

THE STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY  
UNITS



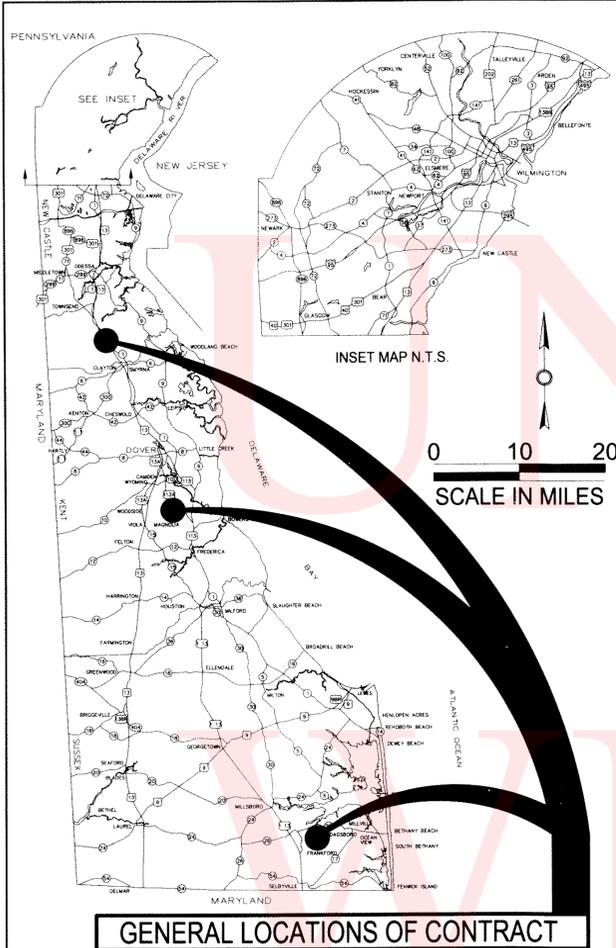
CONSTRUCTION PLANS FOR:

FABRIC BUILDING REPLACEMENT  
DAGSBORO YARD, MAGNOLIA YARD, & SMYRNA SOD FARM

CONTRACT NUMBER: T201280101

COUNTY: SUSSEX (DAGSBORO), KENT (MAGNOLIA), & NEW CASTLE (SMYRNA)

AGREEMENT NUMBER 1552



GENERAL LOCATIONS OF CONTRACT

PROJECT NOTES

- NO UTILITY RELOCATION INVOLVEMENT IS ANTICIPATED. SHOULD ANY CONFLICTS BE ENCOUNTERED DURING CONSTRUCTION REQUIRING ADJUSTMENT OND/OR RELOCATION OF THE AGENCIES' EXISTING FACILITIES, THE NECESSARY RELOCATION WORK SHALL BE ACCOMPLISHED BY THE RESPECTIVE AGENCIES' FORCES, AS DIRECTED BY THE DISTRICT ENGINEER. ANY ADJUSTMENTS AND/OR RELOCATIONS OF MUNICIPALLY OWNED FACILITIES SHALL BE DONE BY THE STATES CONTRACTOR IN ACCORDANCE WITH THE RESPECTIVE AGENCIES STANDARD SPECIFICATIONS AS DIRECTED BY THE DISTRICT ENGINEER.
- NO ENVIRONMENTAL PERMITS ARE REQUIRED FOR THIS WORK PROVIDED NO JURISDICTIONAL WETLANDS OR WATERS ARE IMPACTED. IF THERE IS ANY QUESTION AS TO WHETHER OR NOT A WATER OR WETLAND IS JURISDICTIONAL, CONTACT THE DELDOT ENVIRONMENTAL SECTION AT 302-760-2264.
- IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S EXISTING RIGHT OF WAY OR EASEMENT AREAS. SHOULD THE NEED OCCUR TO TRESPASS ONTO PRIVATE PROPERTY, IT WILL BE THE RESPONSIBILITY OF THE PROJECT MANAGER TO SECURE SUCH TRESPASS NEEDS.
- IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S RIGHT OF WAY. SHOULD THE NEED OCCUR TO TRESPASS ONTO RAILROAD PROPERTY, INCLUDING THE HIGHWAY-RAIL CROSSING, IT WILL BE THE RESPONSIBILITY OF THE PROJECT MANAGER TO CONTACT THE RAILROAD CHIEF ENGINEER AND OBTAIN WRITTEN AUTHORIZATION BEFORE ENTERING.
- THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR COORDINATING WITH THE TRAFFIC SECTION RELATING TO ANY IMPACTS TO TRAFFIC SECTION FACILITIES (INCLUDING BUT NOT LIMITED TO TRAFFIC LOOPS, JUNCTION WELLS ETC.) AT LEAST 4 WEEKS IN ADVANCE OF THE START OF THE ACTIVITY. PRIOR TO INITIATING ANY WORK ON THIS CONTRACT (OR SITES), THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING FOR APPROVAL OF THE SAFETY SECTION, A MAINTENANCE OF TRAFFIC PLAN. SUFFICIENT TIME SHALL BE PROVIDED FOR THE REVIEW AND APPROVAL OF THE PLAN. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE PROPOSED TIME RESTRICTIONS ON THE CLOSURE OF TRAVEL LANES SUBJECT TO THE APPROVAL OF THE SAFETY SECTION.
- THE PROJECT MANAGER IS RESPONSIBLE FOR ENSURING ANY REQUIRED DOCUMENTS AND ANALYSIS AS PART OF THE ADOPTED WORK ZONE SAFETY AND MOBILITY PROCEDURES AND GUIDELINES HAS BEEN COMPLETED PRIOR TO ANY WORK STARTING ON THIS CONTRACT.

