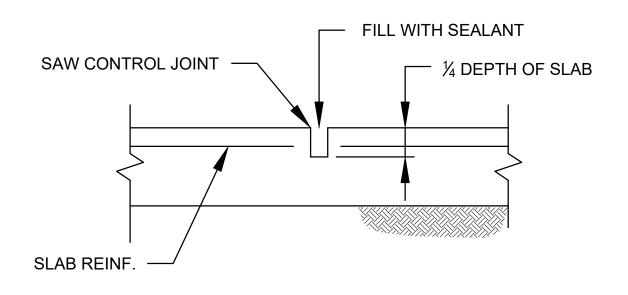


### **DESIGN CRITERIA:**

- 1. LOADS USED IN THE DESIGN OF THE FOUNDATION SLAB ARE AS FOLLOWS:
- 2. UNIFORM LIVE LOADS FOR SLAB ON GRADE 150 PSF
- 3. SNOW LOAD, WIND LOADS, AND SEISMIC LOADS FOR PREFABRICATED BUILDING DESIGN SHALL BE PROVIDED BY PRE-FABRICATED BUILDING MANUFACTURER AS SITE CLASS, DESIGN CATERGORY, ETC. ARE BASED ON SPECIFIC SITE LOCATION.

### **FOUNDATION NOTES:**

- THE ENTIRE STRUCTURE SHALL BE FOUNDED ON COMPACTED STRUCTURAL FILL OR UNDISTURBED SOIL WITH A DESIGN BEARING PRESSURE OF 1,500 PSF.
- 2. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER TO VERIFY THE DESIGN BEARING PRESSURE AND THAT SETTLEMENTS ARE WITHIN GENERALLY ACCEPTED TOLERABLE LIMITS. THE GEOTECHNICAL ENGINEER WILL PROVIDE DIRECTION FOR CORRECTIVE ACTION WHERE NEEDED.
- 3. DO NOT INSTALL FOUNDATION WORK UNTIL IT HAS BEEN COORDINATED WITH ADJACENT UNDERGROUND UTILITIES, ETC.
- 4. NO FOUNDATION CONCRETE SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER. FROST. ICE OR LOOSE MATERIAL.



SLAB (ELEVATION) SAW JOINT

### **CAST-IN-PLACE CONCRETE:**

- 1. CAST-IN-PLACE CONCRETE SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE STANDARD (ACI 318), BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, LATEST EDITION, AND THE SPECIFICATIONS FOR STRUCTURE CONCRETE FOR BUILDINGS (ACI 301), LATEST EDITION.
- 2. ALL CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

A) SLAB ON GRADE - 3,000 PSI
B) CONCRETE OTHERWISE NOTED - 4,000 PSI
C) CONCRETE EXPOSED TO WEATHER SHALL BE ENTRAINED.

- 3. ALL REINFORCING STEEL SHALL BE AS FOLLOWS:

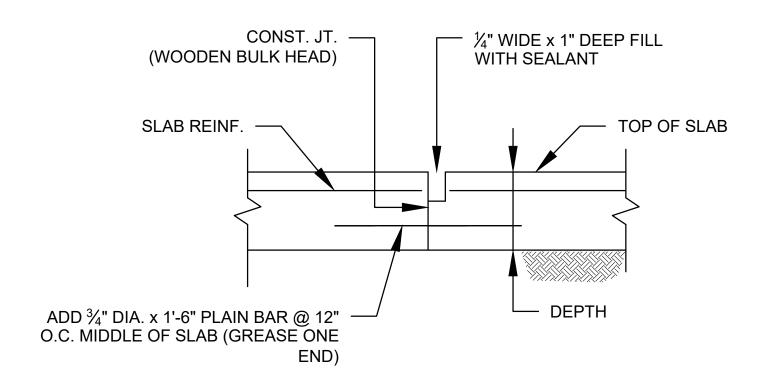
  A) REINFORCING BARS ASTM A615, GRADE 60

  B) WELDED WIRE FABRIC SMOOTH WIRE; ASTM A185 FLAT SHEET TYPE
- 4. WELDED WIRE FABRIC SHALL BE PROPERLY SUPPORTED PRIOR TO PLACING CONCRETE. HOOKING OF FABRIC IS NOT PERMITED.
- 5. #4 BARS MARKED AS CONTINUOUS (CONT.) SHALL BE LAPPED 50 x BAR DIAMETER.
- 6. HOLD ALL REINFORCING STEEL SECURELY IN PLACE TO PREVENT DISLOCATIONS DURING THE POURING OPERATION, SUPPORT SLAB REINFORCING STEEL ON HIGH CHAIRS AND BAR SPACERS OF SUITABLE DESIGN, OR CONCRETE BLOCKS HAVING THE SAME MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SLAB.
- 7. DETAILING OF ALL CONCRETE REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315).
- 8. MINIMUM PROTECTION (CONCRETE COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

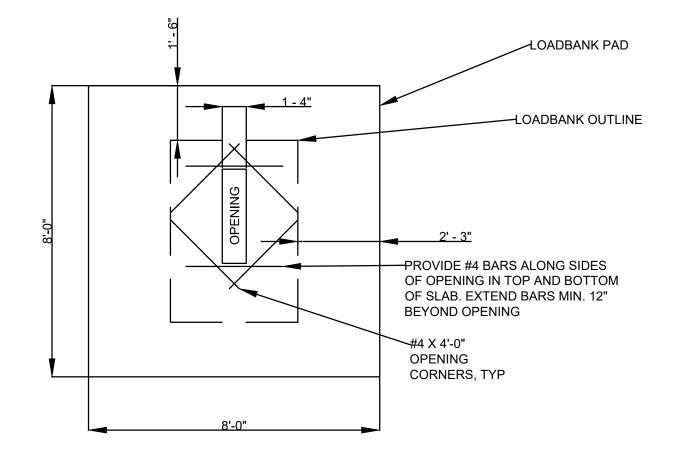
   A) CONCRETE SURFACES CAST AGAINST SOIL: 3"
   B) CONCRETE SURFACES EXPOSED TO EARTH OR WEATHER: 1 1/2"
- 9. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- 10. DIMENSIONS AND HEIGHTS OF CONCRETE SLABS TO BE COORDINATED BY CONTRACTOR AND VERIFIED WITH PRE-FABRICATED BUILDING MANUFACTURER REQUIREMENTS.

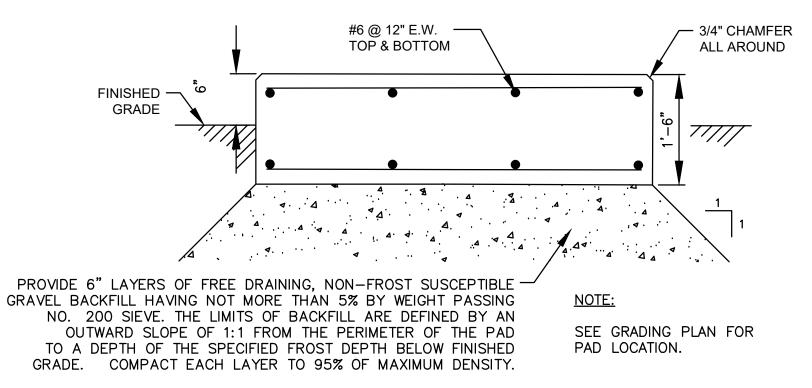
### **CONTROL AND CONSTRUCTION JOINTS**

- 1. SAWCUT JOINTS AT CONTROL JOINTS SHALL BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT RAVELING OUT OF THE AGGREGATE AND DAMAGE TO THE EDGES, BUT NO LATER THAN 12 HOURS AFTER THE FINISHING OF THE SLAB SURFACE HAS BEEN COMPLETED.
- 2. SAWCUT JOINTS SHALL BE MADE AT ALL CONSTRUCTION JOINTS. JOINTS MAY BE SAWCUT WHEN CONTROL JOINTS ARE SAWCUT OR AT ANY TIME PRIOR TO THE TIME THAT SEALANTS ARE TO BE INSTALLED IN THE CONSTRUCTION JOINT.
- 3. IMMEDIATELY AFTER SAWCUTTING, CLEAN THE JOINT AND SLAB SURFACE WITH A HIGH PRESSURE WATER BLASTER (1000 PSI MIN.). WATER BLASTING SHALL REMOVE ALL LAITANCE AND OTHER CONTAMINENTS FROM THE JOINT AND SLAB SURFACE.
- 4. SEALANT FOR JOINTS SHALL BE 2-PART SELF LEVELING SEMI-RIGID EPOXY TYPE. SEALANT SHALL BE LEVEL WITHIN 1/32" BELOW SURFACE. REMOVE ANY EXCESS SEALANT THAT IS ABOVE THE FINISH FLOOR SURFACE ON EITHER SIDE OF THE JOINT. MAINTAIN A UNIFORM THICKNESS THE FULL LENGTH OF ALL JOINTS.



SLAB (ELEVATION) CONSTRUCTION JOINT





LOADBANK PAD SECTION

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025

# AECON

PROJECT

MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

CLIENT

Middle Mile Infrastructure

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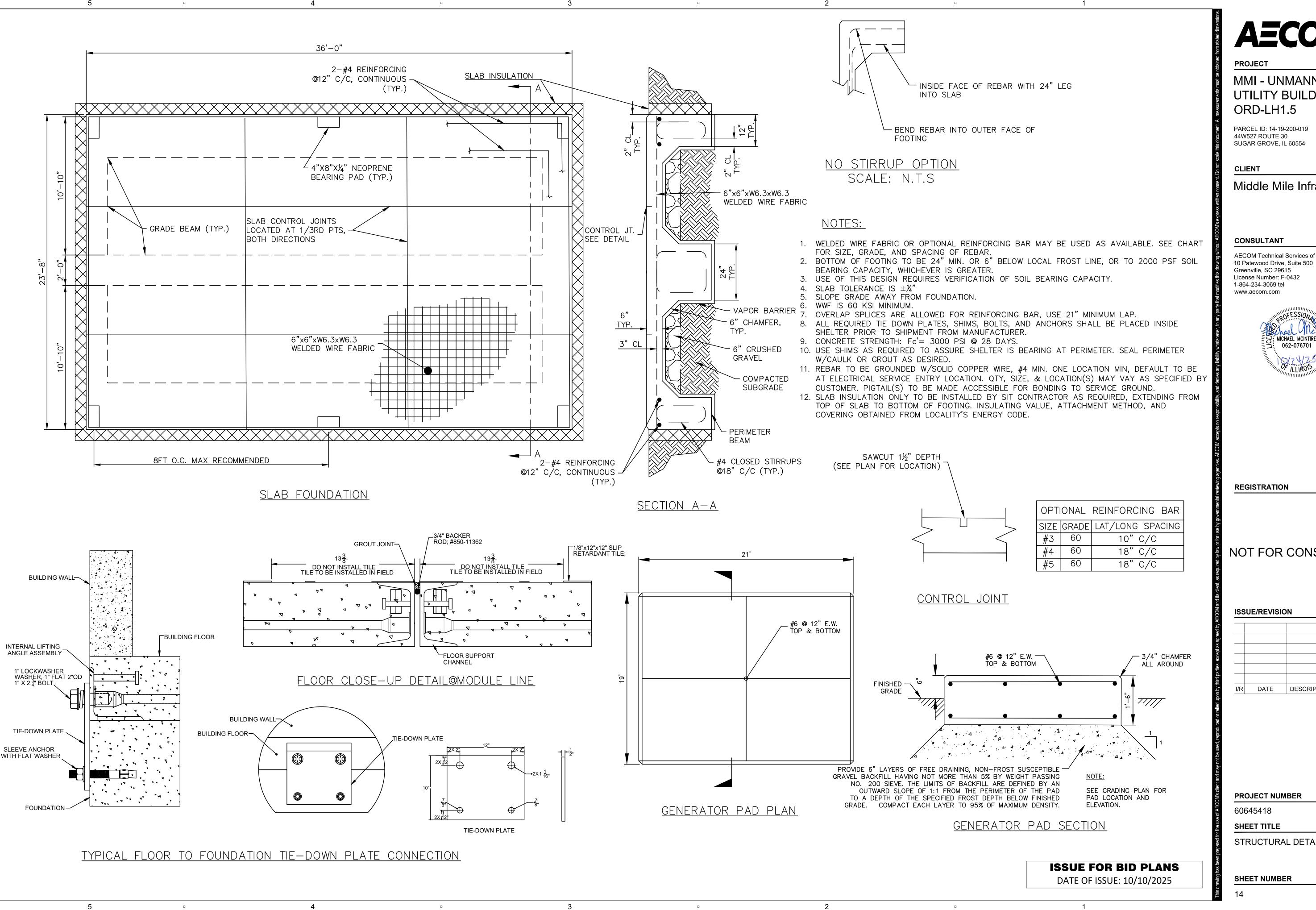
**PROJECT NUMBER** 

