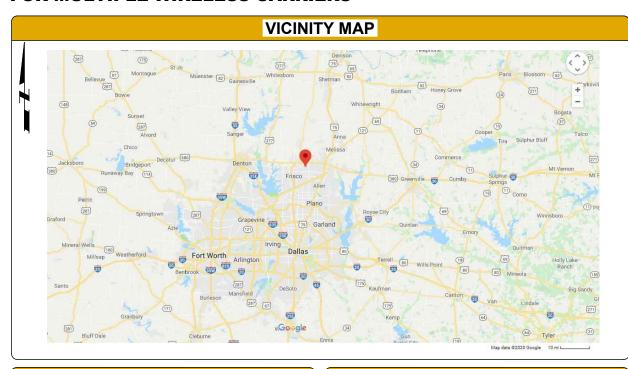
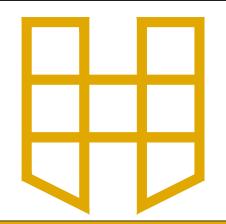
WESTRIDGE SITE: 1640

80' MONOPOLE TOWER

FOR MULTIPLE WIRELESS CARRIERS





CONSULTING ENGINEER



STS (SPECIALTY
TELECOMUNICATIONS
CONSULTANTS, LLC)
13431 BROADWAY EXT., SUITE 120,
OKLAHOMA CITY, OK 73114
405-753-7167

F	PROJECT DATA
SITE NUMBER	1640
SITE NAME	WESTRIDGE
SITE ADDRESS	MCKINNEY, TX
COUNTY	COLLIN
ZONING CLASS	
POWER COMPANY	TBD
CONTACT NAME	
TELEPHONE	
TELCO COMPANY	TBD
CONTACT NAME	
TELEPHONE	
PROPERTY OWNER	PROSPER INDEPENDANT SCHOOL DIST
TELEPHONE	

2C COORDINATES

HEMPHILL CONTACT

SURVEY CONTACT

TELEPHONE

TELEPHONE

LAT 33° 11' 57.00" LONG -96° 45' 14.00"

SURVEY AND 2C PROVIDED BY POINT TO POINT LAND SURVEYORS

AND INCLUDED IN THIS SET OF DRAWINGS FOR REFERENCE ONLY.

JOHN HEMPHILL

918-605-5639

POINT TO POINT LAND SURVEYORS

678-565-4440

DRIVING FROM TULSA, OK. MERGE ONTO US-75 S, IN 89.5 MI. TAKE EXIT 63B TO MERGE ONTO US-69 S TOWARD ATOKA / DALLAS. IN 129.9 MI. TAKE EXIT 41 TOWARD US-380/GREENVILLE/DENTON AND MERGE ONTO W UNIVERSITY DR, IN 5.6 MI. TURN LEFT ONTO N CUSTER RD, IN 1 MI. TURN RIGHT ONTO VIRGINIA PKWY, IN 1.2 MI. TURN LEFT ONTO BLUESTEM DR. IN 0.3 MI. TURN

LEFT, THE SITE IS ON THE LAWN AREA NEXT

TO THE SCHOOL BUILDING.

DIRECTIONS

PROJECT NOTES

HEMPHILL TOWER SITE DEVELOPMENT SPECIFICATIONS SUPPLEMENT THE CONSTRUCTION DRAWINGS. FACILITY IS NOT STAFFED AND NORMALLY NOT OCCUPIED.

CONTRACTOR SHALL VERIFY ALL PLANS
AND EXISTING DIMENSIONS AND
CONDITIONS ON THE JOB SITE AND SHALL
IMMEDIATELY NOTIFY THE CONSTRUCTION
MANAGER IN WRITING OF ANY
DISCREPANCIES BEFORE PROCEEDING
WITH THE WORK OR BE RESPONSIBLE FOR
THE SAME

ENGINEER OF RECORD



SAMUAL T. CURTIS, P.E.
TEXAS NO. 117377
LICENSED PROFESSIONAL ENGINEER

ONE CALL SYSTEM



BEFORE YOU DIG, CALL TEXAS LINE LOCATION FOR LOCATION OF UNDERGROUND UTILITIES. CALL 811

	DRAWING INDEX	
SHEET	SHEET TITLE	REV.
TS	TITLE SHEET	0
C1-1	SITE SURVEY	0
C1-2	SITE SURVEY	0
C1-3	SITE SURVEY	0
C1-4	ZONING OVERVIEW	0
C2-1	COMPOUND LAYOUT	0
C3-1	TOWER ELEVATION	0
C3-3	GROUND EQUIPMENT DETAILS	0
C4-1	ROADWAY AND COMPOUND DETAILS	0
C6-1	COMPOUND WALL DETAILS	
E1-1	ELECTRIC, LIGHTING, AND TELCO PLAN	0
E2-1	ELECTRICAL DETAILS	0
E3-1	GROUNDING PLAN	0
E4-1	GROUNDING DETAILS	0
G1-1	GENERAL NOTES	0
G1-2	GENERAL NOTES	0
L1-1	LANDSCAPING PLAN	0
l		



1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



DRAFTING SERVICES 9 E 4TH ST. SUITE C-4 TULSA, OK 74103 918-215-7575

PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
CHECKED BY:	MK/SLT/JRH

APPROVAL

REV	DATE	DESCRIPTION
0	03/24/21	FOR APPROVAL

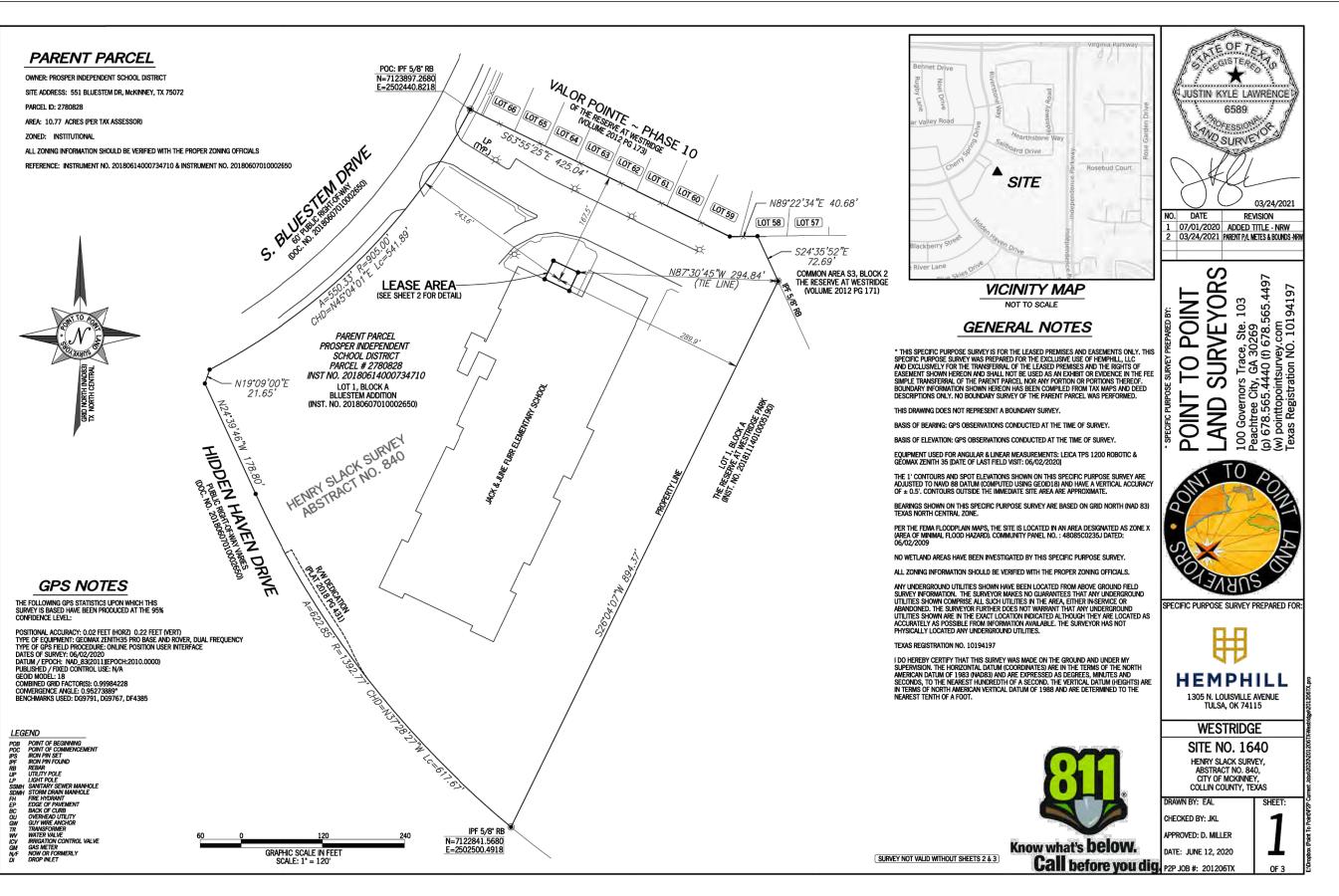
SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE N.T.S.