CONSTRUCTION SPECIFICATIONS

CONSTRUCTION ON THIS SITE SHALL BE IN CONFORMANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED AUGUST 2001, WITH SPECIFICATION SECTIONS INDICATED BELOW:

- DIVISION 400 - BITUMINOUS PAVEMENTS  
SECTION 406 - HOT MIX PATCHING
- DIVISION 600 - STRUCTURES  
SECTION 602 - CONCRETE STRUCTURES
- DIVISION 800 - MATERIAL DETAILS  
SECTION 826 - STRUCTURAL STEEL

DESIGN DESIGNATION

FUNCTIONAL CLASS: _____	D.H.V. PROJECTED: _____	YEAR: _____
TYPE OF CONSTRUCTION: _____	DESIGN SPEED: _____ M.P.H.	
A.A.D.T. CURRENT: _____	YEAR: _____	TRUCKS: _____ %
A.A.D.T. PROJECTED: _____	YEAR: _____	DIRECTION OF DISTRIBUTION: _____ %

INDEX OF SHEETS

DRAWING No.	SHEET No.	TABLE OF CONTENTS
T1.0	1	TITLE
S1.0	2	GENERAL NOTES, SITE PLANS, & ABBREVIATIONS
S2.0	3	FOUNDATION PLAN (DAGSBORO & MAGNOLIA)
S2.1	4	FOUNDATION PLAN (SMYRNA)

TOTAL SHEETS: 4

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
N/A			

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME

RECOMMENDED

*Matthew S. ...* 7/27/12  
MAINTENANCE IMPROVEMENT ENGINEER DATE

*M. ...* 7/27/12  
ASSISTANT DIRECTOR STATEWIDE SUPPORT SERVICES DATE

*Gregory ...* 7/27/12  
DIRECTOR MAINTENANCE AND OPERATIONS DATE

RECOMMENDED AS TO PROCESS

*Natalie Barnhart*  
CHIEF ENGINEER  
DATE July 30, 2012

PREPARED & REVIEWED BY  
ENGINEERING CONSULTANT

C.C. JOHNSON & MALHOTRA, P.C.  
4660 TRINDLE ROAD  
CAMP HILL, PA. 17011  
TEL. 717-730-4160



RECOMMENDED

DATE

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**GENERAL NOTES**

- WORK PERFORMED SHALL COMPLY WITH THE FOLLOWING:
  - BUILDING CODES:  
INTERNATIONAL BUILDING CODE (IBC)
 

	DAGSBORO YARD (DAGSBORO)	MAGNOLIA YARD (MAGNOLIA)	SMYRNA SOD FARM (SMYRNA)
	2003 IBC	2006 IBC	2006 IBC
  - ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS
  - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION MANUAL PREPARED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION 2001 AND ALL APPLICABLE ADDITIONS AND REVISIONS.
- DESIGN LOADS:
 