60645418

SHEET TITLE

STRUCTURAL DETAILS-1

SHEET NUMBER



AECOM

MMI - UNMANNED ILA **UTILITY BUILDING** 

Middle Mile Infrastructure

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive, Suite 500



NOT FOR CONSTRUCTION

DESCRIPTION

STRUCTURAL DETAILS-2

- UNLESS OTHERWISE INDICATED, ALL MOUNTING ELEVATIONS ARE CENTERLINE ELEVATIONS.
- 2. CIRCUITING SHOWN ON THE PLANS IS BASED ON INFORMATION GIVEN TO THE ENGINEER AT TIME OF DESIGN AND A GENERAL FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY ACTUAL AVAILABLE CIRCUITS, PRIOR TO START OF CONSTRUCTION, AND ADJUST ACCORDINGLY.
- CIRCUIT IDENTIFICATION SHALL BE AS FOLLOWS: A-5 = 1-POLE BREAKERS AT CIRCUIT #5 OF PANEL "A". P-1,3 = (1) 2-POLE BREAKER AT CIRCUITS #1 & #3 OF PANEL "P".
- PROVIDE NEW CIRCUIT BREAKERS AS REQUIRED. ALL NEW CIRCUIT BREAKERS SHALL MATCH EXISTING EQUIPMENT FOR MFR, TYPE AND AIC RATING.
- 5. NO WIRING DEVICES OR OUTLET BOXES SHALL BE INSTALLED BACK-TO-BACK.
- CONTRACTOR SHALL FURNISH, INSTALL, AND SIZE ALL SLEEVES, HOLES, CORES, PATCHING, SLOTS, ANCHORS, BRACKETS, SUPPORTS, JUNCTION BOXES, PULLBOXES, AND OTHER APPURTENANCES NECESSARY TO EXECUTE THE CONTRACT DOCUMENTS COMPLETE. SOME OF THESE ITEMS MAY BE SHOWN ON THE DRAWINGS FOR CLARITY OR DESIGN PREFERENCE. HOWEVER, NOT ALL OF THE ITEMS, NECESSARY FOR COMPLETE EXECUTION AND INSTALLATION, ARE SHOWN.
- 7. LABEL ALL JUNCTION BOXES WITH CIRCUIT NUMBER.
- 8. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL, OR AT RIGHT ANGLES, TO STRUCTURE.
- 9. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT BEING INSTALLED PRIOR TO INSTALLATION TO ASSURE THAT THE FEEDER, DISCONNECT, OVERCURRENT PROTECTION, ETC. MATCHES THE ACTUAL NAMEPLATE DATA AS SUPPLIED BY THE MFR. REFER TO EQUIPMENT CUTSHEETS AND MFR'S DATA FOR ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTER-CONNECTIONS OF ALL EQUIPMENT AND PROVIDE / INSTALL AS REQUIRED.
- 10. WORK CALLED FOR BY THE SPECIFICATIONS OR THESE DRAWINGS IS REQUIRED THE SAME AS IF REQUIRED BY BOTH. WHERE A CONFLICT EXISTS BETWEEN THE SPECIFICATIONS AND DRAWINGS. THE MORE STRINGENT REQUIREMENTS OF THE TWO SHALL APPLY UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER.
- 11. FURNISH CABLING AND RACEWAYS FOR SYSTEM DEVICES AND INSTRUMENTATION ACCORDING TO OTHER TRADES AND VENDORS DRAWINGS AND SPECIFICATIONS.
- 12. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DEVICE TYPES, LOCATIONS AND QUANTITIES WITH THE OWNER AND SYSTEM'S VENDOR AND PROVIDE ACCORDINGLY.
- 13. ALL WORK SHALL BE PERFORMED ON DE-ENERGIZED EQUIPMENT ANY WORK ON LIVE EQUIPMENT SHALL BE REQUESTED 72 HOURS PRIOR TO START WITH LIVE WORK PERMIT.
- 14. UPON COMPLETION OF WORK, CORRECT ALL PANELBOARD CIRCUIT DIRECTORY CARDS TO REFLECT AS-BUILT CONDITIONS. CONTRACTOR SHALL PROPERLY COVER ALL UNUSED SPACES.

### **GENERAL WIRING NOTES**

- CIRCUIT HOMERUNS NOT OTHERWISE MARKED ON DRAWINGS SHALL BE CONSIDERED 2 #12, 1 #12G -3/4" C, MIN.
- WIRE SIZING FOR ALL BRANCH CIRCUITS SHALL BE IN ACCORDANCE WITH NEC TABLE 310-15(B)(16), WITH SUITABLE TERMINAL RATINGS AS REQUIRED BY ARTICLE 110.14, AS A MINIMUM.
- WHERE CIRCUITS ARE IN EXCESS OF 50 FEET (120V), OR 150 FEET (277V); THE WIRE SIZE SHALL BE INCREASED TO ACCOMMODATE FOR VOLTAGE DROP. THE CONTRACTOR SHALL ENSURE NEW CIRCUIT WIRES ARE SIZED TO LIMIT VOLTAGE DROP TO 2% ON FEEDERS AND 3% ON BRANCH CIRCUITS.
- WHERE THE WIRE SIZE IS INCREASED DUE TO CIRCUIT LENGTH AS SHOWN ABOVE, THAT WIRE SIZE SHALL BE CARRIED THROUGHOUT THE CIRCUIT, AS A MINIMUM. GROUND WIRE SHALL BE SIZED ACCORDINGLY FOR THE NEW WIRE SIZE.
- ALL CIRCUITS SHALL HAVE A DEDICATED NEUTRAL AND EQUIPMENT GROUND CONDUCTORS, AS REQUIRED, IN EACH AND EVERY CONDUIT OR RACEWAY; METALLIC OR NON-METALLIC, RIGID OR FLEXIBLE.
- EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED PER NEC TABLE 250-122 AND AS REQUIRED TO ACCOMMODATE VOLTAGE DROP, OR AS SHOWN ON DRAWINGS WHICHEVER IS MORE STRINGENT.
- WIRE SIZING SHALL BE AS INDICATED IN NOTES ABOVE, ONE-LINE DIAGRAMS OR AS SHOWN ON THE DRAWINGS, WHICHEVER IS MORE STRINGENT. THAT SAME WIRE SIZE SHALL BE CARRIED THROUGHOUT THE CIRCUIT, AS A MINIMUM.

### GENERAL EMERGENCY ACCESS BOX NOTES

- CONTRACTOR SHALL VERIFY EMERGENCY ACCESS BOX (EAB) LOCATION AND FUNCTIONS WITH FIRE MARSHAL AND LOCAL UTILITY PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- CONTRACTOR SHALL COORDINATE THE EAB AS SPECIFIED IN THESE DRAWINGS WITH THE FIRE MARSHAL AND UTILITY CO. AND PROVIDE EAB AND ALL ACCESSORIES AS REQUIRED BY THE FIRE MARSHAL AND UTILITY CO. FOR AN APPROVED ACCESS SYSTEM.
- SUBMIT EQUIPMENT SHOP DRAWINGS TO THE FIRE MARSHAL UTILITY CO., AND ENGINEER FOR APPROVAL PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH THE
- FOLLOWING INFORMATION AS A MINIMUM: a. ALL SUBMITTALS SHALL INDICATE COMPLIANCE WITH LATEST
- ADOPTED EDITIONS OF: - INTERNATIONAL FIRE CODE
- NFPA 72
- NFPA 13
- NFPA 101 - NFPA - 70 (NATIONAL ELECTRICAL CODE)
- ADA AMERICANS WITH DISABILITIES ACT - ALL STATE AND LOCAL CODES AND ORDINANCES.
- COORDINATE WITH THE SYSTEM VENDOR FOR ADDITIONAL REQUIREMENTS AND PROVIDE ALL LINE VOLTAGE NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- 6. THE ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOXES, CONDUITS, AND CONDUCTORS AS REQUIRED FOR A COMPLETE GATE EMERGENCY ACCESS SYSTEM.

# GENERAL UTILITY CO. COORDINATION

- THE CONTRACTOR SHALL MEET ON-SITE WITH THE UTILITY CO. REPRESENTATIVE TO DETERMINE THE FOLLOWING; PRIOR TO BID AND ROUGH-IN:
  - a. VERIFY PRIMARY CONDUIT WORK REQUIRED AND RESPONSIBILITY; IF ANY.
  - b. VERIFY THE EXACT LOCATION OF THE UNDERGROUND OR OVERHEAD TRANSFORMERS.
  - c. VERIFY METERING METHOD AND REQUIREMENTS, IF DIFFERENT FROM SHOWN.
- d. VERIFY REQUIRED SERVICE CONDUITS, ROUTING, AND TERMINATION LOCATION.
- THE CONTRACTOR SHALL NOTIFY THE UTILITY CO. CONTACT LISTED BELOW OF THE PRE-CONSTRUCTION MEETING SCHEDULE.

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THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE COORDINATION PROCEDURES WILL CONSTITUTE ABSORBING ALL COSTS ASSOCIATED WITH REPLACING ANY AND ALL WORK ALREADY IN PLACE TO MEET THE UTILITY CO. RULES AND REQUIREMENTS.

### ELECTRICAL SYMBOL LEGEND (NOT ALL SYMBOLS USED ON PLANS) PANELBOARD, 120/240V, 1-PH, SURFACE MOUNTED CONDUIT HOME RUN, TEXT INDICATES DESTINATION; PANELBOARD "A". CIRCUIT #5. / A-5 SEE GENERAL NOTES FOR ADDITIONAL INFORMATION. CONCEALED IN WALLS OR ABOVE CEILINGS, EXPOSED ON WALLS OR CEILINGS, OR CONCEALED BELOW GRADE OR FLOORS; RESPECTIVELY WITH APPROPRIATE CONDUCTOR QUANTITIES. SEE GENERAL NOTES. OVERHEAD LINE, LETTER DENOTES TYPE: T = TELECOMMUNICATIONS E = ELECTRIC —— E — G = GROUNDING CONDUCTOR OE = UTILITY O/H ELECTRIC UNDERGROUND DUCTBANK, LETTER DENOTES TYPE: E = ELECTRIC T = TELECOMMUNICATIONS ---E---G = GROUNDING CONDUCTOR UE = UTILITY U/G ELECTRIC LOC = LOCATOR TRACER WIRE J JUNCTION BOX, SQUARE OR ROUND HDPE STRUCTURAL FOAM, WITH OPEN FLOOR AND COMPOSITE SPLIT COVER. TYPE AND SIZE AS FOLLOWS CEV = CUSTOMER (CHANNELL #BULKU366048) SEV = SITE (CHANNELL #BULKU366048) KEV = KNOCKOUT (CHANNELL #366048) TRANSFORMER, DRY-TYPE UON, SIZE AND CONFIGURATION AS INDICATED SIZE, FUSES, POLES, AND NEMA ENCLOSURE RATING AS NOTED. NEMA RATINGS ARE. UON: INDOOR-NEMA 1. OUTDOOR-NEMA 3R. DUPLEX OR QUAD RECEPTACLE, 20A, w/COVER PLATE, AT 18" AFF M.H., $Y \cap Z \qquad Y \cap Z$ X = TYPE, Y = NON-STANDARD M.H., Z = CIRCUIT NUMBER 10'-0" LONG x 3/4" DIAMETER, COPPER-CLAD STEEL TEST WELL, w/GROUND ROD EXOTHERMIC WELD GROUNDING ELECTRODE CONDUCTORS, BELOW GRADE/IN-SLAB OR - - G - - G -EXPOSED; RESPECTIVELY. —— G —— SEE POWER ONE-LINE DIAGRAM AND DETAILS FOR MORE INFORMATION. WALL SWITCH w/COVERPLATE, STANDARD M.H. 48" AFF: K = SWITCH TYPE, AS FOLLOWS: blank> = SINGLE-POLE 2 = DOUBLE-POLE (2-WAY) 3 = THREE-POLE (3-WAY) 4 = FOUR-POLE (4-WAY) D = DIMMER K = KEY-OPERATED P = w/PILOT LIGHT T = TIMER SWITCH, DIGITAL XP = EXPLOSION-PROOF WP = WEATHERPROOF LIGHTING FIXTURE X = FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE. EMERGENCY LIGHT FIXTURE, W/INTEGRAL BATTERY PACK TRIANGLES DENOTES # OF FIXTURE HEADS EXIT SIGN, CEILING OR WALL MOUNTED. QUANTITY OF FACES. AND DIRECTIONAL ARROWS AS INDICATED ON PLANS. SITE LUMINAIRE. POLE MOUNTED. NUMBER OF HEADS AS SHOWN ON PLANS. ARROW INDICATES DIRECTION OF OPTICS, IF SHOWN.