TITLE SHEET

SHEET NUMBER:

TS





SURVEY PROVIDED BY:

POINT TO POINT LAND SURVEYORS 100 GOVERNORS TRACE SUITE 103, PEACHTREE CITY, GA 30269 678-565-4440

PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

	_		
1 1	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL

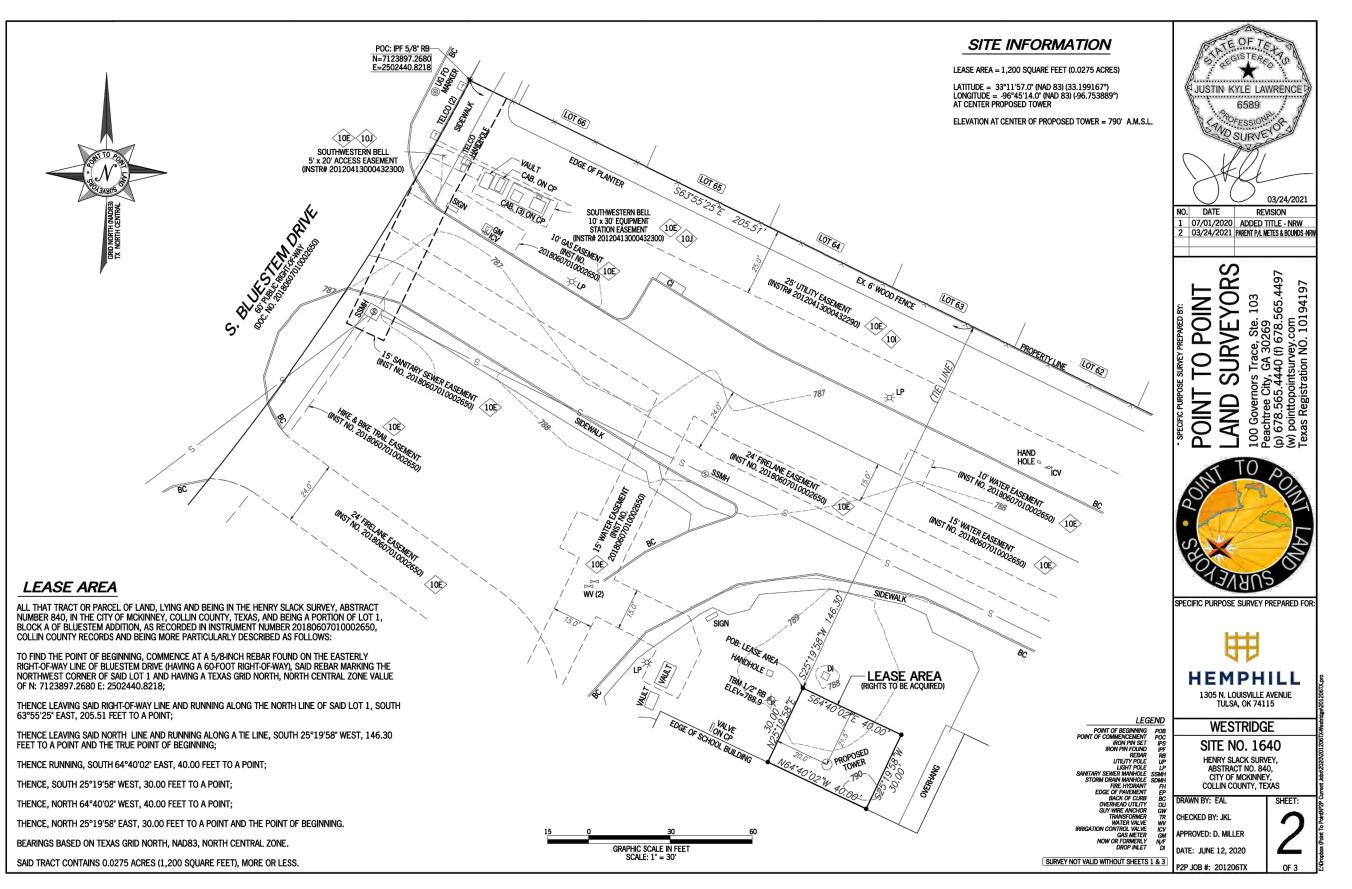
SCALE N.T.S.

SITE SURVEY

SHEET NUMBER:

-1 |

REVISION





SURVEY PROVIDED BY:

POINT TO POINT LAND SURVEYORS 100 GOVERNORS TRACE SUITE 103, PEACHTREE CITY, GA 30269 678-565-4440

PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

lí	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL
	l		

SCALE N.T.S.

SITE SURVEY

SHEET NUMBER:

 $\frac{1}{2}$

PARENT PARCEL

(AS PROVIDED IN TITLE COMMITMENT FILE NO. 01-20061450)

LOT 1, BLOCK A, OF LOT 1, BLOCK A, BLUESTEM ADDITION, AN ADDITION TO THE CITY OF MCKINNEY, COLLIN COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN DOCUMENT NO. 20180607010002650 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS, AND IN CABINET 2018, SLIDE 431 OF THE PLAT RECORDS OF COLLIN

TITLE EXCEPTIONS

THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, EFFECTIVE DATE OF MAY 21, 2020, 8:00 AM, BEING FILE NO. 01-200061450, FOR THE PARENT PARCEL, TO DETERMINE THE IMPACTS OF EXISTING TITLE

10. THE FOLLOWING MATTERS AND ALL TERMS OF THE DOCUMENTS CREATING OR OFFERING EVIDENCE OF THE MATTERS:

E. THE FOLLOWING, ALL ACCORDING TO PLAT RECORDED IN CABINET 2018, SLIDE 431, OF THE PLAT RECORDS OF COLLIN COUNTY, TEXAS:

15 FOOT HIKE & BIKE EASEMENT ALONG THE FRONT PROPERTY LINE(S).

15 FOOT SANITARY SEWER FASEMENT ALONG THE NORTHWESTERN CORNER PROPERTY LINE(S).

10 FOOT GAS EASEMENT ALONG THE NORTHWESTERN CORNER PROPERTY LINE(S).

5 FOOT BY 20 FOOT SOUTHWESTERN BELL TELEPHONE EASEMENT ALONG THE NORTHWESTERN CORNER PROPERTY LINE(S).

25 FOOT UTILITY EASEMENT ALONG THE NORTHERN PROPERTY LINE(S).

10 FOOT BY 30 FOOT SOUTHWESTERN BELL TELEPHONE EASEMENT ALONG THE NORTHERN PROPERTY LINES).

10 FOOT WATER EASEMENT ALONG THE NORTHERN, EASTERN AND THROUGH CENTER PROPERTY LINE(S).

15 FOOT WATER EASEMENT ALONG THE NORTHERN, EASTERN AND THROUGH CENTER PROPERTY LINE(S).

FIRELANE EASEMENT ALONG THE NORTHERN, EASTERN AND THROUGH CENTER PROPERTY LINE(S).

ELECTRIC EASEMENT ALONG THE PORTION OF THE EASTERN PROPERTY LINE(S).

[THESE ITEMS ARE APPLICABLE TO THE PARENT PARCEL. PLOTTABLE ITEMS SHOWN HEREON].

F. RIGHT-OF-WAY EASEMENT CONVEYED TO DENTON COUNTY ELECTRIC COOPERATIVE, INC., TOGETHER WITH ALL RIGHTS GRANTED THEREIN, AS DESCRIBED IN DOCUMENT RECORDED IN VOLUME 468, PAGE 201 OF THE DEED RECORDS OF COLLIN COUNTY, TEXAS.

[BECAUSE THE DESCRIPTION OF THE PROPERTY IMPACTED BY THE EASEMENT IS VAGUE, WE ARE NOT ABLE TO ASCERTAIN THE EXACT LOCATION THEREOF].

G. CONVEYANCE OF ALL OIL, GAS AND OTHER MINERALS OF EVERY CHARACTER IN, ON, UNDER OR THAT MAY BE PRODUCED FROM THE HEREIN DESCRIBED PROPERTY, TOGETHER WITH ALL RIGHTS RELATING THERETO, EXPRESS OR IMPLIED, DESCRIBED IN DEED RECORDED IN DECUMENT NO. 20060214000198320 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL AND IS BLANKET IN NATURE].

H. ALL OIL, GAS, OTHER MINERALS, RESOURCES AND GROUND WATER AS SET FORTH IN CONVEYANCE FROM D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED PARTNERSHIP TO DRH ENERGY, INC., A COLORADO CORPORATION, RECORDED IN DOCUMENT NO. 20070502000586600 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL AND IS BLANKET IN NATURE]

I. UTILITY EASEMENT CONVEYED AND DEDICATED TO THE PUBLIC, TOGETHER WITH ALL RIGHTS GRANTED THEREIN, AS DESCRIBED IN DOCUMENT RECORDED IN DOCUMENT NO. 20120413000432290 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS.

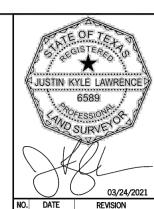
[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL. PLOTTABLE ITEMS SHOWN HEREON].

J. EASEMENT FOR EQUIPMENT STATION AND UNDERGROUND LINES CONVEYED TO 3. ENSURENT FOR DELL'ITELEPHONE COMPANY, TOGETHER MITH ALL RIGHTS GRANTED THEREIN, AS DESCRIBED IN DOCUMENT RECORDED IN DOCUMENT IN D. 20120413000432300 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL. PLOTTABLE ITEMS SHOWN HEREON].

K. WAIVER OF SURFACE RIGHTS AS DESCRIBED IN DOCUMENT RECORDED IN DOCUMENT NO. 20180614000734700, FILED JUNE 14, 2018 OF THE OFFICIAL PUBLIC RECORDS OF COLLIN COUNTY, TEXAS.