	DAGSBORO	MAGNOLIA	SMYRNA
A. BUILDING CLASSIFICATION CATEGORY	I	I	I
B. GROUND SNOW P <sub>g</sub>	20 PSF	25 PSF	25 PSF
FLAT ROOF SNOW LOAD, P <sub>f</sub>	12 PSF	15.1 PSF	15.1 PSF
SNOW EXPOSURE FACTOR, C <sub>e</sub>	0.9	0.9	0.9
SNOW THERMAL FACTOR, C <sub>t</sub>	1.2	1.2	1.2
SNOW IMPORTANCE FACTOR, I	0.8	0.8	0.8
C. WIND SPEED	100 MPH	95 MPH	90 MPH
EXPOSURE	C	C	C
IMPORTANCE FACTOR, I	0.87	0.87	0.87
INTERNAL PRESSURE COEFFICIENT	±0.18	±0.18	±0.18
D. COLLATERAL LOAD	15 PLF	15 PLF	15 PLF
E. ROOF LIVE LOAD	5 PSF	5 PSF	5 PSF
F. SEISMIC DESIGN:			
SEISMIC IMPORTANCE FACTOR, I	1	1	1
MAPPED SPECTRAL RESPONSE ACCELERATION S <sub>a</sub>	0.12	0.16	0.20
MAPPED SPECTRAL RESPONSE ACCELERATION S <sub>i</sub>	0.04	0.05	0.05
SITE SOIL CLASS	D	D	D
SPECTRAL COEFFICIENT, S <sub>ds</sub>	0.13	0.17	0.21
SPECTRAL COEFFICIENT, S <sub>d1</sub>	0.07	0.08	0.08
SEISMIC DESIGN CATEGORY	B	B	B
BASIC STRUCTURAL SYSTEM	BUILDING FRAME	BUILDING FRAME	BUILDING FRAME
SEISMIC FORCE RESISTING SYSTEM:	STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE (TABLE 12.2-1H, ASCE 7-05)	STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE (TABLE 12.2-1H, ASCE 7-05)	STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE (TABLE 12.2-1H, ASCE 7-05)
DESIGN BASE SHEAR	2.96 KIPS	1.39 KIPS	2.08 KIPS
SEISMIC RESPONSE COEFFICIENT C <sub>s</sub>	0.04	0.06	0.07
RESPONSE MODIFICATION FACTOR	3	3	3
SEISMIC ANALYSIS	EQUIV. LATERAL FORCE PROCEDURE	EQUIV. LATERAL FORCE PROCEDURE	EQUIV. LATERAL FORCE PROCEDURE
G. MINIMUM SOIL BEARING PRESSURE:	2000 PSF	3000 PSF	3000 PSF
- FOR SHOP DRAWING SUBMITTALS, CONTRACTOR SHALL SUBMIT FIVE (5) SETS OF SHOP DRAWINGS. REPRODUCTIONS OF CONTRACT DRAWINGS ARE NOT TO BE SUBMITTED AS SHOP DRAWINGS.
- CONTRACTOR SHALL PROTECT EXISTING STRUCTURES, EQUIPMENT, ADJACENT GROUNDS AND PLANTS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT NO ADDITIONAL COSTS TO THE OWNER, ANY ITEMS DAMAGED DURING THE CONSTRUCTION.

**CONCRETE**

- CONCRETE AND REINFORCEMENT SHALL MEET THE REQUIREMENTS OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- CONCRETE FOR FOOTINGS SHALL BE CLASS B CONCRETE PER TABLE 812-A OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO USE.

**STRUCTURAL STEEL**

- STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ALL STRUCTURAL STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF A.I.S.C. "MANUAL OF STEEL CONSTRUCTION". ALL STEEL ANGLES AND PLATES SHALL BE ASTM A36. ALL STRUCTURAL STEEL TUBES SHALL BE ASTM A500 GRADE B. ANCHOR BOLTS SHALL BE ASTM A307 AND THREADED RODS SHALL BE ASTM F1554 GRADE 36 MINIMUM.
- ALL STRUCTURAL STEEL SHOP WORK TO BE WELDED WITH E70XXX ELECTRODES. FIELD WORK CONNECTIONS TO BE BOLTED WITH 3/4" HIGH STRENGTH A325X BOLTS OR WELDED WITH E70XXX ELECTRODES. PRE-DRILL HOLES IN STEEL MEMBERS AS REQUIRED FOR FASTENING, ETC.
- BASE PLATES SHALL BEAR ON LEVELING NUTS SET IN 1" THICKNESS OF APPROVED SHRINK RESISTANT GROUT EXCEPT WHEN SHOWN OTHERWISE, AND ANCHORED WITH FOUR (4) ANCHOR BOLTS. SHIM UNDER BASE PLATES AS REQUIRED.
- ALL STRUCTURAL STEEL FRAMING SHALL BE HOT DIP GALVANIZED.
- WIRE ROPE FITTINGS, INCLUDING EXTRA HEAVY THIMBLES, CLIPS, HOIST RINGS, AND TURNBUCKLES SHALL BE GALVANIZED AND MANUFACTURED BY THE CROSBY GROUP OR EQUIVALENT. ALL INSTALLATIONS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- WIRE ROPE SHALL BE GALVANIZED IMPROVED FLOW STEEL 6 x 19 INRC.