### VAULT BOX CONDUIT ENTRY DETAIL — FINISHED GRADE OR PAVING VAULT (REFER TO **GENERAL NOTES** - CONDUIT(S) WITH ON ELECTRICAL BELL ENDS, TYP. SITE PLAN) SIZE, QUANTITY AND WIRING AS LINE SIDES OF SHOWN ON PLANS **EXCAVATION** WITH 30 LBS. FELT PAPER (4) CONCRETE BRICKS 2"x8"x16" CLEAN 3/4" CRUSHED ROCK

### POLE (2P.3P.4P. 1P ETC.) LIGHT EMITTING DIODE LED LINEAR FEET (FOOT) 2 CONDUCTOR (1/C, 3/C, 4/C, ETC.) LIGHT POLE 2-WIRE (3W, 4W, ETC.) LOCKED ROTOR AMPS LONG, SHORT, INSTANTANEOUS, GROUND AMMETER, AMPERE LSIG ALTERNATING CURRENT, ARMORED CABLE LTG LIGHTING LTNG LIGHTNING AIR CONDITIONING UNIT **ADDITIONAL** LOW-VOLTAGE ADJACENT, ADJOINING ARCHITECT / ENGINEER MAX MAXIMUM AMPERE FRAME, AMP FUSE METAL-CLAD AVAILABLE FAULT CURRENT MINIMUM CIRCUIT AMPS ARC FAULT CIRCUIT INTERRUPTER MAIN CIRCUIT BREAKER ABOVE FINISHED FLOOR MCCB MOLDED CASE CIRCUIT BREAKER MAIN DISTRIBUTION PANEL MDP ABOVE FINISHED GRADE **AUTHORITY HAVING JURISDICTION** MECH MECHANICAL AMPERE INTERRUPTING CAPACITY MFR MANUFACTUREF ALTERNATE MH MOUNTING HEIGHT AMPERE, AMPACITY MIN MINIMUM **MISCELLANEOUS** ARCHITECT, ARCHITECTURAL MOCP MAXIMUM OVERCURRENT PROTECTION

AMP APPROX APPROXIMATELY ARCH AMPERE TRIP MAIN LUGS ONLY ATS **AUTOMATIC TRANSFER SWITCH** MSB MAIN SWITCHBOARD AUTO AUTOMATIC MTD MOUNTED AWG AMERICAN WIRE GAUGE MTS MANUAL TRANSFER SWITCH BAT NOT APPLICABLE BFG BELOW FINISHED GRADE NORMALLY CLOSED BKR BREAKER BLDG **BUILDING** 

C/B С CONDUIT CANDELA cd **NIGHT LIGHT** CKT **CIRCUIT** N.O. NORMALLY OPEN CLG CEILING NTS NOT TO SCALE COAX COAXIAL CABLE COMM COMMUNICATION **ON-CENTER** O/C CONT CONTINUE, CONTINUATION O/H **OVERHEAD** CONTR

CPT **CONTROL POWER TRANSFORMER** OSP CRI COLOR RENDERING INDEX O/L OVERLOAD CT CURRENT TRANSFORMER CU COPPER POLE db **DECIBEL** DC DIRECT CURRENT PH, Ø PHASE **DEGREES CELSIUS** PNL PANEL deg C deg F

DIA DIAMETER DIAG DIAGRAM DISC DISCONNECT DIST DISTRIBUTION DN DOWN DPDT DOUBLE POLE, DOUBLE THROW DOUBLE POLE, SINGLE THROW DPST D/S **DISCONNECT SWITCH** 

2/C

ADJ

A/E

AFF

AHJ

AIC

ALT

DWG EG ELEC **EMERGENCY** 

FLEX

GC

GEN GFCI

GRS

GTB

HGT

HH

HOA

H/V

HZ

ICCB

IG

IMC

I/O ISP

kVA

kV/H

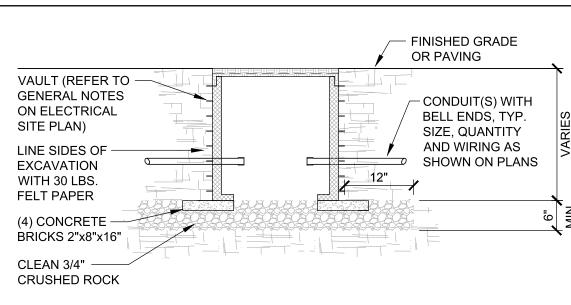
kVAR

kWH

KILOWATT HOUR

kW

J-BOX



### ELECTRICAL ABBREVIATIONS (NOT ALL ABBREVIATIONS ARE USED ON PLANS)

1PH, 1Ø SINGLE-PHASE ADDL AFG NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION N, NEUT NEUTRAL NFPA CIRCUIT BREAKER NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT CONTRACTOR OVERLOAD **OUTSIDE PLANT** PULL BOX, PUSHBUTTON POWER FACTOR **DEGREES FAHRENHEIT POWER POLE** DEMO DEMOLITION

PAIR PRI PRIMARY POTENTIAL TRANSFORMER POLYVINYL CHLORIDE (PLASTIC)

SEC

REFLECTED CEILING PLAN

SECONDARY

PVC PWR POWER QTY QUANTITY

**DRAWING** RCPT RECEPTACLE RMS ROOT MEAN SQUARE **ELECTRICAL CONTRACTOR EQUIPMENT GROUND** SURGE ARRESTER **ELEVATION** SCC SHORT CIRCUIT CAPACITY ELECTRIC, ELECTRICAL SCHD SCHEDULE

ELECTROMAGNETIC INTERFERENCE SQUARE FOOT (FEET) ELECTRICAL METALLIC TUBING EMERGENCY POWER OFF SURGE PROTECTIVE DEVICE SPD SPECIFICATION EX, (EX) EXISTING SINGLE POLE, SINGLE THROW SPST FIRE ALARM STAINLESS STEEL **FOOTCANDLE** SWITCH

SWITCHBOARD **FULL LOAD AMPS** SWBD FLEXIBLE METALLIC CONDUIT SYM SYMMETRICAL SYSTEM FEET OR FOOT SYS G/GND GROUND TIME CLOCK GAUGE GENERAL CONTRACTOR TWIST LOCK

TAMPER RESISTANT GENERATOR, GENERAL GROUND FAULT CIRCUIT INTERRUPTER TTB TELEPHONE TERMINAL BOARD GALVANIZED RIGID STEEL TYPICAL TYP **GROUND TERMINAL BOX** UNDERGROUND

UNDERWRITERS LABORATORY UNLESS OTHERWISE NOTED HANDHOLE HAND-OFF-AUTOMATIC UNINTERRUPTIBLE POWER SUPPLY UTILITY **HORSEPOWER** UTIL HIGH-VOLTAGE HVAC HEATING, VENTILATING & AIR CONDITIONING VOLT, VOLTAGE

**VOLT AMPERE** HERTZ VOLT AMPERE REACTIVE VAR INSULATED CASE CIRCUIT BREAKER WATT ISOLATED GROUND INTERMEDIATE METAL CONDUIT WITH

INPUT / OUTPUT WIRE GUARD WATER HEATER **INSIDE PLANT** WH WITHOUT JUNCTION BOX **WEATHERPROOF** 

XFER TRANSFER **KILOVOLT** XFMR TRANSFORMER KILOVOLT AMPERE KILOVOLT AMPERE PER HOUR **EXPLOSION-PROOF** KILOVOLT AMPERE REACTIVE KILOWATT

### **ISSUE FOR BID PLANS**

DATE OF ISSUE: 10/10/2025

### **PROJECT**

MMI - UNMANNED ILA **UTILITY BUILDING** ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

### CLIENT

### Middle Mile Infrastructure

### CONSULTANT

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### REGISTRATION

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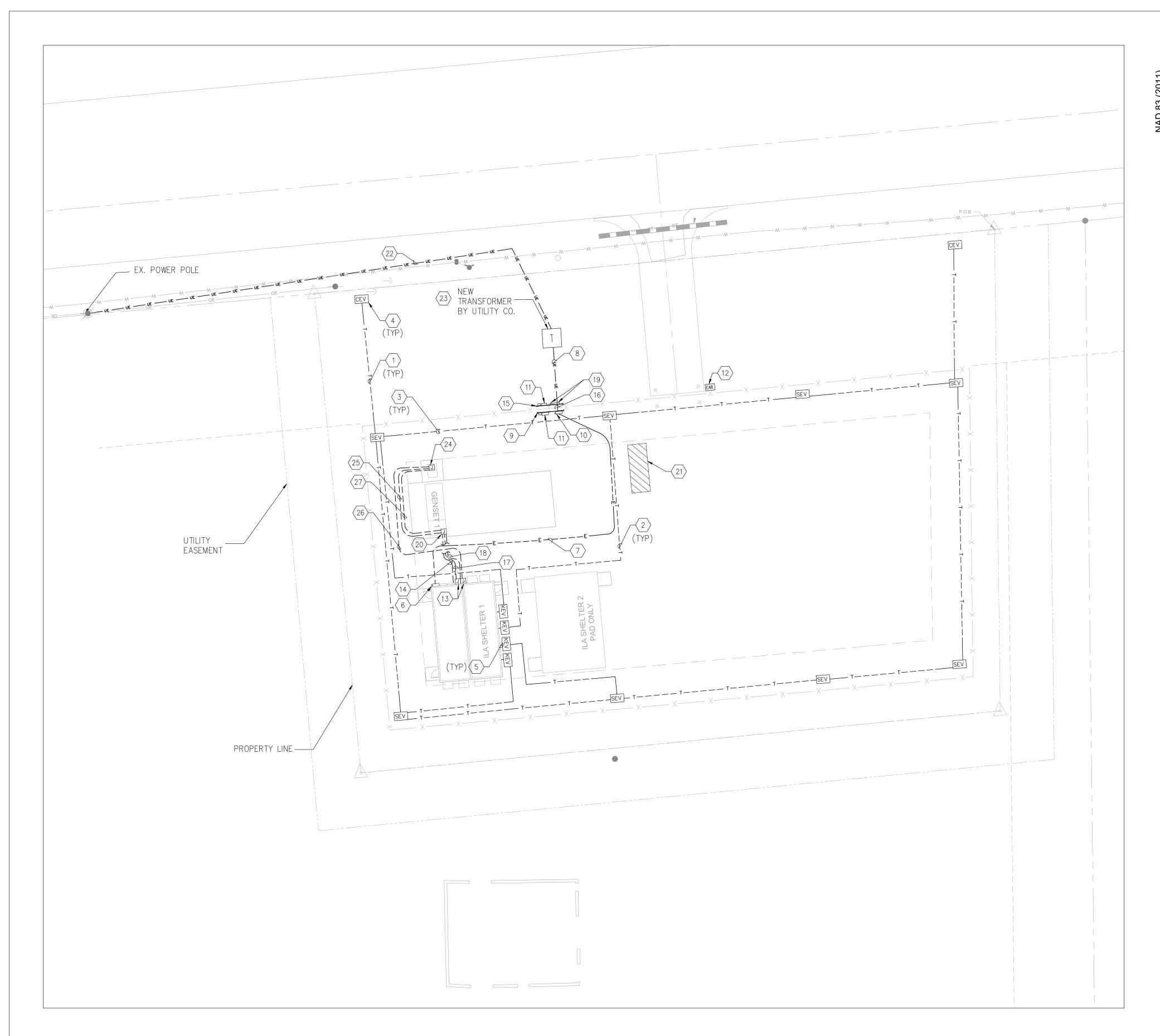
IS	ISSUE/REVISION		
I/F	DATE	DESCRIPTION	

### **PROJECT NUMBER**

60645418

### SHEET TITLE

ELECTRICAL GENERAL NOTES, SYMBOL LEGENDS, AND **ABBREVIATIONS** 





- A. REFER TO ELECTRICAL GENERAL NOTES, SYMBOLS LEGENDS, AND ABBREVIATIONS ON SHEET 15.
- B. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET 19.
- C. REFER TO ONE-LINE DIAGRAM ON SHEET 20.
- D. REFER TO HUT DESIGN PACKAGE FOR OLOW VOLTAGE CABLING FEEDER SCHEDULES AND ADDITIONAL
- THE GC SHALL PROVIDE ALL BACKFILL OF ELECTRICAL AND FIBER TRENCHES. ALL BACKFILL SHALL BE FREE OF PEAT, MARL, HIGHLY PLASTIC CLAY, OR OTHER UNSUITABLE MATERIALS SUCH AS TRASH, DEBRIS, BRUSH, OR ICE.
- ALL UNDERGROUND CONDUITS SHALL HAVE #6 SOLID, HMWPE INSULATION 0.045MIL ORANGE TRACER WIRE INSTALLED EXTERIOR TO THE CONDUIT. THIS TRACER WIRE IS USED FOR CONDUIT LOCATING.
- G. THE GC IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SITE ENTRY VAULTS (SEV), KNOCK-OUT ENTRY VAULTS (KEV), AND INSTALLING ALL FIBER CONDUIT BETWEEN VAULTS. CHANNELL # BULKU366048 (SEV), CHANNELL # BULKU366048 (KEV); NO EXCEPTIONS.
- H. THE CUSTOMER ENTRY VAULTS (CEV) AND FIBER CONDUIT BETWEEN, ALONG WITH CEV CONNECTIONS TO, THE OSP LONG HAUL FIBER CONDUITS SHALL BE BY OTHERS.
- ALL FIBER VAULTS SHALL BE INSTALLED FLUSH WITH FINISHED GRADE AND 6" DEPTH OF COMPACTED AGGREGATE BASE AT THE BOTTOM OF THE VAULT. REFER TO VAULT BOX CONDUIT ENTRY DETAIL ON SHEET 15 FOR ADDITIONAL INFORMATION.
- VAULTS LOCATED OUTSIDE THE PERIMETER FENCE SHALL HAVE PENTA-BOLTS FOR LID LOCKING OPTION, VAULTS WITHIN THE PERIMETER FENCE SHALL NOT REQUIRE ANY SECURITY LOCKING OPTIONS.
- K. ALL FIBER CONDUITS SHALL BE INSTALLED WITH 1/2" PULLTAPE AND SHALL BE CAPPED AFTER ENTERING
- L. THE GC SHALL PROVIDE A MINIMUM OF 4" DEPTH OF BEDDING SAND ABOVE AND BELOW ALL UNDERGROUND FIBER CONDUITS.