[THIS ITEM IS APPLICABLE TO THE PARENT PARCEL].



07/01/2020 ADDED TITLE - NRW

2 03/24/2021 PARENT P/L METES & BOUNDS -NRI

.565.4497

URVEYOR TO POINT

 \overline{S} **POINT**

100 Governors Trace, Ste. 103
Peachtree City, GA 30269
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com
Texas Registration NO. 10194197 LAND



SPECIFIC PURPOSE SURVEY PREPARED FOR:



1305 N. LOUISVILLE AVENUE TULSA, OK 74115

WESTRIDGE **SITE NO. 1640**

HENRY SLACK SURVEY, ABSTRACT NO. 840, CITY OF MCKINNEY, COLLIN COUNTY, TEXAS

RAWN BY: EA

SURVEY NOT VALID WITHOUT SHEETS 1 & 2

CHECKED BY: JKL PPROVED: D. MILLER

DATE: JUNE 12, 2020 P2P JOB #: 201206TX

OF 3



1305 NORTH LOUISVILLE AVE **TULSA, OK 74115** (918) 834-2200

SURVEY PROVIDED BY:

POINT TO POINT LAND SURVEYORS **100 GOVERNORS TRACE** SUITE 103, PEACHTREE CITY, GA 30269 678-565-4440

	-	
ĺ	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD
	DRAWN BY:	RGH
	CHECKED BY:	MK/SLT/JRH

ISSUED FOR: APPROVAL

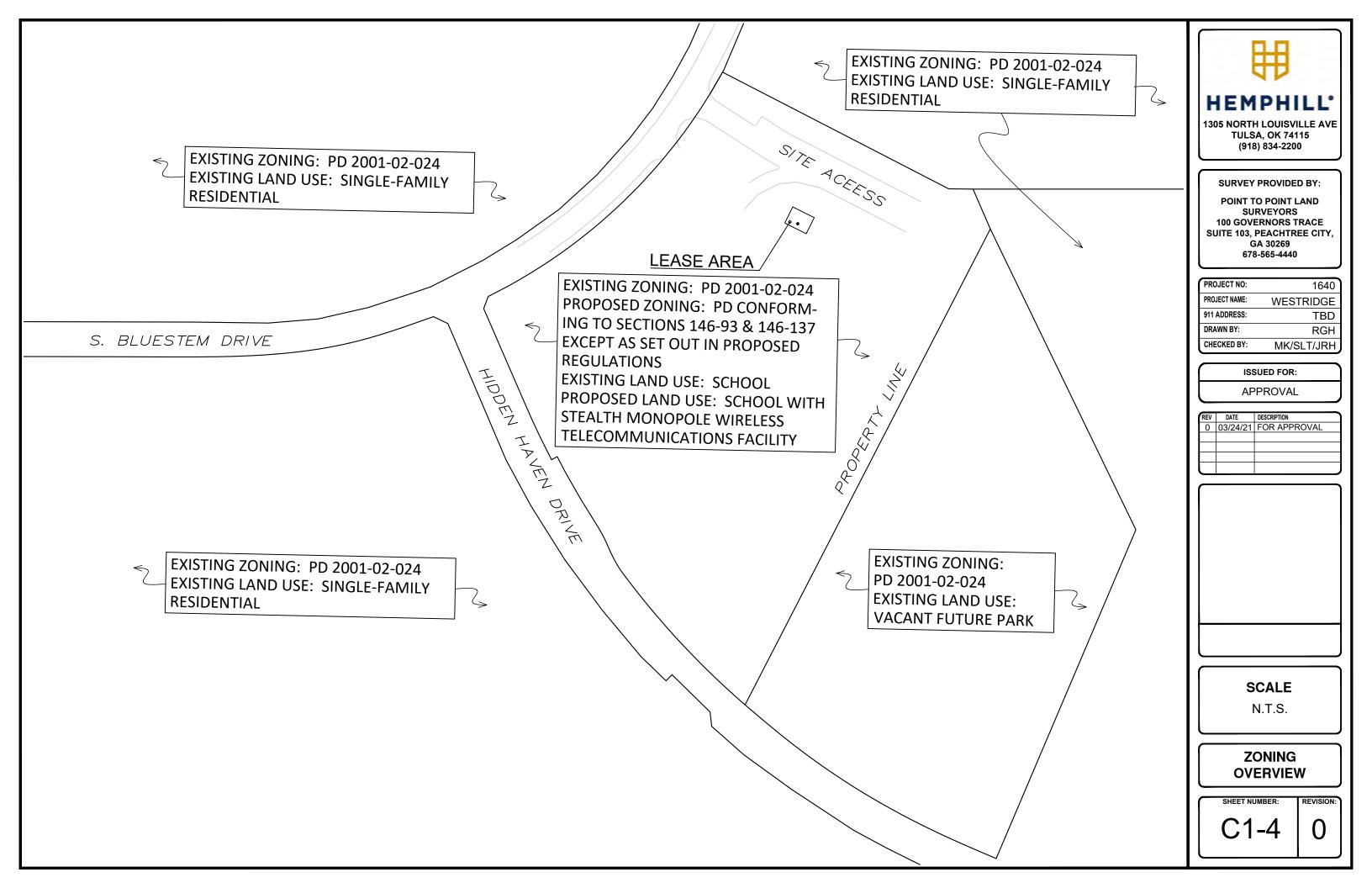
REV	DATE	DESCRIPTION
0	03/24/21	FOR APPROVAL

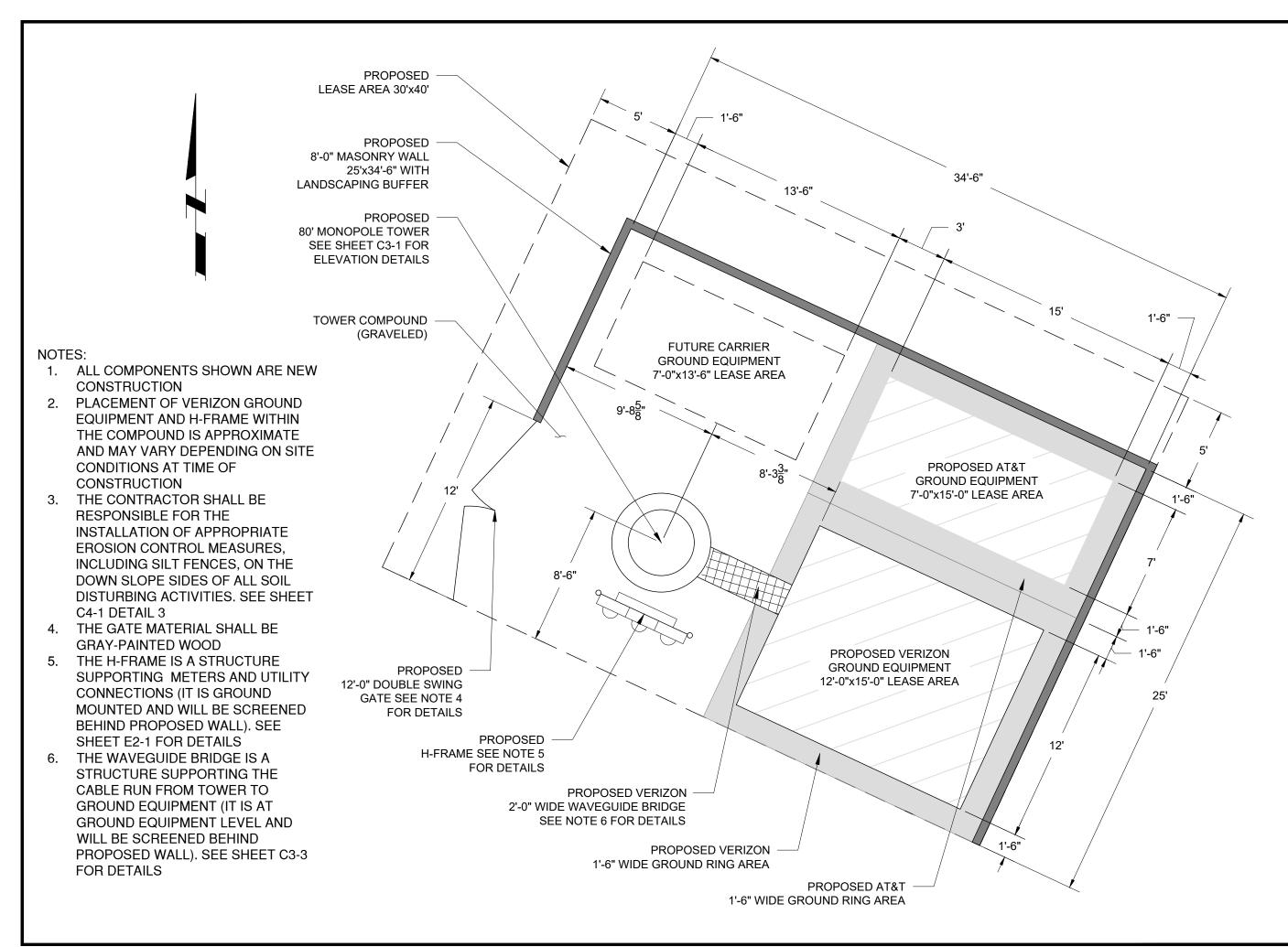
SCALE N.T.S.