**FOUNDATIONS**

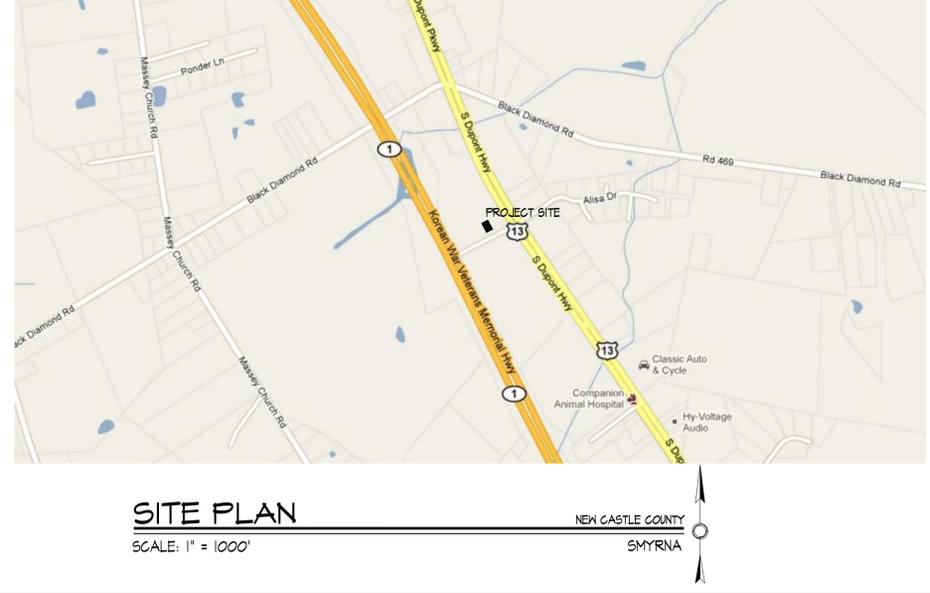
- CONTRACTOR SHALL NOTIFY "MISS UTILITY OF DELMARVA" PRIOR TO BEGINNING EXCAVATION FOR LOCATION OF UNDERGROUND UTILITIES.
- EXISTING FOOTINGS SHALL BE VERIFIED TO BEAR ON UNDISTURBED SOIL BELOW THE FROST LINE AND A MINIMUM OF 4'-0" BELOW EXISTING GRADE.
- NEW FOOTINGS SHALL BE DESIGNED TO BEAR ON UNDISTURBED SOIL BELOW THE FROST LINE AND A MINIMUM OF 4'-0" BELOW EXISTING GRADE.
- SOIL BEARING PRESSURES PROVIDED BY DELAWARE DEPARTMENT OF TRANSPORTATION. PROJECT NUMBER T20450014 DATED MARCH 11, 2011.

**HOT MIX PATCHING**

- DO NOT DISFIGURE ADJACENT ASPHALT PAVING. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT NO ADDITIONAL COSTS TO THE OWNER, ANY ASPHALT PAVING DAMAGED DURING THE CONSTRUCTION.
- PATCHING OF ASPHALT SHALL MEET THE REQUIREMENTS OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

**COATINGS**

- COAT BOTTOM 3'-0" OF EACH TRUSS OR ENDWALL POST MEMBER WITH CORROSION RESISTANT MASTIC TO PREVENT DETERIORATION OF TRUSS STRUCTURE FROM EXPOSURE TO STORED ROAD SALT MATERIALS.