### KEYNOTES (#

- FURNISH AND INSTALL (2) 4" SCHD 80 PVC EMPTY CONDUITS WITH (1) THREE-CELL INNERDUCT (MXE86383) AND PULLWIRE AT 24" BELOW GRADE BETWEEN CEV AND SEV, TYPICAL. COORDINATE EXACT LOCATION OF CEV IN FIELD PRIOR TO ROUGH-IN AND INSTALLATION.
- 2. FURNISH AND INSTALL (2) 4" SCHD 80 PVC EMPTY CONDUIT WITH (1) THREE-CELL INNERDUCT (MXE86383) AND PULLWIRE AT 24" BELOW GRADE BETWEEN SEV AND KEV, TYPICAL.
- 3. FURNISH AND INSTALL (2) 4" SCHD 80 PVC EMPTY CONDUITS WITH (1) THREE-CELL INNERDUCT (MXE86383) AND PULLWIRE AT 24" BELOW GRADE BETWEEN SEV AND SEV, TYPICAL.
- 4. CEV AT FIBER LONG HAUL LINES BY OTHERS, REFER TO GENERAL NOTES ON THIS SHEET.
- 5. FURNISH AND INSTALL (2) 4" SCHD 80 PVC EMPTY CONDUITS WITH PULLWIRE AT 24" BFG BETWEEN KEV AND PRE-INSTALLED OSP CONDUIT ENCLOSURE MOUNTED ON HUT SHELTER. SUPPORT VERTICAL CONDUIT RUN WITH UNISTRUT SHIPPED WITH HUT SHELTER. REFER TO HUT SHELTER DRAWINGS FOR ADDITIONAL INFORMATION.
- 6. SERVICE RATED SAFETY DISCONNECT SWITCH, HEAVY-DUTY, 600A, 3P, 600VAC, FUSIBLE, WITH CLASS RK5 FUSES AND CLASS 'R' REJECTION CLIPS, IN NEMA 3R ENCLOSURE. REFER TO SPECIFICATIONS ON SHEET 19 FOR ADDITIONAL INFORMATION.
- FURNISH AND INSTALL (2) 4" SCHD 80 PVC CONDUIT AT 36" BELOW GRADE FOR ELECTRICAL SERVICE CONDUCTORS TO HUT SHELTER DISCONNECT SWITCH. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET 23 FOR CONDUCTOR SIZES.
- 8. FURNISH AND INSTALL (4) 1" SCHD 80 PVC CONDUITS WITH PULLWIRE AT 36" BFG BETWEEN PAD MOUNTED TRANSFORMER AND CT CABINET. STUB OUT INSIDE UTILITY TRANSFORMER SECONDARY WINDOW, CAP AND MARK FOR FUTURE IDENTIFICATION. COORDINATE EXACT TERMINATION LOCATION AND REQUIREMENTS WITH UTILITY CO. PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
- 9. FURNISH AND INSTALL 3-POST ELECTRICAL H-FRAME FOR RACK MOUNTED SERVICE DISCONNECT SWITCH. H-FRAME SHALL BE GALVANIZED STEEL POSTS WITH U-CHANNEL SUPPORTS.
- 10. 600A, 480/277V, 3PH ELECTRIC UTILITY SERVICE DISCONNECT SWITCH WITH CLASS RK5 FUSES AND CLASS 'R' REJECTION CLIPS, IN NEMA 3 R ENCLOSURE. GC IS RESPONSIBLE FOR COORDINATING MOUNTING STRUCTURE REQUIREMENTS WITH THE LOCAL UTILITY AND PROVIDE ACCORDINGLY.
- 11. ALLOTTED SPACE FOR FUTURE ELECTRIC UTILITY SERVICE METER OR DISCONNECT SWITCH ENCLOSURE OR DISCONNECT SWITCH FOR FUTURE HUT SHELTER.
- 12. EMERGENCY ACCESS BOX (EAB) WITH GATE KEY FOR EMERGENCY ACCESS OF ENTRY GATE BY THE FIRE DEPARTMENT. GC IS RESPONSIBLE FOR REGISTERING THE EAB, AND COORDINATING ALL REQUIREMENTS FOR EAB, WITH THE FIRE MARSHAL AND PROVIDE ACCORDINGLY. REFER TO GENERAL EMERGENCY ACCESS BOX NOTES ON SHEET 15 FOR ADDITIONAL REQUIREMENTS AND INFORMATION.
- 13. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING LOOSE J-BOXES SHIPPED WITH HUT SHELTER FOR CONDUIT TERMINATIONS. (1)- 6X6X4 J-BOX FOR POWER, AND (1)- 10X10X6 J-BOX FOR LOW-VOLTAGE CONDUITS. COORDINATE EXACT MH FOR SURFACE MOUNTED J-BOXES PRIOR TO ROUGH-IN. TERMINATE CONDUITS ONTO RESPECTIVE J-BOXES. CONDUIT SHALL BE INSTALLED WITH WEATHER PROOF FITTINGS. WALL PENETRATIONS SHALL BE SEALED WITH DUCT SEAL. SPRAY FOAM IS NOT PERMITTED FOR CONDUIT
- 14. FURNISH AND INSTALL (2) 4" SCHD 80 PVC CONDUIT AT 36" BELOW GRADE FOR ELECTRICAL SERVICE CONDUCTORS TO HUT SHELTER GENERATOR DOCKING STATION. REFER TO ONE-LINE DIAGRAM ON SHEET 23 FOR CONDUCTOR SIZES.
- 15. FURNISH AND INSTALL 3-POST ELECTRICAL H-FRAME FOR RACK MOUNTED ELECTRIC UTILITY METER/CT CABINET. H-FRAME SHALL BE GALVANIZED STEEL POSTS WITH U-CHANNEL SUPPORTS.
- 16. FURNISH AND INSTALL (2) 4" SCHD 80 PVC EMPTY CONDUIT WITH PULLWIRE AT 36" BELOW GRADE BETWEEN CT CABINET AND SERVICE DISCONNECT. COORDINATE WITH UTILITY CO. FOR TERMINATIONS.
- 17. FURNISH AND INSTALL (1) 1" SCHD 80 PVC CONDUIT AT 36" BFG FOR GENERATOR AUX LOAD CONDUCTORS TO HUT 120V PANELBOARD. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET 19 FOR
- 18. FURNISH AND INSTALL (6) 1" SCHD 80 PVC CONDUIT AT 36" BELOW GRADE FOR ELECTRICAL CONDUCTORS FROM HUT SHELTER TERMINAL BLOCK TB-05.
- 19. 600A, 480/277V, 3PH ELECTRIC UTILITY METER AND CT CABINET. PROVIDE METER ENCLOSURE, CT CABINET, AND MOUNTING STRUCTURE IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS. ELECTRIC METER FURNISHED AND INSTALLED BY THE LOCAL UTILITY. FURNISH AND INSTALL (1) 1" RGS CONDUIT WITH PULLWIRE AT 48" AFG BETWEEN UTILITY METER AND CT CABINET. COORDINATE WITH UTILITY CO.
- 20. GENERATOR POWER/LOW VOLTAGE JUNCTION BOX. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF GENERATOR AND TERMINATION OF ALL POWER AND CONTROL CONDUITS AND
- 21. ALLOTTED SPACE FOR FUTURE TRAILER MOUNTED PORTABLE GENERATOR.
- 22. FURNISH AND INSTALL (1) 4" SCHD 80 PVC CONDUIT AT 36" BELOW GRADE FOR UTILITY SERVICE CONDUCTORS. CONTRACTOR SHALL COORDINATE ROUTING WITH UTILITY CO. AND ALL EXISTING UNDERGROUND UTILITIES.
- 23. PAD-MOUNTED TRANSFORMER WILL BE INSTALLED BY UTILITY CO. COORDINATE FINAL PLACEMENT OF TRANSFORMER IN FIELD WITH UTILITY CO. CONTRACTOR SHALL PROVIDE CONCRETE PAD PER UTILITY CO. REQUIREMENTS.
- 24. LOAD BANK TERMINAL JUNCTION BOX. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF LOAD BANK AND TERMINATION OF ALL POWER AND CONTROL CONDUITS AND CONDUCTORS.
- 25. FURNISH AND INSTALL (3) 1" SCHD 80 PVC CONDUIT AT 36" BFG FOR MONITORING FROM GENERATOR TO
- 26. FURNISH AND INSTALL (4) 1" SCHD 80 PVC CONDUIT AT 36" BFG FOR ELECTRICAL CONDUCTORS FROM HUT SHELTER TERMINAL BLOCK TB-05.
- 27. FURNISH AND INSTALL (2) 4" SCHD 80 PVC CONDUIT AT 36" BFG FOR LOAD BANK POWER FEED FROM GENERATOR. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET 25 FOR CONDUCTOR SIZES.

# GRAPHIC SCALE: 1" = 20'

**ISSUE FOR BID PLANS** 

DATE OF ISSUE: 10/10/2025

### **PROJECT**

MMI - UNMANNED ILA **UTILITY BUILDING** ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

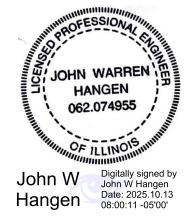
### **CLIENT**

### Middle Mile Infrastructure

### **CONSULTANT**

www.aecom.com

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive, Suite 500 Greenville, SC 29615 License Number: F-0432 1-864-234-3069 tel



### **REGISTRATION**

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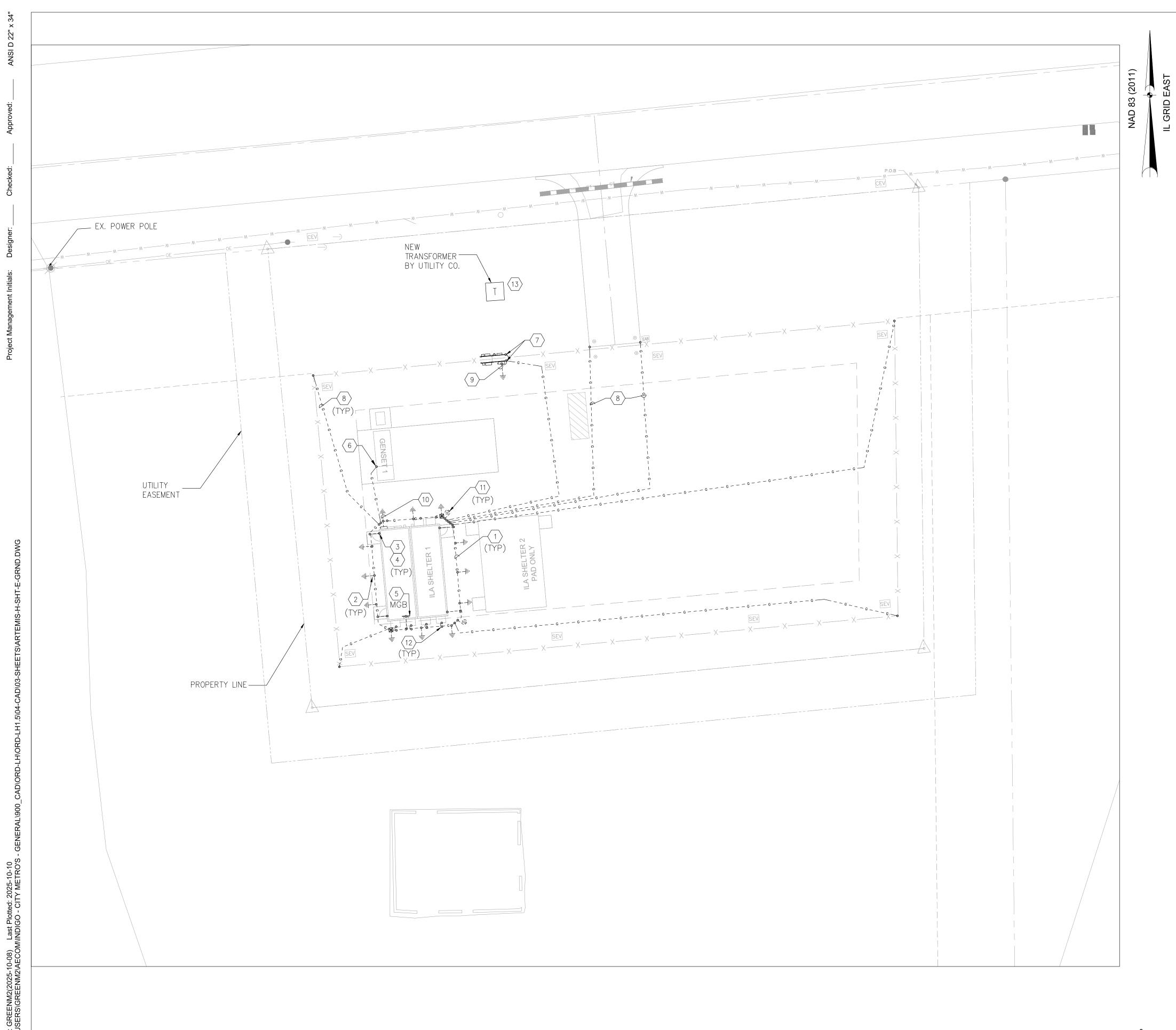
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I/R	DATE	DESCRIPTION	

### **PROJECT NUMBER**

60645418

SHEET TITLE

**ELECTRICAL SITE PLAN** 



- A. REFER TO ELECTRICAL GENERAL NOTES, SYMBOLS LEGENDS, AND ABBREVIATIONS ON SHEET 15.
- B. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET 19.
- C. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET ## FOR ADDITIONAL INFORMATION.
- D. REFER TO HUT DESIGN PACKAGE FOR ADDITIONAL GROUNDING DETAILS.
- E. THE GC SHALL PROVIDE ALL BACKFILL OF ELECTRICAL AND FIBER TRENCHES. ALL BACKFILL SHALL BE FREE OF PEAT, MARL, HIGHLY PLASTIC CLAY, OR OTHER UNSUITABLE MATERIALS SUCH AS TRASH, DEBRIS, BRUSH, OR ICE.
- F. ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL LISTED AND LABELED.
- G. THE GC IS RESPONSIBLE FOR INSTALLING ALL SITE GROUNDING AS SHOWN, UON.
- H. THE GC SHALL INSTALL ALL GROUNDING CONDUCTORS AT A MINIMUM OF 36" DEPTH BFG .
- METAL SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER NEC 250-12. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- J. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY IRREVERSIBLE MEANS (EXOTHERMIC WELDED) CONNECTIONS, UON.
- K. ALL EXTERIOR GROUNDING CONNECTIONS SHALL HAVE CORROSION INHIBITING COMPOUND APPLIED AFTER CONNECTIONS ARE MADE, SANCHEM INC. "NO-OX-ID" OR OWNER PRE-APPROVED INDUSTRY STANDARD EQUAL.
- L. ALL GROUND RING "C" TAP AND "H" TAP CONNECTIONS SHALL HAVE TAP COVERS INSTALLED.