SITE SURVEY

SHEET NUMBER:

REVISION









STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD
	DRAWN BY:	RGH
	CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

l	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL
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SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

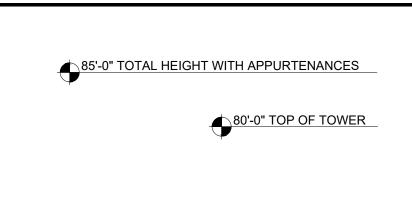
3/16" = 1'-0"

COMPOUND LAYOUT

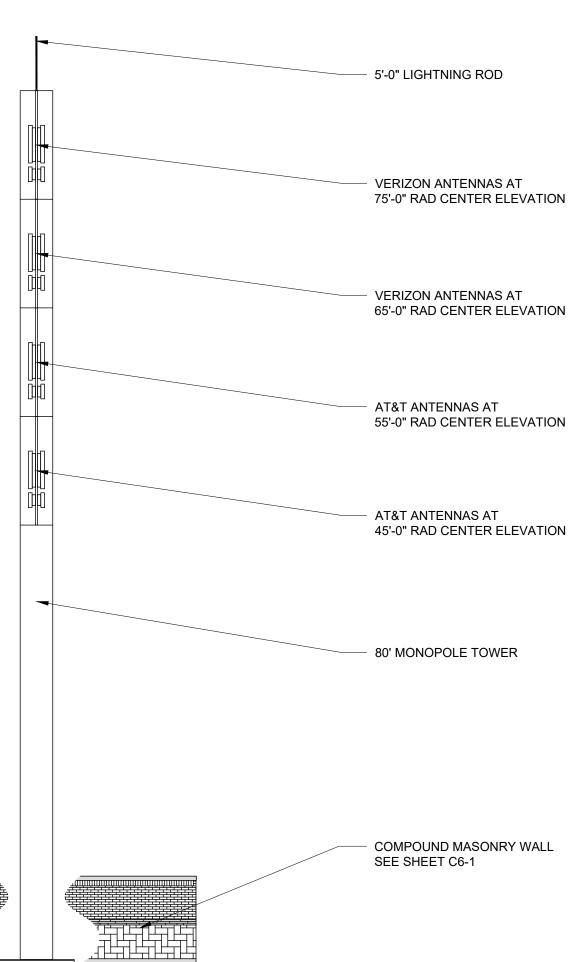
SHEET NUMBER:

REVISION

2-1 |



THESE DRAWINGS ARE NOT INTENDED TO REFLECT THE STRUCTURAL INTEGRITY OF THE TOWER. THE PROPOSED ANTENNAS AND TRANSMISSION LINES SHOWN ARE REPRESENTATIVE IN NATURE AND DO NOT REFLECT THE ACTUAL CONFIGURATIONS REQUIRED. THE CONTRACTOR SHALL REFER TO THE STRUCTURAL ANALYSIS OF THIS TOWER SITE FOR THE APPROVED LOCATION AND CONFIGURATION OF ALL ANTENNAS AND TRANSMISSION LINES. ALL ANTENNAS MUST BE MOUNTED AND THE TRANSMISSION LINES CONFIGURED IN STRICT ACCORDANCE WITH THE STRUCTURAL ANALYSIS.





1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

-	
PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

1	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL



SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

N.T.S.

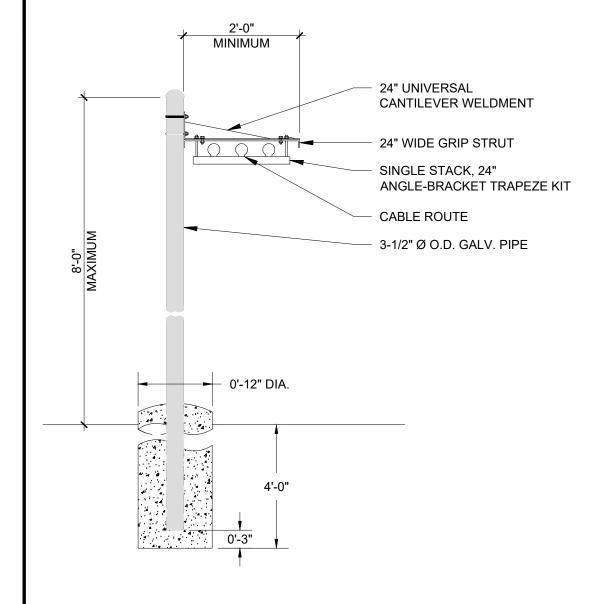
TOWER ELEVATION

SHEET NUMBER:

REVISION:

C3-1

POSTS TO BE SPACED MINIMUM 4'-0" O.C. AND MAXIMUM 10'-0" O.C.
MAXIMUM STRUCTURE HEIGHT TO NOT EXCEED PROPOSED COPOUND WALL HEIGHT





1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200

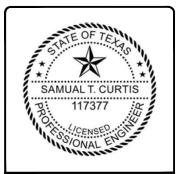


STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

1	REV	DATE A	DESCRIPTION L	
	0	03/24/21	FOR APPROVAL	



SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

N.T.S.

GROUND EQUIPMENT DETAILS

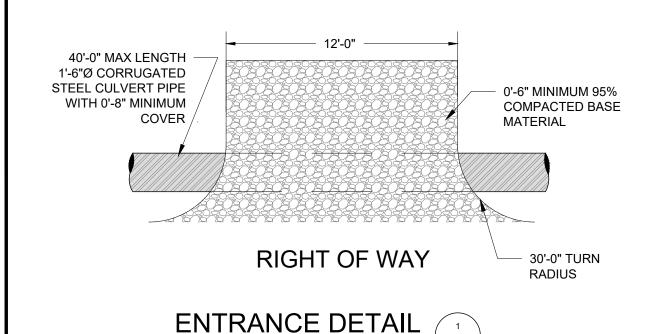
SHEET NUMBER:

REVISION

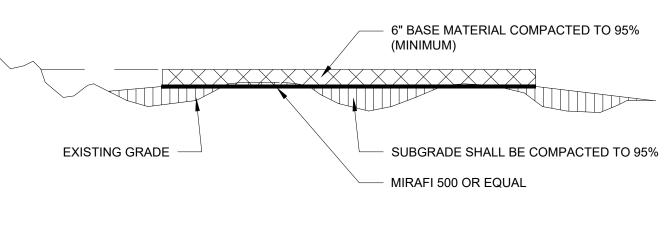
C3-3

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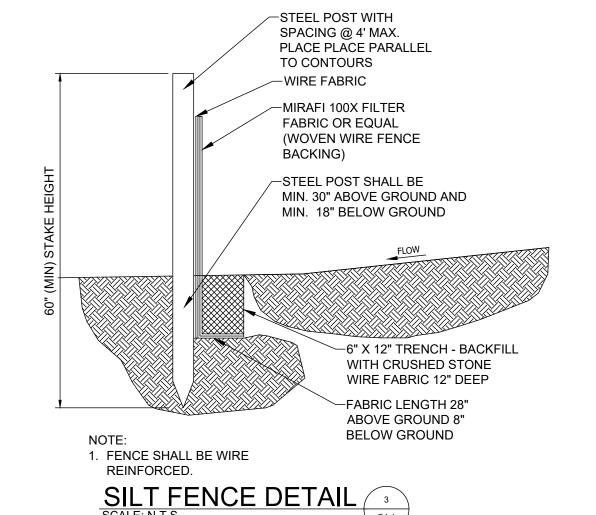


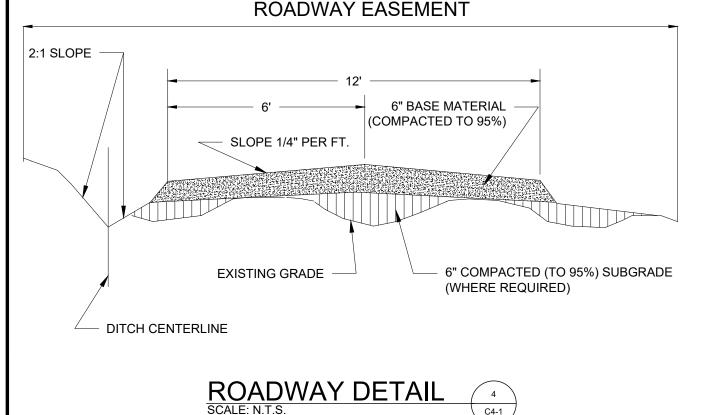


NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS TO ENSURE THAT THE ENTRANCE MEETS ALL GOVERNING SPECIFICATIONS.









CONSTRUCTION SEQUENCE

- 1- INSTALLATION OF SILT FENCE PRIOR TO ANY EARTH MOVING OPERATIONS, AS REQUIRED.
- 2- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE.
- 3- STRIPPING AND STOCK PILING OF TOPSOIL AND ROUGH GRADING. TEMPORARY STABILIZATION WITHIN 15 DAYS.
- 4- CONSTRUCTION OF UNDERGROUND IMPROVEMENTS.



1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



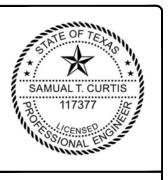
STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

PROJECT NO:	1640
PROJECT NAME:	WESTRIDGE
911 ADDRESS:	TBD
DRAWN BY:	RGH
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ISSUED FOR:

APPROVAL

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lí	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL



SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

N.T.S.