CONTRACT T201280101	F.A.P. NO.	DRAWING NO. S1.0	SHEET NO. 2	TOTAL SHTS 4
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**DELAWARE DEPARTMENT OF TRANSPORTATION**  
FABRIC BUILDING REPLACEMENT  
DAGSBORO YARD, MAGNOLIA YARD, SMYRNA SOD FARM

**REVISIONS**


**ENGINEERING CONSULTANT**

C.C. JOHNSON & MALHOTRA, P.C.

**CCJM**

4660 TRINDLE ROAD  
CAMP HILL, PA. 17011  
TEL 717-730-4160

**GRAPHIC SCALE**

**ABBREVIATIONS**

ADD'L	ADDITIONAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
C	CENTERLINE
CONC.	CONCRETE
DIA.	DIAMETER
EA.	EACH
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
ETC.	ETCETERA
EX.	EXISTING
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
H.S.	HIGH STRENGTH
IBC	INTERNATIONAL BUILDING CODE
INFO.	INFORMATION
KIPS	1000 POUNDS
MAX.	MAXIMUM
MIN.	MINIMUM
MPH	MILES PER HOUR
O.C.	ON CENTER
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
TYP.	TYPICAL
V.I.F.	VERIFY IN FIELD
W	WITH

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PREL. TRACING \_\_\_\_\_ DESIGN \_\_\_\_\_ CHKD. \_\_\_\_\_

CONTRACT	F.A.P. NO.	DRAWING NO.	SHEET NO.	TOTAL SHTS
T201280101		S2.0	3	4

**DELAWARE DEPARTMENT  
OF TRANSPORTATION**  
FABRIC BUILDING REPLACEMENT  
DAGSBORO YARD, MAGNOLIA YARD, SMYRNA SOD FARM