### KEYNOTES (#)

- 1. #1/0 STRANDED TINNED COPPER GROUND RING OR BONDING CONDUCTOR.
- 2. COPPER GROUND ROD, 10'-0" L X 3/4" DIA., SPACED 10'-0" MIN. ALONG HUT SHELTER GROUND RING.
- 3. FOUNDATION REBAR TO BE GROUNDED WITH SOLID COPPER WIRE, #4 MIN. ONE LOCATION MIN.
- 4. THE HUT SHELTER HAS FOUR (4) EXTERIOR STAINLESS STEEL GROUND PADS THAT MUST BE USED FOR GROUNDING THE HUT SHELTER, USING TWO-HOLE LUG CONNECTORS.
- 5. BOND THE HUT SHELTER'S INTERIOR MASTER GROUND BAR (MGB) TO THE HUT SHELTER GROUND RING. FIELD VERIFY EXACT MGB LOCATION PRIOR TO ROUGH-IN AND CONNECTIONS. REFER TO HUT SHELTER DESIGN PACKAGE FOR ADDITIONAL DETAIL.
- 6. BOND THE GENERATOR TO THE HUT SHELTER GROUND RING.
- 7. BOND THE UTILITY AND METERING EQUIPMENT H-FRAMES TO THE HUT SHELTER GROUND RING.
- 8. BOND ALL CORNER FENCE POSTS AND GATE ENTRANCE POSTS TO THE HUT SHELTER GROUND RING.
- ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR. ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 10. HUT BUILDING GROUNDING ELECTRODE CONDUCTOR. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- FUTURE HUT SHELTER GROUND RING BONDING CONDUCTOR. LEAVE 50'-0" SLACK BONDING CONDUCTOR COILED AND BURIED 36" BFG FOR FUTURE BONDING CONNECTIONS. MARK FOR FUTURE IDENTIFICATION BY OTHERS.
- 12. BOND ALL HVAC UNITS AND VANDAL CAGES TO HUT SHELTER GROUND RING.
- 13. PROVIDE TRANSFORMER GROUNDING IN ACCORDANCE WITH UTILITY CO. REQUIREMENTS. COORDINATE WITH UTILITY FOR DELINEATION OF RESPONSIBILITIES.

# AECON

PROJECT

### MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

CLIENT

Middle Mile Infrastructure

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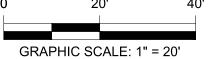
SHEET TITLE

ELECTRICAL GROUNDING PLAN

SHEET NUMBER

SIILLI NO

1 <u>ELECTRICAL GROUNDING PLAN</u> SCALE: 1" = 20'



ISSUE FOR BID PLANS

DATE OF ISSUE: 10/10/2025

ELECTRICAL CONDUIT TRACING PLAN

SCALE: 1" = 20'

GENERAL NOTES

- A. REFER TO ELECTRICAL GENERAL NOTES, SYMBOLS LEGENDS, AND ABBREVIATIONS ON SHEET 15.
- B. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET 19.
- C. REFER TO ELECTRICAL ONE-LINE DIAGRAM ON SHEET 20 FOR ADDITIONAL INFORMATION.
- D. REFER TO HUT DESIGN PACKAGE FOR ADDITIONAL GROUNDING DETAILS.
- E. THE GC SHALL PROVIDE ALL BACKFILL OF ELECTRICAL AND FIBER TRENCHES. ALL BACKFILL SHALL BE FREE OF PEAT, MARL, HIGHLY PLASTIC CLAY, OR OTHER UNSUITABLE MATERIALS SUCH AS TRASH, DEBRIS, BRUSH, OR ICE.
- F. ALL GROUND RODS SHALL BE COPPER-CLAD, 3/4" DIA. X 10'-0" L.
- G. ALL GROUND RODS SHALL BE DRIVEN UNTIL THE TOP OF THE ROD IS AT A DEPTH OF 18" BELOW FINISHED GRADE.
- H. TRACER WIRE SHALL BE #6 AWG, SOLID COPPER, 0.045MIL HMWPE ORANGE INSULATION, BURIED AT 18" BELOW GRADE.
- I. MARKER POLES, WITH ORANGE FIBER OPTIC CABLE WARNING DOME, AND BAND MARKINGS AS REQUIRED FOR ROUTE MARKER (GENERAL), INTERMEDIATE SLACK VAULT (ISV), INTERCONNECT ENTRY VAULT (IEV), OR NETWORK SPLICE VAULT (NSV) WITH LOCATE TEST STATION MARKER POLE. POLES ARE 72" LONG, AND BURIED TO 24" BELOW GRADE.
- J. PROVIDE MARKER POLES WITH BLACK BAND MARKINGS AS FOLLOWS; GENERAL NO BANDS, ISV 1 BAND, IEV - 2 BANDS, NSV - 3 BANDS. ADDITIONAL MARKER POLE IDENTIFICATION MARKINGS SHALL BE COORDINATED WITH MMI MIDWEST LLC DOC# LL.A.DR.C01.20200825.

### KEYNOTES (#)

- 1. TRACER WIRE, REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
- 2. GROUND ROD, REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
- 3. FIBER OPTIC MARKER POLE FOR TRACER CABLE. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
- 4. FIBER OPTIC MARKER POLE WITH LOCATE TEST POINT STATION. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.

AECON

**PROJECT** 

MMI - UNMANNED ILA UTILITY BUILDING ORD-LH1.5

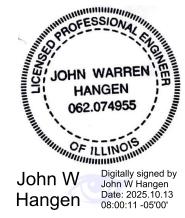
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CLIENT

Middle Mile Infrastructure

CONSULTANT

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REGISTRATION

NOT FOR CONSTRUCTION

SSUE/REVISION		
DATE	DESCRIPTION	

PROJECT NUMBER

60645418

SHEET TITLE

ELECTRICAL CONDUIT TRACING PLAN

SHEET NUMBER

18

0 20'
GRAPHIC SCALE:

ISSUE FOR BID PLANS

DATE OF ISSUE: 10/10/2025

### <u>DIVISION 26 - ELECTRICAL</u>

### SECTION 260499 - BASIC ELECTRICAL REQUIREMENTS

1.1. THE FOLLOWING ARE MINIMUM REQUIREMENTS, AS THEY APPLY TO THIS PROJECT, AND SHALL GOVERN, EXCEPT THAT BUILDING LAWS AND/OR DRAWINGS SHALL GOVERN WHEN THEIR REQUIREMENTS ARE IN

### 2. DRAWINGS AND SPECIFICATIONS

- 2.1. THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH PROVISIONS CONTAINED HEREIN AND THE SUBMISSION OF HIS BID SHALL BE CONSTRUED AS INDICATING SUCH
- 2.2. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND PIPING. DIMENSIONS GIVEN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. DRAWINGS MAY NOT BE SCALED TO OBTAIN EXACT DIMENSIONS.
- 2.3. THE EXACT LOCATIONS OF APPARATUS, FIXTURES, EQUIPMENT AND CONDUITS SHALL BE ASCERTAINED FROM THE OWNER'S REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY SHOULD THE CONTRACTOR FAIL TO ASCERTAIN SUCH LOCATIONS, THE WORK SHALL BE CHANGED AT HIS OWN EXPENSE WHEN SO ORDERED BY THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT UP TO THE TIME OF INSTALLATION, WITHOUT ADDITIONAL COST.
- 2.4. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND SUPPLIED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE PROVIDED BY THIS CONTRACTOR
- 2.5. THE WORK REQUIRED UNDER THESE SPECIFICATIONS INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO PROVIDE LIGHTING AND POWER SYSTEMS, SERVICE ENTRANCES, MOTOR CONTROLS AND CONNECTIONS, BRANCH CIRCUITING, FEEDERS, PANELS, FIXTURES, WIRING DEVICES, AND OTHER ITEMS SHOWN ON THE PLANS OR SPECIFIED.
- 2.6. WHEN THE SPECIFICATION OF AN ITEM IS NOT IDENTIFIED WITH A PARTICULAR AREA, THE ITEM SHALL PERTAIN TO ALL AREAS.
- 2.7. THIS CONTRACTOR SHALL FURNISH SUCH LABOR AND MATERIALS AS HEREINAFTER SPECIFIED AND AS REQUIRED TO COMPLETE ALL ELECTRICAL CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT AND OWNER'S EQUIPMENT AS SHOWN AND/OR SPECIFIED.

### 3. EXAMINATION OF SITE

BIDDER IS TO VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND SATISFY HIMSELF AS TO THE NATURE AND SCOPE OF WORK. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT OF MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.

### 4. DEFINITIONS

- "INSTALL" SHALL MEAN TO PLACE, FIX IN POSITION, SECURE, ANCHOR, WIRE, ETC., INCLUDING NECESSARY APPURTENANCES AND LABOR SO THAT EQUIPMENT OR INSTALLATION WILL FUNCTION AS SPECIFIED AND
- 4.2. "FURNISH" SHALL MEAN TO PURCHASE AND SUPPLY EQUIPMENT OR COMPONENTS.
- 4.3. "PROVIDE" SHALL MEAN TO "FURNISH AND INSTALL".
- 4.4. "OR APPROVED EQUAL" SHALL MEAN EQUAL IN TYPE, DESIGN, QUALITY, STYLE, COLOR, ETC., AS DETERMINED BY THE ENGINEER/ARCHITECT.

### 5. INTERFERENCES

5.1. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN HIS WORK AND THAT OF ANY OTHER CONTRACTOR TO THE OWNER OR ARCHITECT AS SOON AS THEY ARE DISCOVERED. THE OWNER OR ARCHITECT WILL DETERMINE WHICH EQUIPMENT SHALL BE RELOCATED REGARDLESS OF WHICH WAS FIRST INSTALLED, AND HIS DECISION SHALL BE FINAL.

- 6.1. ALL WORK SHALL BE INSTALLED IN A PRACTICAL AND WORKMANLIKE MANNER BY COMPETENT WORKMEN. SKILLED IN THEIR BRANCH OF THE TRADE.
- 6.2. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND SHALL BE THE BEST OF THEIR SEVERAL KINDS.
- 6.3. ALL MATERIAL AND EQUIPMENT SHALL MEET OR EXCEED STANDARDS SPECIFIED BY U.L., NEMA, ANSI AND IEEE WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED.
- 6.4. FROM TIME-TO-TIME DURING THE OPERATION AND AT THE COMPLETION THEREOF, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY HIS WORK AND HE SHALL LEAVE THE AREA OF THE OPERATION BROOM CLEAN.
- 6.5. ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BEAR THE UNDERWRITER'S LABORATORIES (U.L.) LABEL.

### SUPPORTS

7.1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS OR HANGERS REQUIRED TO INSTALL OR MOUNT PANELBOARDS, SWITCHBOARDS, OR ANY ELECTRICAL EQUIPMENT CALLED FOR ON THE PLANS, IN THESE SPECIFICATIONS, OR AS NECESSARY TO MOUNT ANY PIECE OF ELECTRICAL EQUIPMENT, MATERIAL, OR DEVICE. CONDUIT, FIXTURES, OR ANY ELECTRICAL DEVICES SHALL NOT BE SUPPORTED FROM STEEL DECK, BRIDGING, CEILING, OR CEILING SUPPORT WIRES.

### 8. TEMPORARY CONSTRUCTION POWER AND LIGHTING

8.1. SUFFICIENT TEMPORARY POWER, DURING CONSTRUCTION, FOR HEATING, LIGHTING, APPLIANCES, OR MOTORIZED PORTABLE EQUIPMENT SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

### 9. CODES, LAWS, PERMITS AND INSPECTIONS

- 9.1. INSTALL ALL WORK IN FULL ACCORDANCE WITH CODES, RULES AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITY, AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES. THIS SHALL INCLUDE ALL REQUIREMENTS OF THE CITY BUILDING CODE, REGULATIONS OF THE STATE DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA, ADA (AMERICANS WITH DISABILITIES ACT), AND THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AS INTERPRETED BY THE LOCAL INSPECTION DIVISION. ALL THESE CODES, RULES, AND REGULATIONS ARE HEREBY INCORPORATED INTO THIS SPECIFICATION.
- 9.2. COMPLY WITH SPECIFICATION REQUIREMENTS WHICH ARE IN EXCESS OF CODE REQUIREMENTS AND NOT IN CONFLICT WITH SAME.
- 9.3. THE CONTRACTOR SHALL SECURE ALL PERMITS AND CERTIFICATES OF INSPECTION INCIDENTAL TO THE WORK, REQUIRED BY FOREGOING AUTHORITIES. ALL SUCH CERTIFICATES SHALL BE DELIVERED TO THE OWNER IN DUPLICATE, BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED. THE CONTRACTOR SHALL PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREWITH.