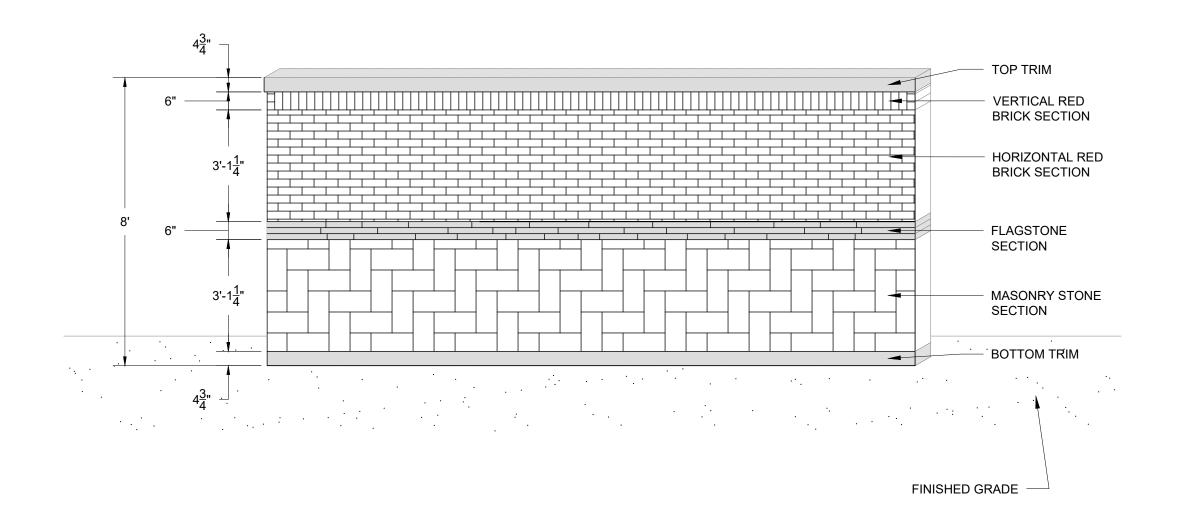
ROADWAY AND COMPOUND DETAILS

SHEET NUMBER:

C4-1

NOTES:

- 1. REFER TO SHEETS G1-1 AND G1-2 FOR ADDITIONAL INFORMATION
- 2. ALL PIPE DIMENSIONS ARE INTERIOR DIAMETER
- 3. MATERIALS AND FINAL DIMENSIONS OF EACH WALL SECTION TO BE VERIFIED AND CHOSEN TO MATCH EXISTING ADJACENT SCHOOL BUILDING EXTERIOR



ELEVATION VIEW

SCALE: N.T.S.

C6-1



1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

i	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD
	DRAWN BY:	RGH
	CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

REV	DATE	DESCRIPTION
0	03/24/21	FOR APPROVAL
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SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

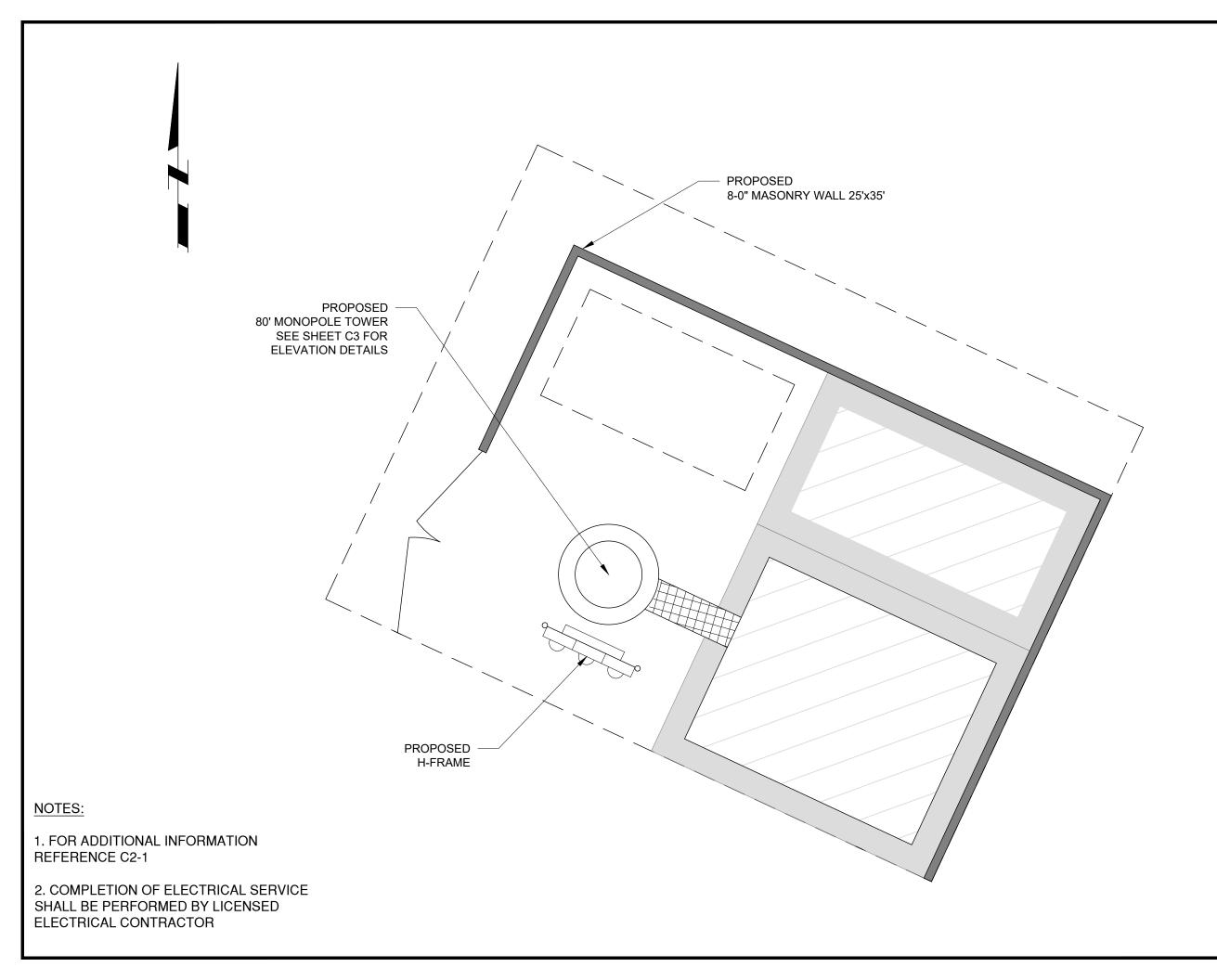
N.T.S.

COMPOUND WALL DETAILS

SHEET NUMBER:

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C6-1







STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD
	DRAWN BY:	RGH
	CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

lí	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL
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SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

3/16" = 1'-0"

ELECTRIC, LIGHTING AND TELCO PLAN

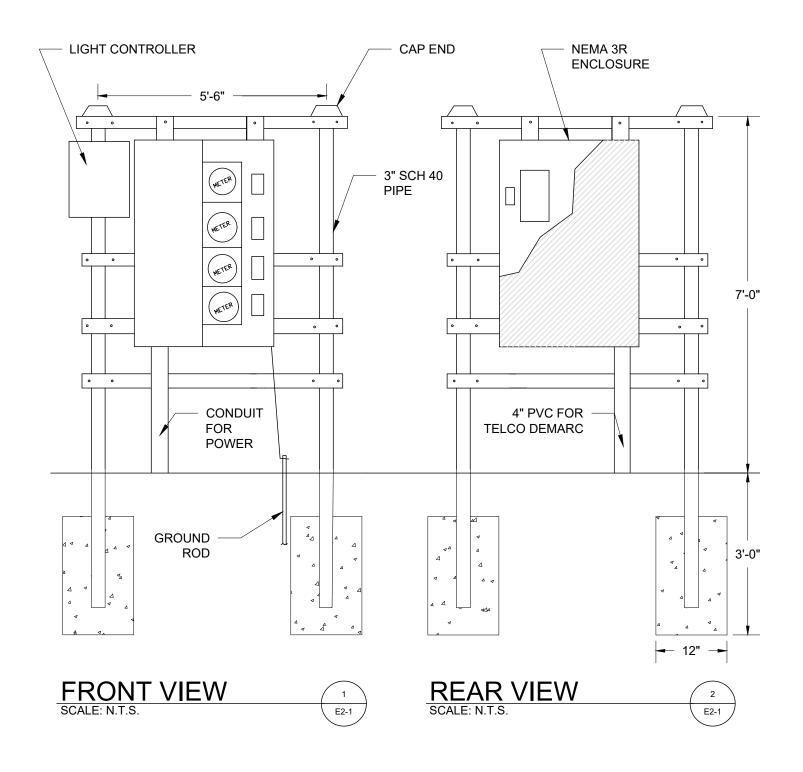
SHEET NUMBER:

REVISION

E1-1

NOTES

- 1 CONTRACTOR SHALL PROVIDE AND INSTALL MODULAR METERING MAIN, 120/240V, 400A, NEMA 3R WITH FOUR METER SOCKETS. METER CENTER SHALL BE FURNISHED WITH 200A METER AND 200A CIRCUIT BREAKER. CIRCUIT BREAKERS SHALL BE COVERED WITH LEXAN METER COVER.
- 2 CONTRACTOR SHALL PROVIDE AND INSTALL TELCO DEMARCATION BOX TO INCLUDE 48" X 48" X 12" NEMA 3R ENCLOSURE WITH BACKPLATE AND GFI RECEPTACLE (120V, 5A).
- 3 TOWER LIGHTING SHALL BE REQUIRED ON ALL TOWERS EXCEEDING 200' IN HEIGHT OR AS OTHERWISE REQUIRED BY FAA.
- 4 DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE ALTERED IN THE FIELD TO BETTER SUIT ACTUAL CONDITIONS OR EQUIPMENT RECEIVED.
- 5 ALL CONDUIT SHALL BE SCH. 40 PVC UNDERGROUND.
- 6 ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND BY THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING ENTITIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS AS ESTABLISHED BY ANSI, NEMA, NSFU, AND "UL" LISTED.
- 7 ALL CONDUIT SHALL HAVE A PULL STRING.
- 8 THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY IBC, NEC, AND APPLICABLE CODES.
- 9 UNDERGROUND AND/OR OVERHEAD LINES SHALL BE OF THE SIZE AND MATERIAL NECESSARY TO MEET THE LOCAL CODE REQUIREMENTS.
- 10 ALL FRAME MEMBERS TO BE 1-5/8" X 1-5/8" P1000 UNISTRUT (EXCEPT FOR LEGS). CONNECT TO LEGS WITH U BOLTS





1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



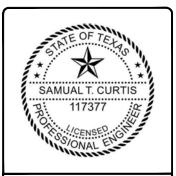
STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

ĺ	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD
	DRAWN BY:	RGH
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ISSUED FOR:

APPROVAL

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ı	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL



SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

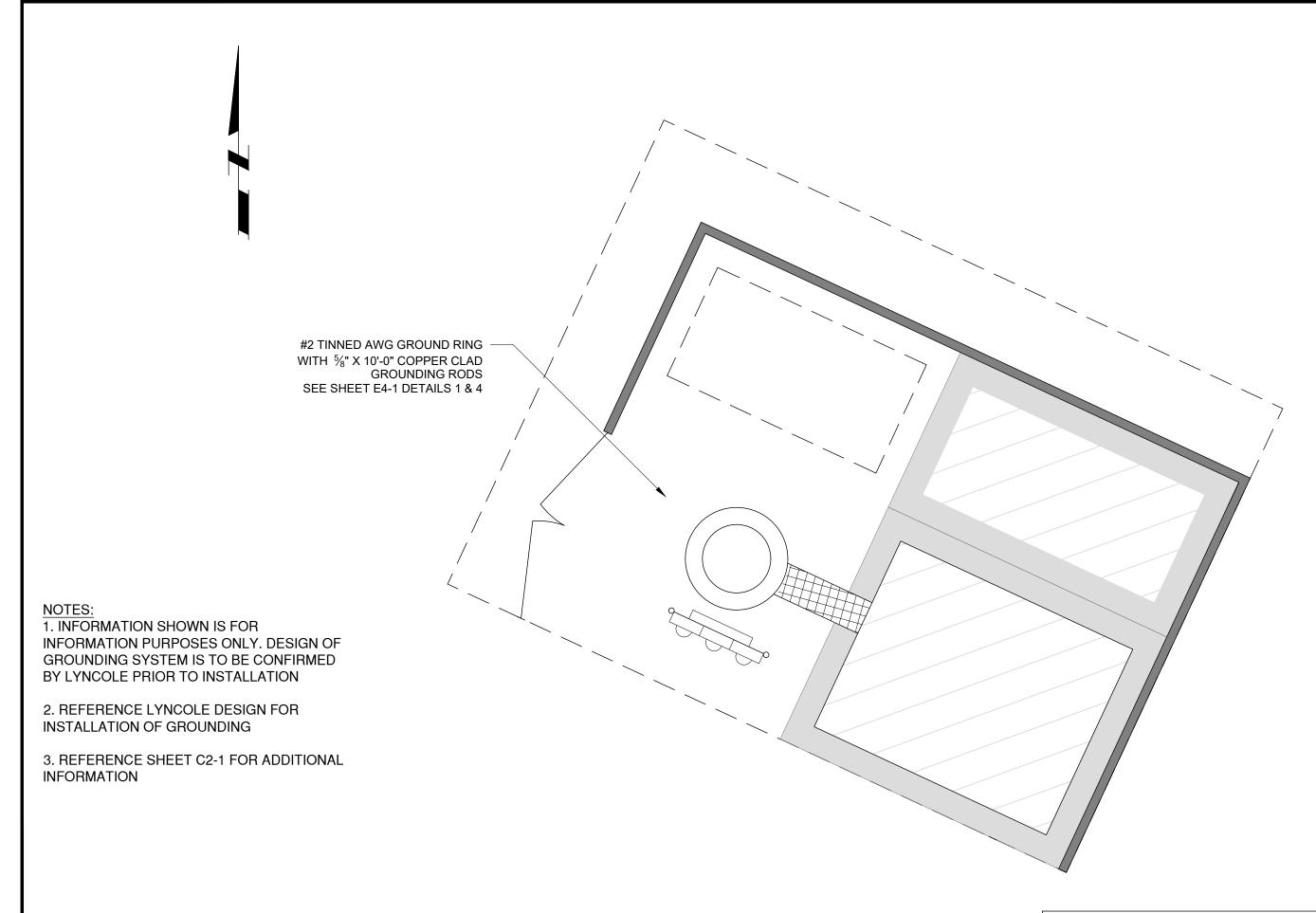
N.T.S.

ELECTRICAL DETAILS

SHEET NUMBER:

REVISION

E2-1



THIS PLAN IS PROPOSED CONSTRUCTION FOR THE SUBJECT SITE.



1305 NORTH LOUISVILLE AVE TULSA, OK 74115 (918) 834-2200



STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

	i	PROJECT NO:	1640
		PROJECT NAME:	WESTRIDGE
	911 ADDRESS:	TBD	
	DRAWN BY:	RGH	
		CHECKED BY:	MK/SLT/JRH

ISSUED FOR:

APPROVAL

li	REV	DATE	DESCRIPTION
	0	03/24/21	FOR APPROVAL
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SAMUAL T. CURTIS, P.E. TEXAS NO. 117377

SCALE

3/16" = 1'-0"

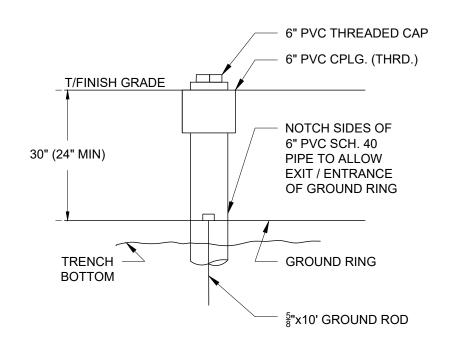
GROUNDING PLAN

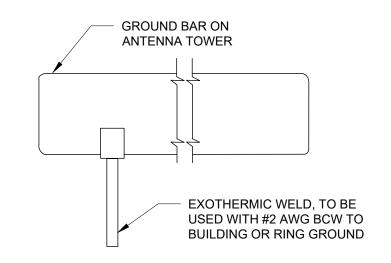
SHEET NUMBER:

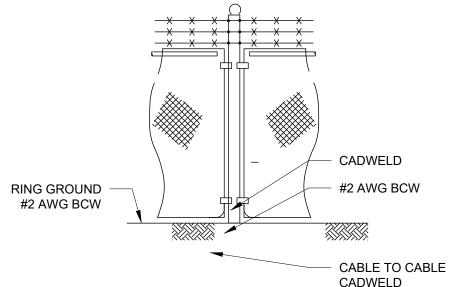
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E3-1

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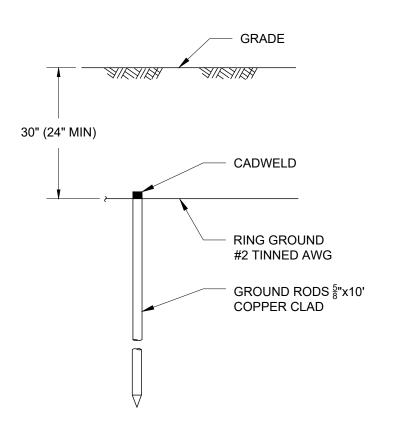




- THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST, ABOVE GRADE.
- 2. VERTICAL POST SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM, ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FEET





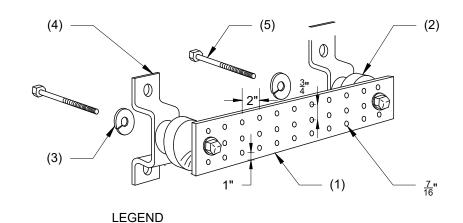


ROD AND RING GROUNDING

SCALE: N.T.S.

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E4-1

INSTALLATION OF GROUND WIRE TO GROUND BAR SCALE: N.T.S.



- (1) COPPER GROUND BAR, ¹/₄"x4"x20". HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- (2) INSULATORS
- (3) §" LOCKWASHERS
- (4) WALL MOUNTING BRACKET
- (5) $\frac{5}{8}$ -11x1" H.H.C.S. BOLTS

GROUND BAR DETAIL
SCALE: N.T.S.





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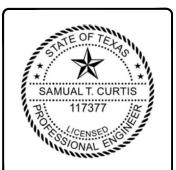
STS (SPECIALTY TELECOMUNICATIONS CONSULTANTS, LLC) 13431 BROADWAY EXT., SUITE 120, OKLAHOMA CITY, OK 73114

	PROJECT NO:	1640
	PROJECT NAME:	WESTRIDGE
ı	911 ADDRESS:	TBD
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ISSUED FOR:

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GROUNDING DETAILS

SHEET NUMBER:

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REVISION:

CONSTRUCTION

GENERAL

General construction, electrical, tower and foundation drawings are interrelated. In performance of the work each contractor must refer to all drawings. Coordination is the responsibility of the general contractor.