REVISIONS

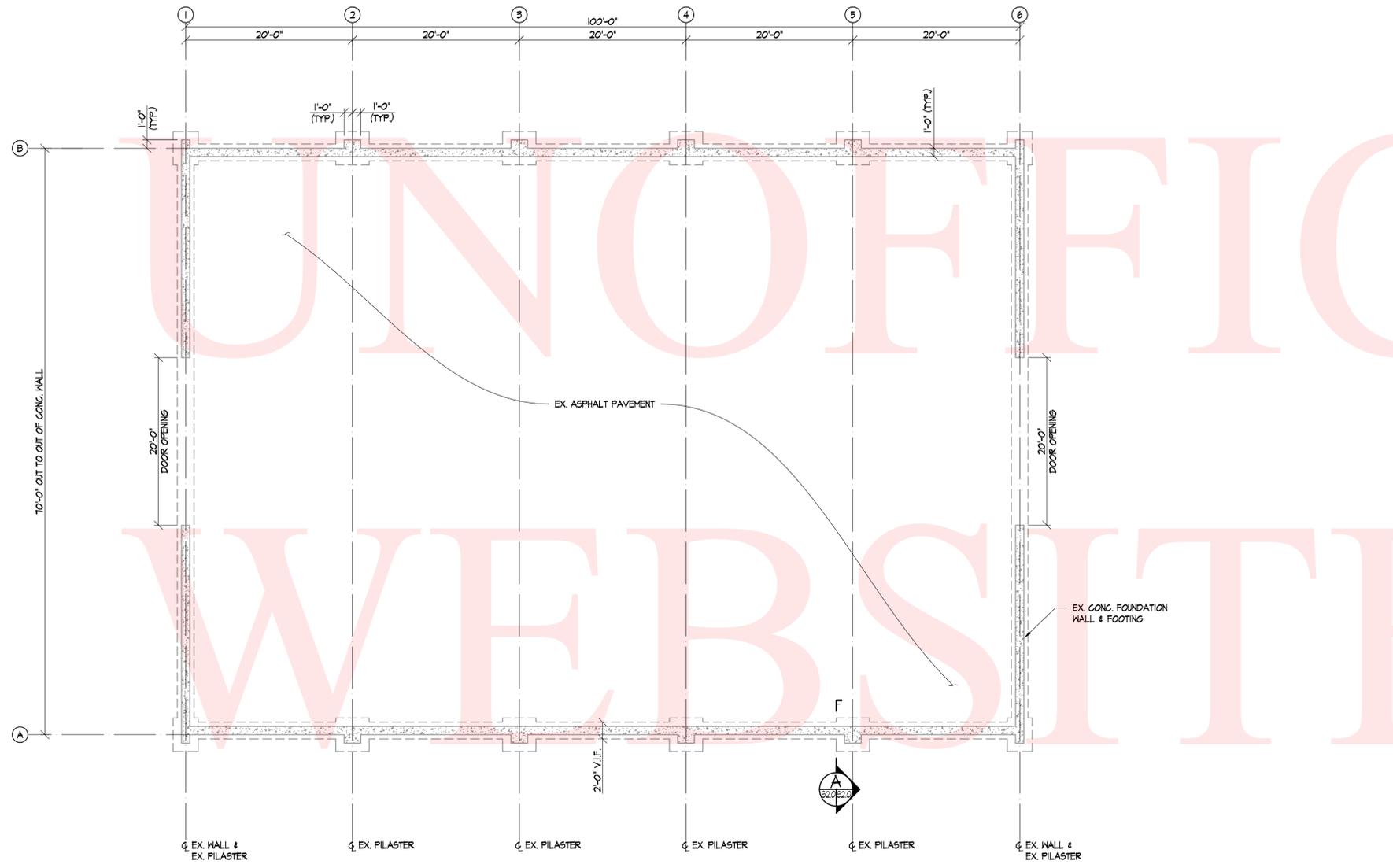


ENGINEERING CONSULTANT

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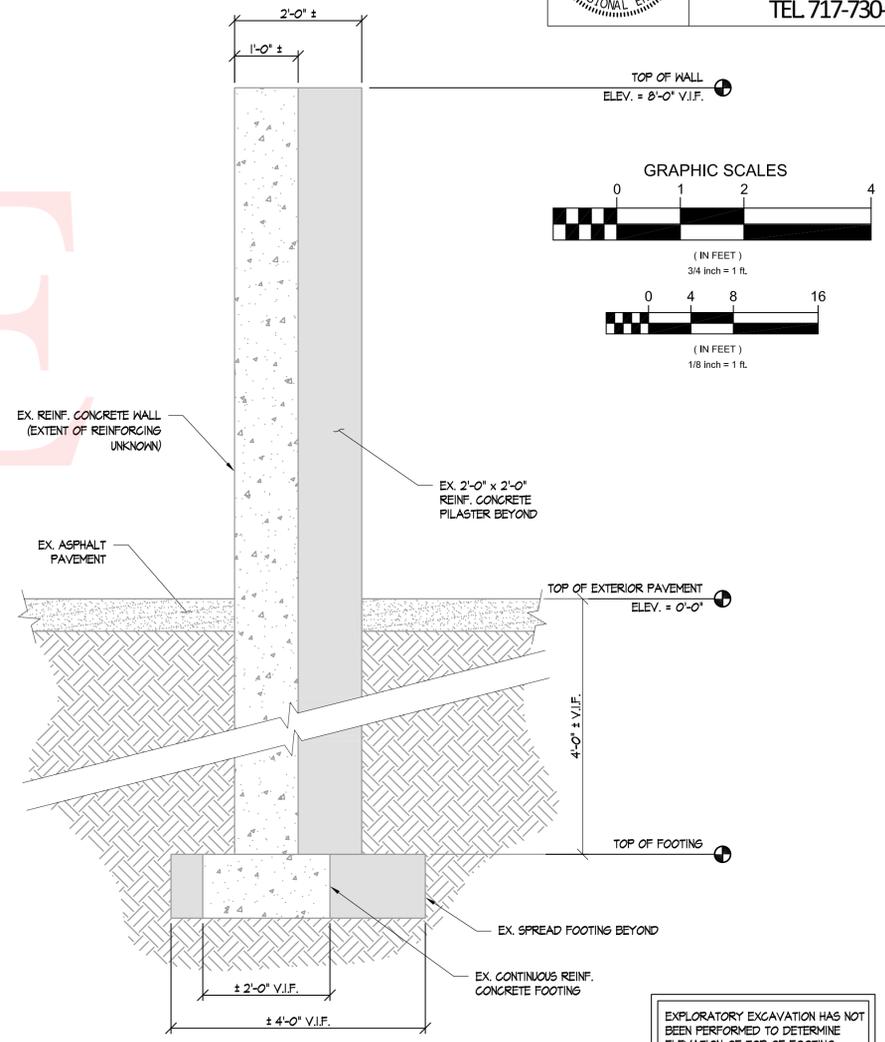
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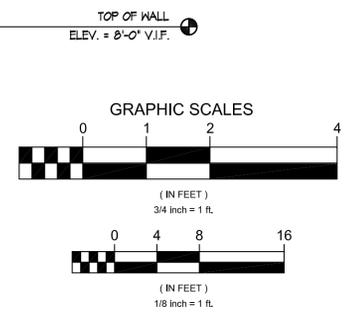


**FOUNDATION PLAN**  
SCALE: 1/8" = 1'-0"  
EXISTING  
DAGSBORO & MAGNOLIA

NOTE: GENERAL CONTRACTOR TO VERIFY EXISTING DIMENSIONS, SITE CONDITIONS, AND ELEVATIONS.