### 10. FIELD CHANGES (AS-BUILT DRAWINGS)

10.1. KEEP ONE (1) SET OF WORKING DRAWINGS AND SHOP DRAWINGS AT THE JOB SITE FOR SOLE PURPOSE OF RECORDING ALL CHANGES MADE DURING CONSTRUCTION. AFTER COMPLETION OF THE WORK AND BEFORE REQUESTING FINAL PAYMENT, THE ABOVE MENTIONED DRAWINGS SHALL BE DELIVERED TO THE

### 11. LABELING AND NAMEPLATES

- 11.1. PERMANENTLY LABEL ALL PANELBOARDS AND SAFETY SWITCHES INDICATING EQUIPMENT OR PANELS AND AREAS WHICH THEY SERVE.
- 11.2. PANELS SHALL BE LABELED AS SHOWN ON DRAWINGS.
- 11.3. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL IDENTIFICATION FOR PULL OR JUNCTION BOXES FURNISHED BY HIM.
- 11.4. IDENTIFY AS TO USE ON FACE OF EQUIPMENT BY MEANS OF LAMINATED BLACK AND WHITE PHENOLIC LABEL WITH 3/8" LETTERS ENGRAVED THROUGH BLACK TO WHITE.

### 11.5. MATERIALS

11.5.A. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, WHITE LETTERS ON BLACK BACKGROUND.

### 11.6. INSTALLATION

- 11.6.A. DEGREASE AND CLEAN SURFACES TO RECEIVE NAMEPLATES AND TAPE LABELS.
- 11.6.B. INSTALL NAMEPLATES AND TAPE LABELS PARALLEL TO EQUIPMENT LINES.
- 11.6.C. SECURE NAMEPLATES TO EQUIPMENT FRONTS USING SCREWS, RIVETS OR ADHESIVE. SECURE NAMEPLATES TO INSIDE FACE OF RECESSED PANELBOARD DOORS IN FINISHED LOCATIONS.
- 11.6.D. MARK EVERY JUNCTION OR PULL BOX COVER PLATES WITH THE CIRCUIT NUMBER(S) OF ALL WIRES CONTAINED THEREIN.

### 11.7. WIRE INSTALLATION

NFUTRAL

GROUND

- 11.7.A. PROVIDE WIRE MARKERS ON EACH CONDUCTOR AT TERMINAL STRIPS AND AT FINAL LINE AND LOAD CONNECTIONS. IDENTIFY WITH BRANCH CIRCUIT OR FEEDER NUMBER OF POWER AND LIGHTING CIRCUITS, AND WITH CONTROL WIRE NUMBER AS INDICATED ON EQUIPMENT MANUFACTURER'S SHOP DRAWINGS FOR CONTROL WIRING OR AS DRAWINGS INDICATE.
- 11.7.B. ALL WIRES SHALL BE COLOR CODED. COLOR CODE BRANCH CIRCUIT WIRING AS FOLLOWS: THREE-PHASE SYSTEM120/208V

PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN
THREE-PHASE SYSTEM <u>27</u>	7/480V
PHASE A	BROWN
PHASE B	ORANGE
PHASE C	YFLLOW

SWITCHED WIRES: OTHER THAN COLORS LISTED ABOVE TRAVELERS BETWEEN 3-WAY SWITCHES: PURPLE INSULATED GROUND: GREEN WITH YELLOW STRIPES

GRAY

GREEN

### 12. WARRANTY

12.1. IN ADDITION TO WARRANTIES OF EQUIPMENT BY MANUFACTURER OF SAME, THIS CONTRACTOR SHALL ALSO WARRANTY EQUIPMENT PROVIDED BY HIM AND SHALL BE HELD FOR A PERIOD OF ONE (1) YEAR TO MAKE GOOD ANY DEFECTS IN MATERIAL AND WORKMANSHIP OCCURRING DURING THIS PERIOD, AT HIS SOLE EXPENSE. THIS ONE (1) YEAR PERIOD SHALL START FROM THE DATE OF FINAL ACCEPTANCE BY

### 13. SCOPE OF WORK

- 13.1. FURNISH ALL LABOR AND MATERIAL NECESSARY TO COMPLETE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS, SPECIFIED HEREIN OR REQUIRED TO COMPLETE THE CONSTRUCTION OF THE BUILDING AS SHOWN.
- 13.2. THE LISTING HEREIN OF ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRED TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR (UNLESS NOTED TO BE SUPPLIED BY OTHERS) SHALL BE OF QUALITY OR SUBJECT TO QUALIFICATIONS AS NOTED. EACH OPERATION SHALL BE PERFORMED ACCORDING TO STANDARD PRACTICE, MANUFACTURER'S INSTRUCTIONS, AND CONDITIONS STATED, PROVIDING, THEREFORE, ALL NECESSARY LABOR, EQUIPMENT AND INCIDENTALS.
- 13.3. THE ELECTRICAL CONTRACTOR SHALL SCHEDULE HIS WORK TO CONFORM TO THE PROGRESS OF THE OTHER TRADES AND CONTRACTORS EMPLOYED ON THIS PROJECT.
- 13.4. THE ELECTRICAL WORK SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:
- 13.4.A. DEMOLITION WORK AS REQUIRED.
- 13.4.B. COMPLETE POWER DISTRIBUTION SYSTEMS INCLUDING PANELS, AS SHOWN ON PLANS.
- 13.4.C. COMPLETE BRANCH CIRCUIT WIRING SYSTEM.
- 13.4.D. TEMPORARY ELECTRIC SERVICE AS REQUIRED FOR CONSTRUCTION.
- 13.4.E. TESTING OF ALL ELECTRICAL EQUIPMENT.

### 14. MANDATORY SHOP DRAWINGS

- 14.1. SUBMIT A MINIMUM OF FIVE (5) COPIES OF ALL REQUIRED ELECTRICAL SHOP DRAWINGS.
- 14.2. SHOP DRAWINGS SHALL BE SUBMITTED FOR:
- 14.2.A. PANELBOARDS, GEAR, ETC.
- 14.2.B. ALL WIRING DEVICES
- 14.2.C. GROUNDING EQUIPMENT

### END OF SECTION - 260499

### SECTION 260500 - BASIC MATERIALS AND METHODS

### CONDUIT

- 1.1. ALL WIRE SHALL BE RUN IN ACCORDANCE WITH THE APPLICABLE CODES IN CORROSION RESISTANT, RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE SPECIFICALLY
- 1.1.A. CONDUIT BELOW SLAB, EXPOSED TO WEATHER, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
- CARLON PVC, TYPE 80 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED UNDERGROUND 1.1.B. BELOW FLOOR SLAB OR PAVEMENT IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC SCHEDULE 80 CONDUIT SHALL NOT BE RUN IN OR ABOVE FIRST FLOOR SLAB. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
- 1.1.C. A GROUND CONDUCTOR SHALL BE SUPPLIED IN ALL CONDUITS AND RACEWAYS. THE GROUND CONDUCTOR SHALL BE COPPER, AND SIZED PER THE NEC OR AS SHOWN ON DRAWING, WHICHEVER
- 1.2. CONDUIT AND EMT SHALL BE DELIVERED TO THE BUILDING IN 10-FOOT LENGTHS AND EACH LENGTH SHALL HAVE THE U.L. LABEL.
- 1.3. EMT CONNECTORS AND COUPLERS SHALL BE RAIN TIGHT TYPE MADE OF DIE CAST AS MANUFACTURED BY THOMAS & BETTS, STEEL CITY, OR APPLETON. BENDS AND OFFSETS SHALL BE MADE WITH A HICKEY OR POWER BENDER WITHOUT KINKING OR DESTROYING THE SMOOTH BORE OF THE CONDUIT. PARALLELED CONDUITS SHALL RUN STRAIGHT AND TRUE WITH OFFSETS UNIFORM AND SYMMETRICAL. CONDUIT TERMINALS AT BOXES AND CABINETS SHALL BE RIGIDLY SECURED WITH LOCKNUTS AND BUSHINGS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND LOCAL ELECTRICAL CODE. INSULATED BUSHINGS SHALL BE USED ON ALL CONDUIT 1-1/4" TRADE SIZE AND LARGER.
- 1.4. CONDUIT SHALL BE SECURELY FASTENED IN PLACE AT NO MORE THAN 8-FOOT CENTERS, AND HANGERS,

- SUPPORTS OR FASTENINGS SHALL BE PROVIDED AT EACH CONDULET, ELBOW AND AT THE END OF EACH STRAIGHT RUN, TERMINATING AT A BOX OR CABINET. CONDUIT SHALL NOT BE SUSPENDED FROM THE CEILING OR CEILING SUSPENSION WIRES.
- 1.5. HORIZONTAL AND VERTICAL CONDUIT RUNS SHALL BE SUPPORTED BY ONE-HOLE MALLEABLE STRAPS OR OTHER APPROVED METAL DEVICE WITH SUITABLE BOLTS, EXPANSION SHIELD OR BEAM CLAMP FOR MOUNTING TO BUILDING STRUCTURE OR SPECIAL BRACKETS. CONDUIT SHALL BE SUPPORTED FROM STRUCTURAL STEEL OR JOIST AND INDEPENDENT OF OTHER PIPING. DO NOT SUPPORT CONDUIT FROM METAL ROOF DECK OR ANY OTHER SUPPORT DEVICE OF ANOTHER TRADE.
- 1.6. ARMORED CABLE (BX) OR NONMETALLIC SHEATHED CABLE (ROMEX) SHALL NOT BE USED.
- 1.7. NO ALUMINUM CONDUIT SHALL BE USED.
- 1.8. ONLY SHORT RUNS OF FLEXIBLE METAL CONDUIT NOT OVER 6' IN LENGTH AND HAVING A GROUND CONDUCTOR, SHALL BE USED FOR TERMINAL CONNECTIONS TO MOTORS AND ALSO FOR ELECTRICAL EQUIPMENT WHERE IT IS NOT PRACTICAL TO MAKE FINAL CONNECTION WITH RIGID CONDUIT. FLEXIBLE CONDUIT EXPOSED TO WEATHER SHALL BE SEALTITE.
- 1.9. EXPOSED CONDUIT AND CONDUIT IN CEILING SPACE SHALL BE RUN PARALLEL TO THE BUILDING STRUCTURE.
- 1.10. CONDUIT SYSTEM SHALL CONFORM TO ALL THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC/NFPA-70) AND LOCAL CODES.

### 2. CONDUCTORS

- 2.1. SIZES OF CONDUCTORS FOR FEEDERS ARE GIVEN ON THE DRAWINGS AND NO WIRE SMALLER THAN #12 GAUGE SHALL BE USED FOR BRANCH LIGHTING OR POWER CIRCUITS. ALL WIRING SHALL HAVE THE U.L. LABEL AND BE OF 98% CONDUCTIVITY COPPER. <u>ALUMINUM WIRE OR ALUMINUM CABLE IS NOT</u>
- 2.1.A. THE GAUGE OF ALL WIRE SHALL BE IN ACCORDANCE WITH B&S STANDARD.
- 2.2. ALL WIRE AND CABLE FOR SMALL POWER CIRCUITS SHALL HAVE "NEC" TYPE "THHN/THWN" 600-VOLT
- 2.3. WIRE AND CABLE ABOVE #8 GAUGE SHALL BE STRANDED TYPE "THWN" INSULATED FOR 600-VOLTS.
- 2.4. FOR SPECIAL CONDITIONS, AS PROVIDED BY THE NEC. TYPE "R.H.H., A.V.A." OR OTHER REQUIRED INSULATION SHALL BE USED.

### GROUNDING

- 3.1. THIS CONTRACTOR SHALL PROVIDE, INSTALL AND CONNECT A COMPLETE SYSTEM OF GROUNDING FOR ALL EQUIPMENT AND STRUCTURES. A GOOD MECHANICAL AND ELECTRICAL CONNECTION SHALL BE MADE WITH APPROVED GROUNDING CONNECTORS.
- 3.2. ELECTRICAL SYSTEM AND EQUIPMENT GROUNDS SHALL COMPLY WITH THE NEC AS WELL AS ALL LOCAL AND STATE CODES AND REGULATIONS.
- 3.3. PANELS, CONDUIT SYSTEMS, MOTOR FRAMES, LIGHTING FIXTURES AND OTHER EQUIPMENT THAT ARE PART OF THIS INSTALLATION SHALL BE SECURELY GROUNDED BOTH MECHANICALLY AND ELECTRICALLY IN
- ACCORDANCE WITH ALL CODES. 3.4. SYSTEM GROUND SHALL NOT EXCEED A MAXIMUM OF TEN (10) OHMS RESISTANCE. VERIFY EXISTING GROUNDING SYSTEM AND ADD ADDITIONAL GROUNDING AS REQUIRED TO MEET THE ABOVE SPECIFIED
- 3.5. A GROUND CONDUCTOR SHALL BE SUPPLIED IN ALL CONDUIT. IT SHALL BE INSULATED, STRANDED, ANNEALED COPPER CONDUCTOR.

### 4. TOGGLE SWITCHES AND RECEPTACLES

- 4.1. ALL SWITCHES AND RECEPTACLES SHALL BE HEAVY-DUTY TYPE, WHITE IN COLOR (EXCEPT SPECIAL CONFIGURATIONS NOT AVAILABLE IN WHITE).
- 4.2. ACCEPTABLE DEVICE MANUFACTURERS ARE COOPER WIRING, HUBBELL, LEVITON, OR PASS & SEYMOUR/LEGRAND. THIS BASIS OF DESIGN IS LEVITON.