SITE WORK

PART 1 - GENERAL

- 1. Work included: See Site Plan
- 2. Access road, turnaround areas and sites are constructed to provide a well-drained, easily maintained, even surface for material and equipment deliveries and maintenance personnel access.

3. SEQUENCING

- A. Confirm survey stakes and set elevation stakes prior to any construction.
- B. Grub the complete road (if applicable) and site area prior to foundation construction or placement of backfill or subbase materials.
- C. Construct temporary construction zone along access drive.
- D. Bring the site area to subbase course elevation and bring the access road to base course elevation prior to forming foundation.
- E. Soil stabilizer shall be Mirafi 500X or equal.
- F. Grade, seed, fertilize and mulch disturbed areas immediately after bringing site and access road to base course elevation.
- G. Remove gravel from temporary construction zone to an authorized area or as directed by the owner's representative.

4. SUBMITTALS

- A. Before construction:
- i. If landscaping is applicable to contract, submit two copies of the landscape plan under nursery letterhead. If a landscape allowance was included in the contract, provide an itemized listing of proposed costs on nursery letterhead (refer to plans for landscaping requirements).

5. WARRANTY

- A. In addition to the warranty on all construction covered in the contract documents, the contractor shall repair all damage and restore area as close to original condition as possible at site and surroundings.
- B. Disturbed area will reflect growth of new grass cover prior to final inspection.

PART 2 - PRODUCTS

1. MATERIALS

- A. Road and site materials shall conform to DOT specifications fill material acceptable select fill shall be in accordance with State Department of Highway and Transportation standard specifications and approved by the owner's representative.
- B. Soil stabilizer shall be Mirafi 500X or equal.

PART 3 - EXECUTION

1. INSPECTIONS

Local building inspectors shall be notified no less than 24 hours in advance of concrete pours, unless otherwise specified by jurisdiction.

2. PREPARATION

- A. Clear trees, brush and debris from site area and access road right-of-way.
- B. Prior to other excavation and construction, grub organic material to a minimum of six (6) inches below grade.
- C. Prior to placement of fill or base materials, roll the soil.
- D. Where unstable soil conditions are encountered, line the areas with stabilizer mat prior to placement of fill or base material.

3. INSTALLATION

- A. The site and turnaround areas shall be at the subbase course elevation prior to forming foundation. Grade or fill the site and access road as required in order that upon distribution of spoils resulting from foundation excavations, the resulting grade will correspond with said subbase course, elevations are to be calculated from finished grades or slopes indicated.
- B. Clear excess spoils, if any, from job site and do not spread beyond the limits of project area unless authorized by the owner's representative and agreed to by landowner.
- C. Bring the access road to base course elevations prior to use to permit construction and observation during construction of the site.
- D. Avoid creating depressions where water may pond.
- E. The contract shall include grading, banking and ditching, unless otherwise indicated.
- F. When improving an existing access road, grade the existing road to remove any organic matter and smooth the surface before placing fill or stone.
- G. Place fill or stone in six inch maximum lifts and compact before placing next lift.
- H. The top surface course shall extend a minimum of six inches beyond the site fence and shall cover the area as indicated.
- I. Apply riprap gravel to the slopes of all fenced areas and parking areas and all other slopes greater than 2:1.
- J. Apply seed, fertilizer and straw cover to all other disturbed areas, ditches, drainage and swales not otherwise riprapped.
- K. Apply seed and fertilizer to surface conditions which will encourage rooting. Rake areas to be seeded to even the surface and loosen the soil.
- L. Sow seed in two directions to twice the quantity recommended by the seed producer.

4. PROTECTION

- A. Protect seeded areas from erosion by spreading straw to a uniform loose depth of 1 2 inches, stake and tie down as required. Use of erosion control mesh or mulch net will be an acceptable alternate.
- B. Protect all exposed areas against washouts and soil erosion, place straw bales at the inlet approaches to all new or existing culverts. Where the site or road areas have been elevated immediately adjacent to the rail line, stake erosion control fabric full length in the swale to prevent contamination of the rail ballast.
- 5. The required structural fill operation to the grades indicated for PCS equipment shelters shall be performed as follows:
- A. The structural fill material shall be placed in lifts not exceeding six inches in loose thickness.
- B. Each layer of structural fill material placed shall be compacted to a minimum of 95° of maximum density obtainable by ASTM compaction test designation D-337-66T for cohesive fill or 75% relative as determined by ASTM D-2049-64T for cohesionless fill, whichever is greater.
- C. The final grade of structural fill for all footings shall be capable of supporting the design soil bearing pressure load of 3,000 lbs. per square foot minimum.

FENCING AND GATE(S)

PART 1 - GENERAL

1. Work included: See plan for location of fence and gate(s).

2. QUALITY ASSURANCE

All steel materials utilized in conjunction with this specification will be galvanized or stainless steel. Weight of zinc coating of the fabric shall not be less than 12 ounces per square foot of material covered. Posts shall be hot-dipped galvanized.

3. SEQUENCING

If the site has been brought up to surface course elevation prior to the fence construction, fence post excavation spoils must be controlled to preclude contamination of said surface course.

4. SUBMITTALS

- A. Manufacturer's descriptive literature.
- B. Certificate or statement of compliance with the specifications.

PART 2 - PRODUCTS

1. FENCE MATERIAL

- A. All fabric wire, rails, hardware and other steel materials shall be hot-dipped galvanized.
- B. Fabric shall be six-foot height two-inch chain link mesh of No. 9 gauge wire. The fabric shall have a knuckled finish for the top selvages. Fabric shall conform to the specifications of ASTM A-392 Class 1.
- C. Barbed wire shall be double-strand, 12-1/2 gauge twisted wire strand with 14-gauge, 4-point round barbs spaced on five-inch centers, conforming to ASTM A121 Design # 12-4-5-14R Type 2.
- D. All posts shall be mechanical service pipe and shall be Type 1 ASTM F1083, High Strength (50 Ksi) Schedule 40 pipe, ASTM F1043 Group 1A, and of the following diameter (I.D. per fence industry standards).

Line 2 inches
Corner 3 inches

Gate 4 inches

- E. Gate posts shall be extended 12 inches, including dome cap, to provide for attachment of barbed wire.
- F. All top and brace rails shall be 1-1/2" diameter mechanical service pipe. Frames shall have welded corners.
- G. Gate frame and braces shall be 1-5/8" diameter Schedule 40 mechanical service pipe. Frames shall have welded corners.
- H. Gate frame shall have a full height vertical brace and a full width horizontal brace, secured in place by use of gate brace clamps.
- I. Gate frame shall have a full height vertical brace and a full width norizontal brace, secured in place by use of gate brace ci.

 I. Gate hinges shall be Merchants Metal Model 6-4386-hinge adapter with Model 6-409, 188 degree attachment.
- J. The quide (latch assembly) shall be heavy industrial gate latch. Master Halco #17221.
- K. Latches and stops shall be provided for all gates.
- L. All stops shall have keepers capable of holding the gate leaf in the open position.
- M. A No. 7 gauge zinc coated tension wire shall be used at the bottom of the fabric terminated with bank clips at corner and gateposts, conforming to ASTM A824 Type II.
- N. A six-inch by 1/2-inch diameter eyebolt to hold tension wire shall be placed at the line posts.
- O. Stretcher bars shall be 3/16-inch by 3/4-inch or have equivalent cross-sectional area, and conform to ASTM F626, having a minimum zinc coating of 1.2oz/sq-ft.
- P. All corner gate and panels shall have a 3/8-inch truss rod with turnbuckles.
- Q. All posts except gateposts shall have a combination cap and barbed wire supporting arm. Gateposts shall have a dome cap.
- R. Other hardware includes but may not be limited to the clips, band clips and tension band clips.
- S. Barbed wire gate guards shall be fitted with dome caps.
- T. Barbed wire support arms shall be cast iron with set bolt and lock wire in the arm.
- U. All caps shall be cast steel.
- V. Where the use of concertina has been specified, 24-inch diameter coil barbed tape, stainless steel, cyclone fence model gap to Type III shall be furnished. It shall be supported above the top rail by use of six wire barbed wire arms positioned atop each line/corner post.



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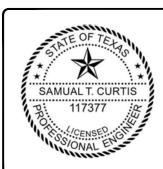


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APPROVAL

REV DATE DESCRIPTION
0 03/24/21 FOR APPROVAL



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GENERAL NOTES

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PART 3 - EXECUTION

1. INSPECTION

To confirm proper depth and diameter of post hole excavations, all post holes will be excavated as per construction documents.

2. INSTALLATION

- A. Foundations shall have a minimum six-inch concrete cover under post.
- B. All fence posts shall be vertically plumb plus/minus one-quarter inch.
- C. At corner posts, gateposts and sides of gate frame, fabric shall be attached with stretcher and tension band-clips at fifteen inch intervals
- D. At line posts, fabric shall be attached with band-clips at fifteen inch intervals.
- E. Fabric shall be attached to brace rails, tension wire and truss rods with tie clips at two foot intervals.
- F. A maximum gap of two inches will be permitted between the chain link fabric and the final grade.
- G. Gate shall be installed so locks are accessible from both sides.
- H. Gate hinge bolts shall have their threads peened or welded to prevent unauthorized removal.
- I. Concrete to be a minimum of 3,000 psi.