**SECTION**  
SCALE: 3/4" = 1'-0"  
EXISTING  
DAGSBORO & MAGNOLIA



EXPLORATORY EXCAVATION HAS NOT BEEN PERFORMED TO DETERMINE ELEVATION OF TOP OF FOOTING

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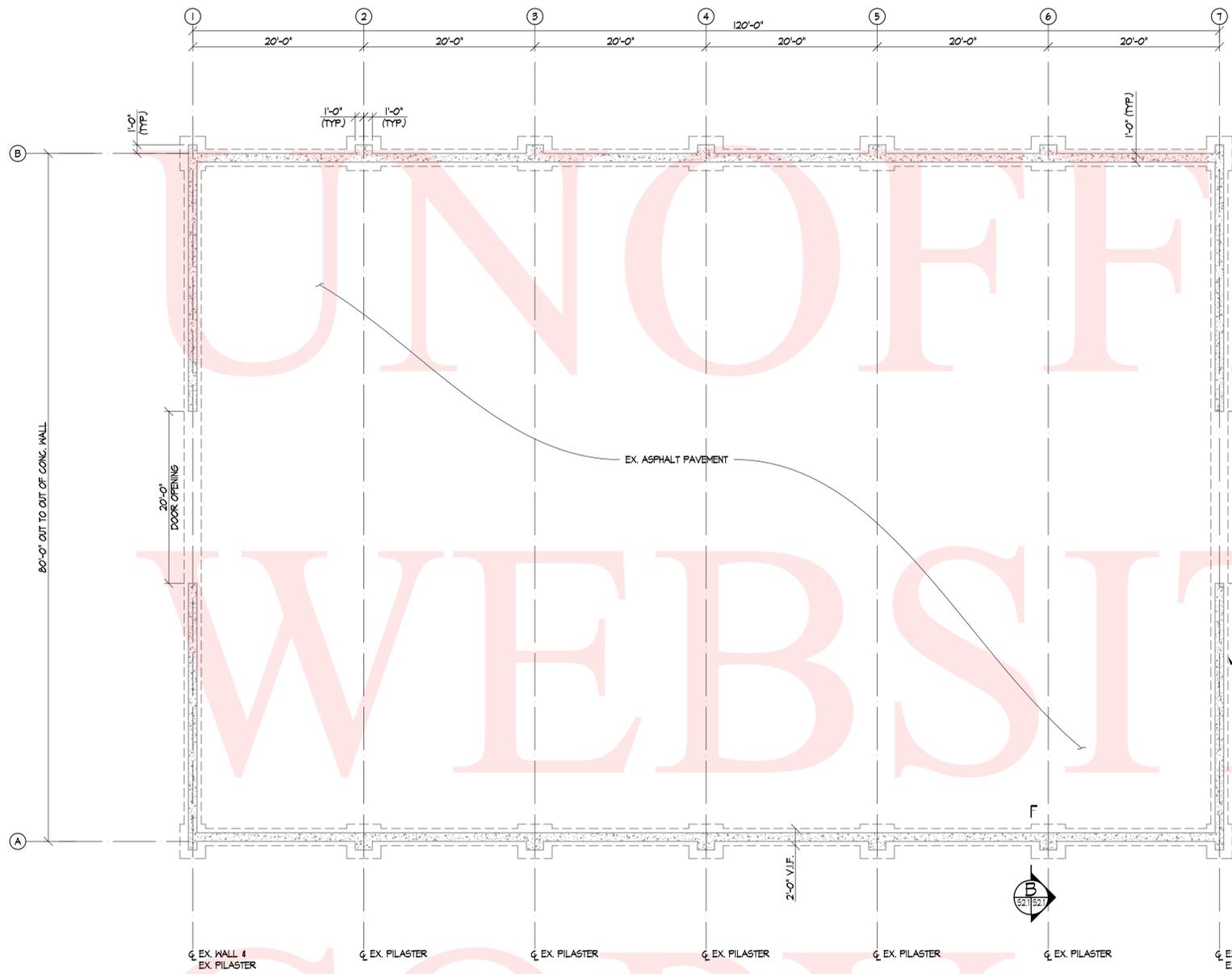
CONTRACT	F.A.P. NO.	DRAWING NO.	SHEET NO.	TOTAL SHTS
T201280101		S2.1	4	4