- 4.3.A. SINGLE POLES #1221, DOUBLE POLE #1222 AND THREE (3) WAY SWITCHES #1223 SHALL BE RATED 20-AMPERE, 120/277 VOLTS.
- 4.3.B. SWITCHES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR TO CENTERLINE.
- 4.4. DUPLEX RECEPTACLES SHALL BE 20-AMPERE AT 125-VOLTS, #5362. MOUNT AT 18" ABOVE FLOOR TO CENTERLINE OR AS NOTED ON PLANS.
- 4.5. OUTDOOR RECEPTACLES SHALL BE WEATHERPROOF WITH 'WHILE-IN-USE" SPRING COVERS (PASS & SEYMOUR# WIUCAST1 PLATES OR APPROVED EQUAL).

- 5.1. UNLESS OTHERWISE NOTED, ALL PLATES IN FINISHED AREAS FOR WALL SWITCHES, RECEPTACLES AND
- TELEPHONE OUTLETS SHALL BE BRUSHED STAINLESS STEEL. 5.2. ALL PLATES SHALL HAVE FULL CONTACT WITH THE WALL AND BOXES. EDGES SHALL BE PARALLEL TO THE FINISHED WALLS AND CEILINGS.

### 6. OUTLETS

- 6.1. LOCATIONS OF OUTLETS ARE SHOWN APPROXIMATELY ON THE DRAWINGS. CONTRACTOR SHALL REFER TO THE SHOP DRAWINGS OF THE MANUFACTURERS OF THE EQUIPMENT FOR THE EXACT LOCATION OF OUTLETS FOR FIXTURES, MOTORS, HEATERS AND THEIR RESPECTIVE CONTROL DEVICES.
- 6.2. OUTLET BOXES FOR CONCEALED WORK SHALL BE PRESSED STEEL BOXES, GALVANIZED AND NOT LESS THAN #12 GAUGE, EXCEPT FLOOR BOXES WHICH SHALL BE CAST IRON. CEILING BOXES SHALL BE FOUR INCHES (4") ROUND AND OCTAGONAL WITH LUGS AND SCREWS FOR BACK PLATES. WALL OUTLETS SHALL BE FOUR INCHES (4") SQUARE BY 1-1/2" DEEP, SINGLE OR DOUBLE COVER, EXCEPT GANG BOXES OF SIMILAR DEPTH SHALL BE USED AT LOCATIONS REQUIRING MORE THAN 2-GANG.
- 6.3. OUTLETS ON THE EXTERIOR OF THE BUILDING SHALL BE FLUSH WEATHERPROOF TYPE.
- 6.4. ALL OUTLETS SHALL BE FIRMLY SECURED IN PLACE. OUTLETS IN FINISHED AREAS SHALL BE FLUSH WITH FINISHED CEILING OR WALLS.
- 6.5. ALL OUTLET LOCATIONS IN FLOOR SHALL BE VERIFIED WITH OWNER'S REPRESENTATIVE BEFORE POURING OF CONCRETE FLOOR.

### 7. BRANCH CIRCUIT WIRING

- 7.1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND CONNECT A COMPLETE SYSTEM OF PANELS, CONDUITS, WIRE FITTINGS, BOXES, SUPPORTS AND ALL OTHER MISCELLANEOUS MATERIALS REQUIRED FOR EQUIPMENT AS INDICATED ON THE PLANS AND READY FOR OPERATION BY THE OWNER.
- 7.2. ALL CIRCUITS SHALL BE COLOR CODED.

### END OF SECTION - 260500

### SECTION 262000 - ELECTRICAL SERVICE AND DISTRIBUTION

METERING AND DISTRIBUTION EQUIPMENT ACCORDINGLY.

- SECONDARY SERVICE 1.1. ELECTRICAL SERVICE SHALL BE SECONDARY, AS SHOWN ON PLANS WITH GROUNDED AND NEUTRAL AND SECONDARY METERING. PROVIDE ALL NECESSARY EQUIPMENT AND MATERIAL AND INSTALL THE SERVICE,
- 1.2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO SECURE COMPLETE DETAILS FOR THE CONNECTION TO THE EXISTING PRIMARY TRANSFORMER.

- 1.3. ELECTRICAL CONTRACTOR SHALL PROVIDE SECONDARY SERVICE CABLES AND CONDUITS FROM THE TRANSFORMER TO MAIN SERVICE AS INDICATED ON DRAWINGS.
- 1.4. SITE ELECTRICAL SHALL BE COORDINATED WITH LOCAL POWER COMPANY BY ELECTRICAL CONTRACTOR.
- 1.5. PROVIDE COORDINATION, VIA THE GENERAL CONTRACTOR, OF THE SITE ELECTRICAL CONTRACTOR FOR THE FINAL LOCATIONS, PENETRATIONS, AND SERVICE TIE-INS ASSOCIATED WITH SECONDARY POWER SERVICE ENTRANCE CONDUITS.

### 2. SAFETY SWITCHES

### 2.1. GENERAL

2.1.A. SWITCH SHALL BE HEAVY DUTY TYPE WITH VISIBLE, QUICK MAKE, QUICK BREAK BLADES. SWITCHES SHALL BE U.L. LISTED AND CONFORM TO NEMA STANDARDS.

### 2.2. ENCLOSURES

- STEEL ENCLOSURES WITH OPERATING HANDLE AT SIDE. NEMA 1 FOR GENERAL INDOOR USE, NEMA 3R FOR GENERAL OUTDOOR USE AND NEMA 4 (STAINLESS STEEL) WHERE INDICATED ON THE DRAWINGS. MANUFACTURER'S STANDARD ENAMEL FINISH.
- 2.2.B. THE ENCLOSURE SHALL BE INTERLOCKED WITH THE SWITCH HANDLE SUCH THAT THE ENCLOSURE DOOR CANNOT BE OPENED WITH SWITCH IN THE "ON" POSITION. SWITCH HANDLE SHALL BE CAPABLE OF BEING PADLOCKED IN THE "OFF" POSITION.

### 2.3. RATINGS

- 2.3.A. SAFETY SWITCHES SHALL BE RATED FOR THE CONTINUOUS CURRENT AND VOLTAGE INDICATED ON THE DRAWINGS. WHERE USED IN CONJUNCTION WITH MOTOR CIRCUITS, UNITS SHALL BE HORSEPOWER RATED FOR THE SIZE MOTOR INDICATED.
- SWITCHES USED AS SERVICE ENTRANCE EQUIPMENT SHALL BE U.L. LISTED FOR USE AS SERVICE **EQUIPMENT**

### 2.4. POLES

SAFETY SWITCHES SHALL HAVE THE NUMBER OF POLES INDICATED ON THE DRAWINGS, BUT NOT FEWER THAN ONE (1) POLE FOR EACH UNGROUNDED CONDUCTOR TO BE OPENED.

### 2.5. FUSES

- 2.5.A. WHERE INDICATED, SAFETY SWITCHES SHALL BE FUSED IN EACH UNGROUNDED LEG IN ACCORDANCE WITH THE REQUIREMENTS OF THE SECTION ENTITLED "FUSES".
- 2.6. SWITCH SHALL BE SQUARE -D # H366NR (NO EXCEPTIONS)

### 3. DISTRIBUTION PANELBOARDS (INCLUDING POWER PANELS)

- 3.1. POWER AND DISTRIBUTION PANELBOARDS SHALL BE SUITABLE FOR VOLTAGES, PHASE, AND WIRES INDICATED ON PLANS AND/OR RISER DIAGRAMS. PANELBOARDS SHALL HAVE SOLID NEUTRAL, COPPER BUSS, DEAD FRONT WITH LUGS IN THE MAINS, FUSES AND HEAVY-DUTY SWITCHES IN BRANCH CIRCUITS OF SIZE AND NUMBER INDICATED ON THE PLANS. ALL LUGS SHALL BE U.L. APPROVED CU/AL TYPE.
- 3.2. BREAKERS SHALL BE BOLTED TO BUS TYPE, QUICK-MAKE, QUICK-BREAK AND CAPABLE OF INTERCHANGING 1-, 2- OR 3-POLE UNITS. MULTIPLE UNITS SHALL BE COMMON TRIP.
- PANELBOARDS SHALL BE PROVIDED WITH SPARES AND FULL PROVISIONS FOR FUTURE BREAKERS AS

3.4. PANELBOARDS SHALL BE MANUFACTURED AS A COMPLETE UNIT BY EATON, GENERAL ELECTRIC, SIEMENS,

OR SQUARE -D, NOT AN ASSEMBLY OF PARTS SECURED FROM A SUPPLY HOUSE. 3.5. PANELBOARDS AND SWITCHES SHALL BE IDENTIFIED FOR "USAGE".

### 4. GENERAL (FOR ALL PANELBOARDS: INCLUDING POWER PANELS)

- 4.1. METAL FRAMED CARD HOLDERS WITH TYPEWRITTEN CIRCUIT DIRECTORY MUST BE PROVIDED FOR EACH PANELBOARD. DIRECTORY SHALL BE CLEAR AND DESIGNATION SHALL MATCH IDENTIFICATION ON EQUIPMENT. PANELBOARDS (SWITCHBOARD, DISTRIBUTION, POWER PANELS AND LIGHTING PANELS) SHALL BE IDENTIFIED BY A LABEL ON THE SWITCH AND/OR PANEL DOOR. PROVIDE ENGRAVED LAMINATED PHENOLIC NAMEPLATES WITH 3/8" LETTERS ENGRAVED THROUGH BLACK TO WHITE.
- 4.2. ALL PANELBOARDS, SAFETY SWITCHES, STARTERS AND IN GENERAL, ALL EQUIPMENT REQUIRING LUGS
- SHALL BE EQUIPPED WITH SOLDERLESS TYPE U.L. APPROVED LUGS. 4.3. PROVIDE ALL NECESSARY UNISTRUT, CHANNEL, BACKING AND SUPPORTS TO MOUNT SWITCHBOARD AND PANELBOARDS SECURELY IN PLACE.

### 5. FUSES

- 5.1. THIS CONTRACTOR SHALL REPLACE ALL FUSES BLOWN DURING CONSTRUCTION AND TESTING AND SHALL PROVIDE A COMPLETE SET OF FUSES IN ALL FUSE HOLDERS, SWITCHES, PANELS AND ALL OTHER DEVICES
- 5.2. FUSES IN SWITCHBOARD AND MAIN DISTRIBUTION PANELBOARDS IN ELECTRIC ROOM SHALL BE AS INDICATED ON PLANS.
- 5.2.A. PROVIDE LABEL IN EACH SWITCH INDICATING FUSE TYPE, AMPERE RATING AND INTERRUPTING RATING.
- 5.2.B. REPLACE ALL BLOWN FUSES UP TO FINAL ACCEPTANCE OF JOB. 5.2.C. PROVIDE AND PLACE IN A WALL MOUNTED METAL CABINET IN ELECTRICAL ROOM A SPARE SET OF THREE (3) FUSES FOR EACH SIZE AND TYPE FUSE USED IN SWITCHBOARD IN ELECTRICAL ROOM.

THE CABINET SHALL BE SIMILAR TO BUSSMAN SPARE FUSE CABINET #SFC, WITH DOOR, LOCKING

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5.3. FUSES SHALL BE MERSEN # TRS600R (NO EXCEPTIONS).

HANDLE, INTERNAL SHELF AND FUSE STOCK LIST.

### END OF SECTION - 262000

### **PROJECT**

MMI - UNMANNED ILA **UTILITY BUILDING** ORD-LH1.5

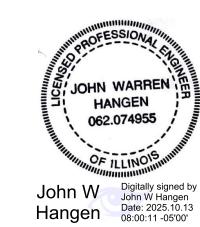
PARCEL ID: 14-19-200-019 44W527 ROUTE 30 SUGAR GROVE, IL 60554

### CLIENT

### Middle Mile Infrastructure

### CONSULTANT

AECOM Technical Services of South Carolina, Inc. 10 Patewood Drive. Suite 500 Greenville, SC 29615 License Number: F-0432 1-864-234-3069 tel www.aecom.com