3. PROTECTION

Upon completion of erection, inspect fence material and paint field cuts or galvanizing breaks with zinc-based paint, color to match the galvanized metal.

Applicable Standards:

ASTM-A120 Specification for pipe, steel black and hot-dipped, zinc coated (galvanized) welded and seamless.

ASTM-A123 Zinc (hot-dipped galvanized) coated steel chain link fence fabric.

ASTM-A153 Specification for zinc coating (hot-dip) on iron and steel hardware.

ASTM-A392 Specification for zinc-coated steel chain link fence fabric.

ASTM-A431 Specification for aluminum-coated steel chain link fence fabric.

ASTM-A525 Standard specification for steel sheet zinc coated (galvanized) by the hot-dipped process.

ASTM-A535 Specification for aluminum coated steel barbed wire.

ASTM-A570 Specification for hot-rolled carbon steel sheet and strip, structural quality.

Federal Specification RR-F-191 Fencing Wire and Post Metal (and Gates, Chain Link Fence Fabric and Accessories)

ELECTRICAL

- 1. Contractor shall review the contract documents prior to the ordering of the electrical equipment and starting the actual construction. Contractor shall issue a written notice of all findings to the architect listing any discrepancies or conflicting information.
- 2. Verify exact locations and mounting heights of electrical equipment with owner prior to installation.
- 3. All materials and equipment shall be new and in good working condition when installed and shall be of the best grade and of the same manufacturer throughout for each class or group of equipment. Materials shall be listed "J" where applicable. Materials shall meet with approval of all governing bodies having jurisdiction. Materials shall be manufactured in accordance with applicable standards established by ANSI, NEMA, NSFU and "UL" listed.
- 4. All conduit shall have a pull string.
- 5. Provide Project Manager with one set of complete electrical "As Installed" drawings at the completion of the job showing actual dimensions, routing and circuits.
- 6. The entire electrical installation shall be grounded as required by IBC, NEC and all applicable codes.
- 7. Patch, repair and paint any area that has been damaged in the course of the electrical work.
- 8. Wire and cable conductors shall be copper 600 amp, type THHN or THWN with a minimum size of #2 AWG color-coded. All rectifier drops shall be stranded to accept crimp connectors.
- 9. All chemical ground rods shall be "UL" approved.
- 10. Meter socket amperes, voltage, number of phases shall be as noted on the drawings, manufactured by Milbank or approved equal and shall be utility company approved.

11 CONDIJIT

- A. Electrical metallic tubing shall have UL label; fitting shall be gland ring compression type.
- B. Flexible metallic conduit shall have UL listed label and may be used where permitted by code. Fittings shall be "Jake" or "Squeeze" type. All flexible conduits shall have full length ground wire.
- C. All underground conduit shall be PVC Schedule 40 with UV protection (unless noted otherwise) at a minimum depth of 24" below grade.
- 12. Contractor to coordinate with utility company for connection of temporary and permanent power to the site. The temporary power and all hookup costs are to be paid by the contractor.

13. All electrical equipment shall be labeled with permanent engraved plastic labels with white on blue background lettering (minimum letter height shall be 1/4"). Nameplates shall be fastened with stainless steel screws, not adhesive.

14. GROUNDING ELECTRODE SYSTEM

A. PREPARATION

i. Surface Preparation:

All connections shall be made to bare metal. All painted surfaces shall be field inspected and modified to ensure proper contact. No washers are allowed between the items being grounded. All connections are to have a non-oxidizing agent applied prior to installation.

ii. Ground Bar Preparation:

All copper ground bars shall be cleaned, polished and a non-oxidizing agent applied. No fingerprints or discolored copper will be permitted.

iii. All grounding conductors shall run through seal tight wherever conductors run through walls, floors or ceilings. If conductors

must run through EMT, both ends of conduit shall be grounded. Seal both ends of conduit with silicone caulk.

B. GROUND BARS

i. All ground bars shall be 1/4" thick copper and of size indicated on drawings.

C. EXTERNAL CONNECTIONS

i. All grounding connections shall be made by the exothermic weld process. Connections shall include all cable, splices, tee's, x's, etc. All cable to ground rods, ground rod splices and lightning protection systems are to be as indicated. All materials used (molds, welding metal, tools, etc.) shall be cadweld and installed per manufacturer's recommended procedures.

D. GROUND RODS

 i. All ground rods shall be 5/8" diameter by 10'-0" long "copperweld" or approved equal of the number and locations indicated.

Ground rods shall be driven full length vertically in undisturbed earth.

E. GROUND CONDUCTORS

i. All ground conductors shall be standard tinned, solid bare copper, annealed and size indicated on drawings.

F. GROUND RING

- i. The external ground ring encircling the tower (if applicable) and future carrier shall be minimum size of No. 2 AWG solid tinned, bare copper conductor in direct contact with the earth at a depth specified on plan sheets and details. Conductor bends shall have a minimum bending radius of eight inches.
- ii. All external ground rings are to be joined together and all connections must be cadwelded. No lugs or clamps will be accepted.

G. FENCE / GATE

i. Ground each gatepost, corner post and gate as indicated on drawing. Ground connections to fence posts and all other connections for the ground grid system shall be made by exothermic weld process and installed per manufacturer's recommendations and procedures and sprayed and cold-galvanized paint.



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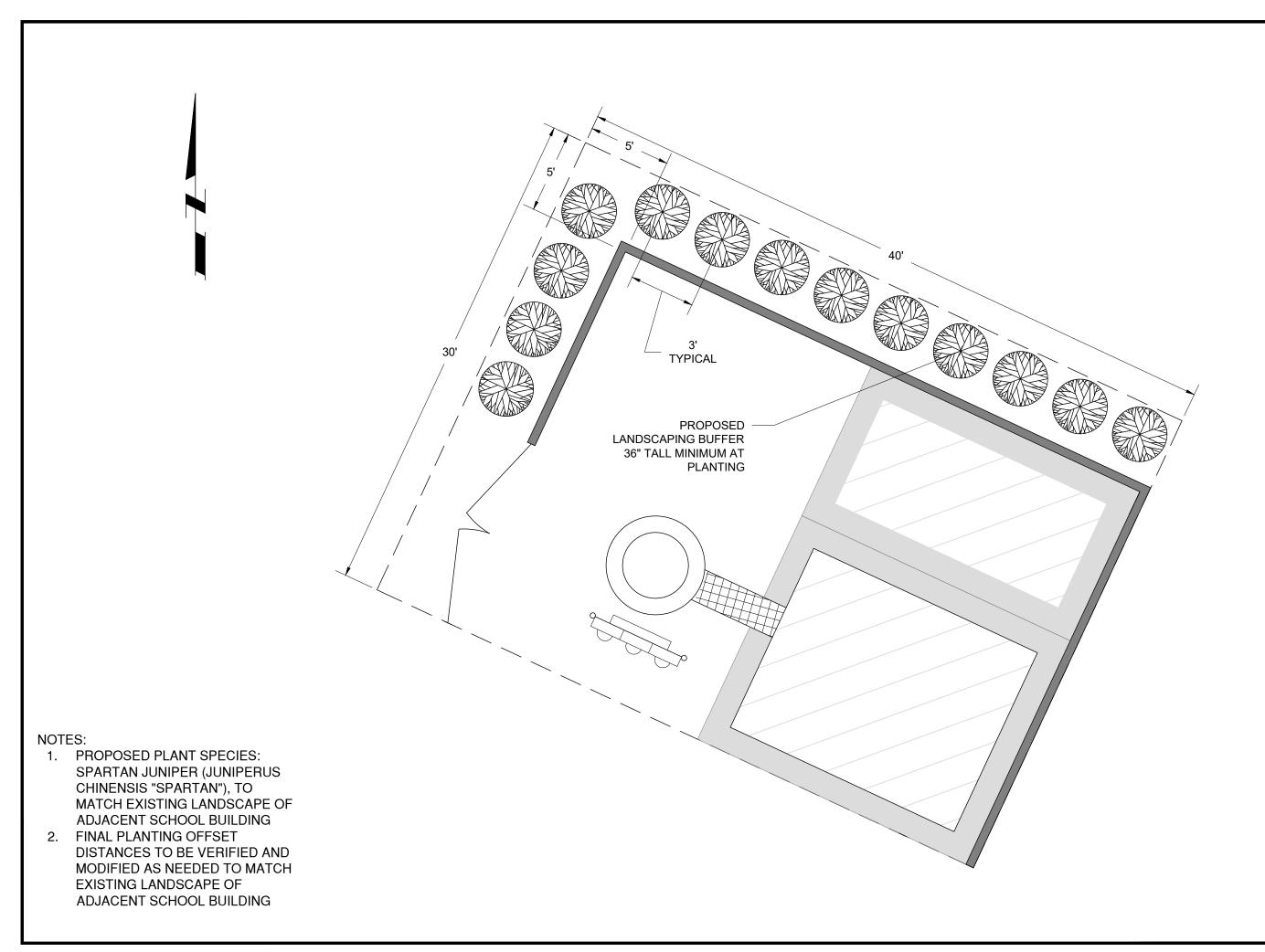
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GENERAL NOTES

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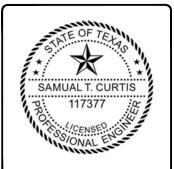
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COMPOUND LAYOUT

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