**DELAWARE DEPARTMENT  
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FABRIC BUILDING REPLACEMENT  
DAGSBORO YARD, MAGNOLIA YARD, SMYRNA SOD FARM

REVISIONS	

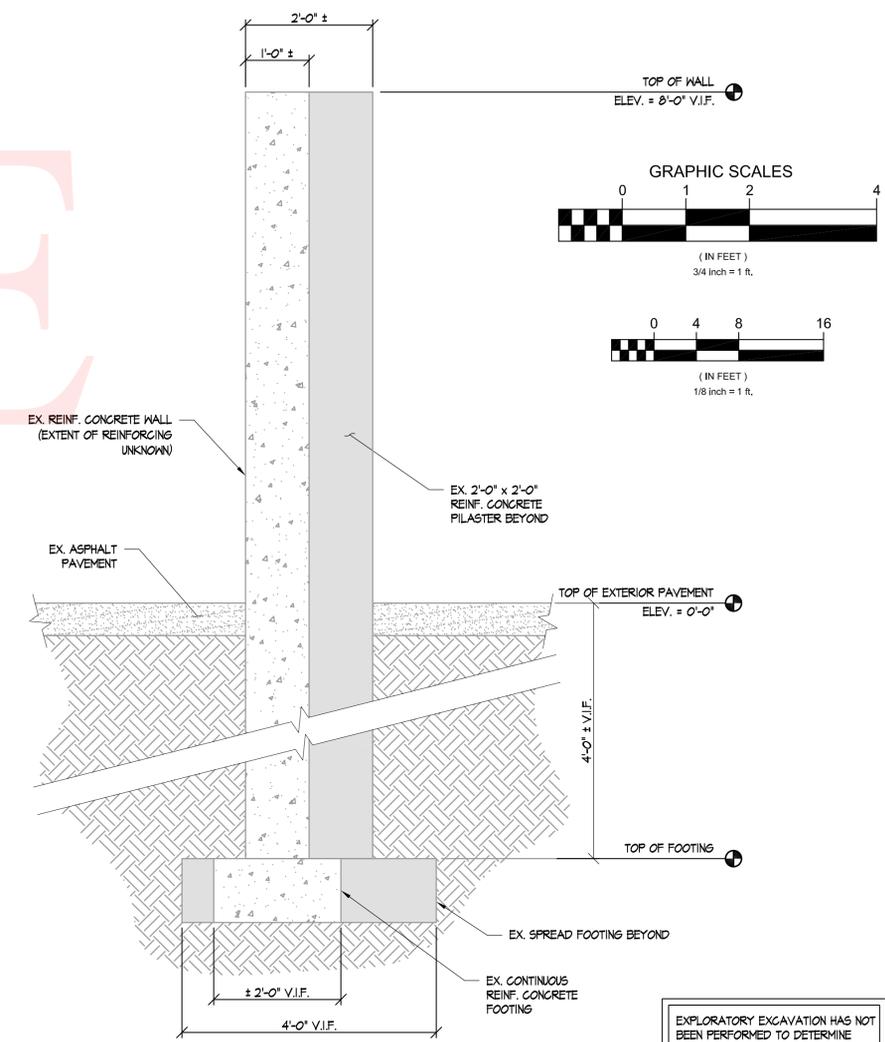
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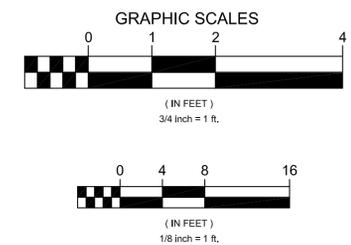


**FOUNDATION PLAN**  
SCALE: 1/8" = 1'-0"  
EXISTING SMYRNA

NOTE: GENERAL CONTRACTOR TO VERIFY EXISTING DIMENSIONS, SITE CONDITIONS, AND ELEVATIONS.



**SECTION**  
SCALE: 3/4" = 1'-0"  
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