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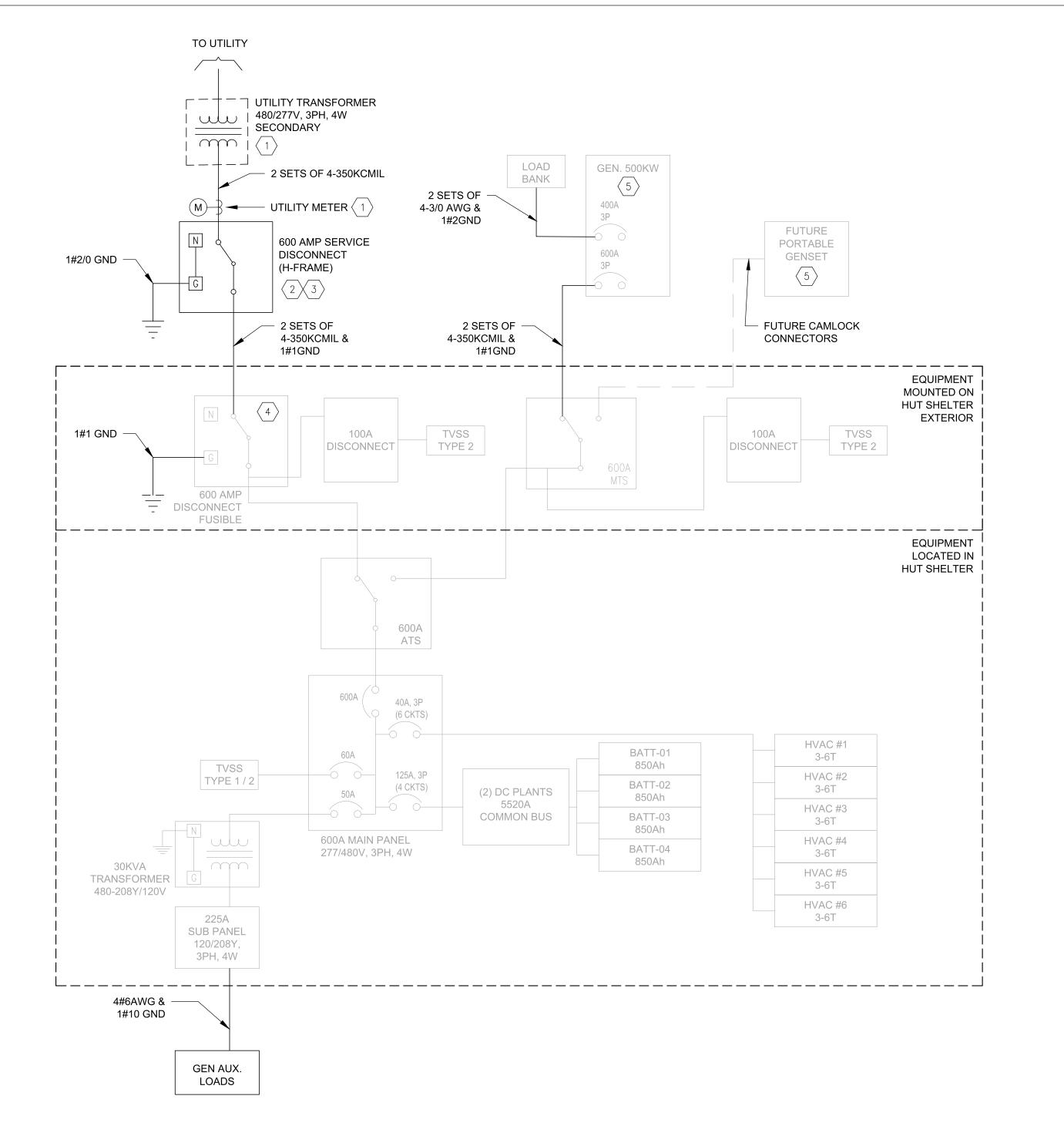
### **PROJECT NUMBER**

60645418

SHEET TITLE

**SHEET NUMBER** 

**ELECTRICAL SPECIFICATIONS** 



- A. REFER TO ELECTRICAL GENERAL NOTES, SYMBOLS LEGENDS, AND ABBREVIATIONS ON SHEET 15.
- B. REFER TO ELECTRICAL SITE PLAN ON SHEET 16 FOR EQUIPMENT LAYOUT AND CONDUIT SIZES.
- C. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET 19.
- D. BLACK (DARK) LINES INDICATE CONTRACTOR PROVIDED EQUIPMENT.
- E. LIGHT (HALFTONE) LINES INDICATE OWNER FURNISHED EQUIPMENT.
- F. ELEMENTS WITHIN THE DASHED OUTLINE SHOULD BE PROVIDED WITH THE HUT SHELTER SHIPMENT AND ARE SHOWN FOR REFERENCE ONLY. THESE ELEMENTS ARE INSTALLED INSIDE OR ON THE HUT SHELTER; SHOWN WITHIN THE DASHED OUTLINE FOR GROUPING CLARITY PURPOSES ONLY. REFER TO THE META-VEGA DRAWING PACKAGE FOR CONDUIT SIZES, CONDUCTOR SIZES, PANEL SCHEDULES AND ADDITIONAL INFORMATION.
- G. THE HUT SHELTER ELECTRICAL SYSTEM IS RATED AT 65,000 A.I.C. IF HIGHER RATINGS ARE REQUIRED IT IS THE RESPONSIBILITY OF THE SITE CONTRACTOR TO MEET SUCH REQUIREMENTS.
- H. CONTRACTOR SHALL PROVIDE ARC FLASH STUDY AND POST INCIDENT ENERGY ON ALL EQUIPMENT REQUIRES BY NFPA 70E.
- I. ALL LUGS THAT HOLD MORE THAN ONE WIRE SHALL BE LISTED FOR MULTI-BARRELL CONNECTIONS.
- J. ALL CONDUCTORS SHALL BE COPPER.
- K. THE GENERATOR SYSTEMS SHOWN ARE FOR REFERENCE ONLY. REFER TO THE META VEGA DRAWING PACKAGE FOR GENERATOR ADDITIONAL INFORMATION AND REQUIREMENTS.

### KEYNOTES (#)

- CONTRACTOR SHALL COORDINATE WITH THE UTILITY CO. FOR TRANSFORMER CONNECTION AND METERING REQUIREMENTS AND DELINEATION OF WORK. REFER TO GENERAL UTILITY CO. COORDINATION NOTES ON SHEET 15 AND ELECTRIC UTILITY METER NOTE ON SHEET 16 FOR ADDITIONAL REQUIREMENTS AND INFORMATION.
- 2. LABEL SERVICE ENTRANCE DISCONNECT WITH RED TAG.
- 3. NEUTRAL-TO-GROUND BOND SHALL ONLY BE MADE IN THE H-FRAME SERVICE DISCONNECT.
- 4. SERVICE RATED DISCONNECT SWITCH SHIPPED WITH HUT SHELTER SHALL NOT BE USED FOR UTILITY SERVICE CONNECTION. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT NO NEUTRAL-TO-GROUND BOND IS TERMINATED IN THE DISCONNECT.
- NEUTRAL-TO-GROUND BOND SHALL NOT BE MADE AT THE GENERATOR MAIN CIRCUIT BREAKER DISCONNECTING MEANS.

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**PROJECT** 

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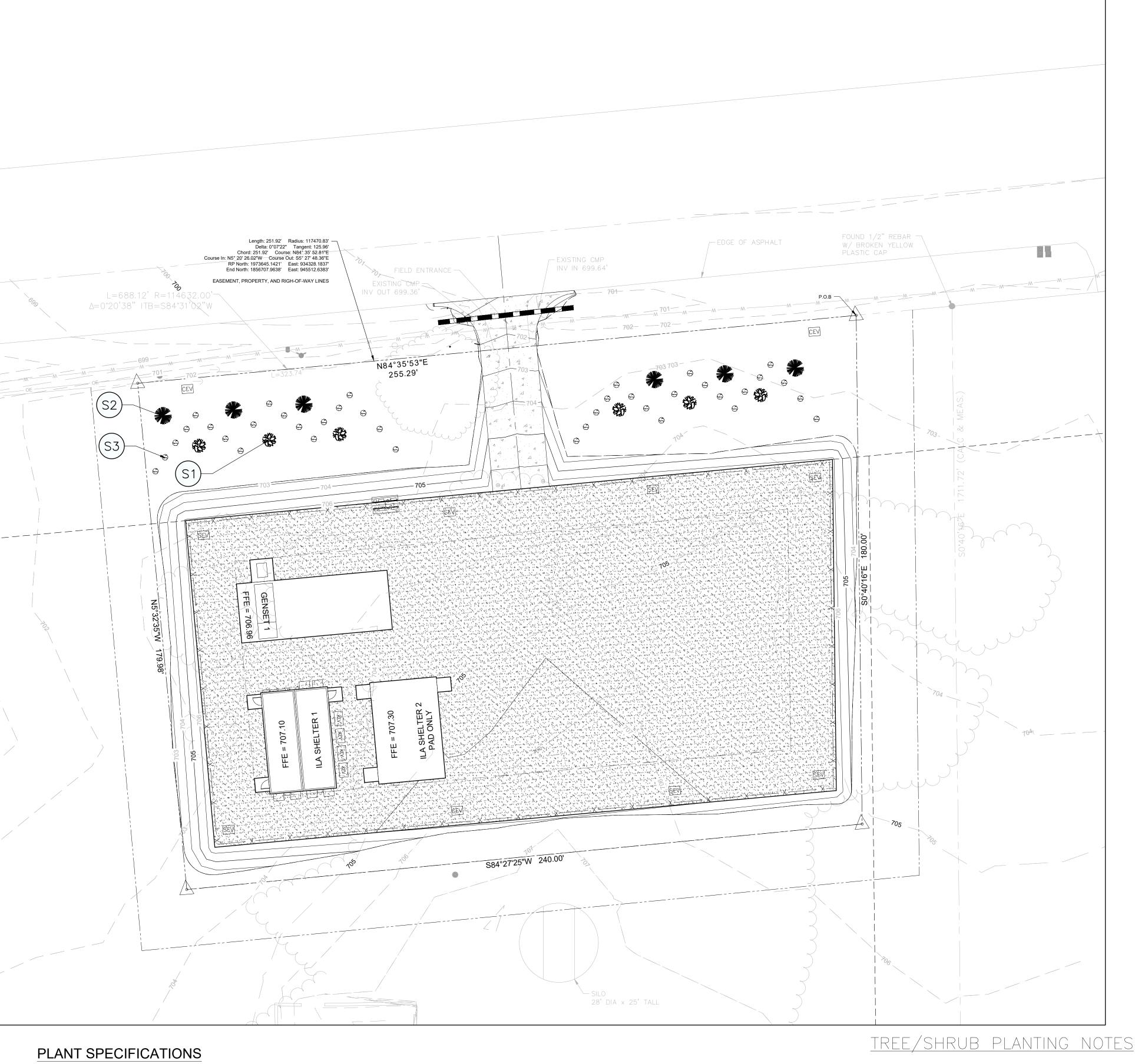
SHEET TITLE

ELECTRICAL ONE-LINE DIAGRAM

SHEET NUMBER

20

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TREE TYPE 2:

MIN CALIPER:

QUANTITY:

SPACING:

YELLOW PINE

25' COC

SCIENTIFIC NAME: PINUS PONDEROSA

 $(s_2)$  MIN MATURE SIZE: 60 TO 125' X 25 TO 30'  $(s_3)$ 

SHRUB TYPE 1:

MIN CALIPER:

QUANTITY:

SPACING:

JUNIPER BUSH

SCIENTIFIC NAME: JUNIPERUS COMMUNIS

36

6' COC

MIN MATURE SIZE: 5'X13'

SILVER MAPLE

50 TO 80' X 30 TO 60'

SCIENTIFIC NAME: ACER SACCHARINUM

25' COC

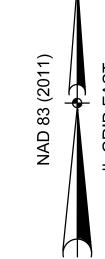
TREE TYPE 1:

(S1) MIN MATURE SIZE:

MIN CALIPER:

QUANTITY:

SPACING:



## LEGEND WORK LIMIT LINE PROPERTY LINE RIGHT OF WAY LINE PROPOSED EASEMENT LINE LANDSCAPE BUFFER EDGE OF GRAVEL - SETBACK LINE - × — × — FENCE LINE GRAVEL CONCRETE

### LANDSCAPE NOTES

- SECTION 11-12-7 LANDSCAPING OF THE CITY OF SUGAR GROVE CODE OF ORDINANCES CALLS FOR AN M-1 DISTRICT:
- 1.1. STREET YARD: 1. EVERGREEN TREE, 1 SHADE TREE, AND 6 SHRUBS PER 50 LINEAR FEET
- INTERIOR YARD: 1 TREE AND 6 SHRUBS PER 50 LINEAR FEET. WHEN A LANDSCAPE YARD IS REQUIRED FOR PARKING. NOT APPLICABLE FOR THE SITE
- 1.3. REAR YEAR: 1 TREE AND 6 SHRUBS PER 50 LINEAR FEET. NOT APPLICABLE FOR THE SITE
- 2. SECTION 11-9-7 OTHER STANDARDS REQUIRES EXISTING TREES, 6" IN DIAMETER OR GREATER, SHALL BE REPLACED. REMPLACEMENT TREES SHALL BE REQUIRED IN ADDITIONAL TO ANY OTHER LANDSCAPING THAT MAY BE REQUIRED. NOT LESS THAN (1) 3-INCH CALIPER TREE SHALL BE REQUIRED FOR EACH 6-INCH TREE PROPOSED TO BE REMOVED. HOWEVER, IN NO INSTANCE SHALL MORE THAN (3) 3-INCH CALIPER REPLACEMENT REES BE REQUIRED FOR ANY TREE REMOVAL
- 3. TOTAL SITE FRONTAGE WITHIN PROPERTY REQUIRING LANDSCAPE BUFFER = APPROXIMATELY 259'
- 4. LANDSCAPING MAINTENANCE WILL BE PROVIDED QUARTERLY AND AS NEEDED TO MAINTAIN SURVIVABILITY AND AESTHETIC VALUE.
- 5. MAINTENANCE OF REQUIRED LANDSCAPED AREAS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ALL SUCH AREAS SHALL BE PROPERLY MAINTAINED SO AS TO ASSURE THEIR SURVIVAL AND AESTHETIC VALUE AND SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM OR A READILY AVAILABLE WATER SUPPLY, FAILURE TO MONITOR SUCH AREAS IS A VIOLATION OF THIS ORDINANCE AND MAY BE REMEDIED IN THE MANNER PRESCRIBED FOR OTHER VIOLATIONS.
- 6. TREES WITH A DBH OF 6 INCHES OR GREATER WILL BE REMOVED AS PART OF THIS PROJECT

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**PROJECT** 

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SHEET TITLE

LANDSCAPE PLAN

SHEET NUMBER

- 1. SAMPLE SITE SOILS FOR LABORATORY TESTING TO DETERMINE FERTILIZER COMPOSITION.
- 2. PROVIDE FERTILIZER WITH A COMPOSITION OF NITROGEN, PHOSPHOROUS, AND POTASSIUM IN THE AMOUNTS SPECIFIED IN SOIL LABORATORY REPORTS FOR PLANT SPECIES, FROM A QUALIFIED TESTING LABORATORY.



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