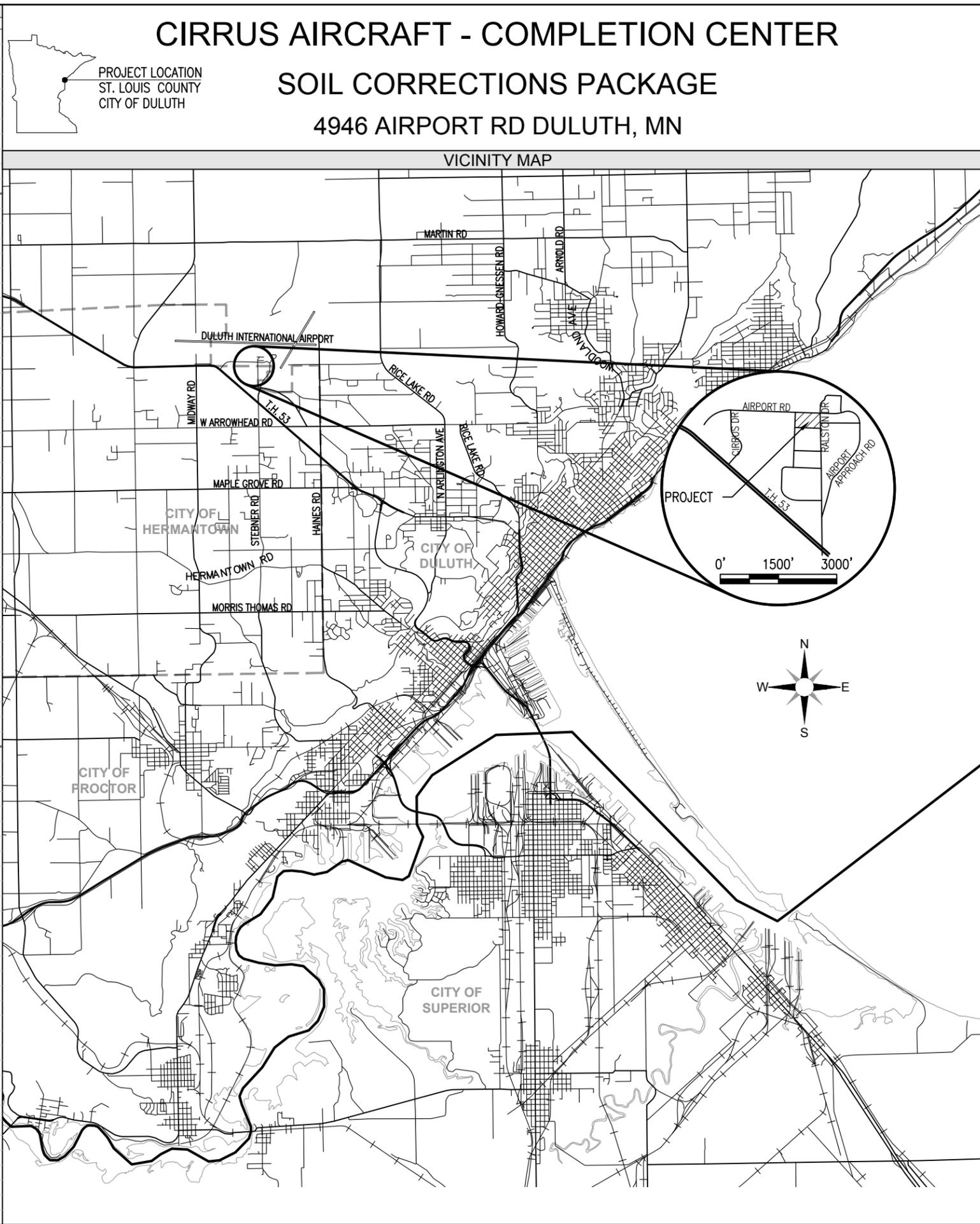


DESCRIPTION	PROPOSED	EXISTING	REMOVAL
SITE PROPERTY LINE	---	---	N/A
SECTION LINE	---	---	N/A
RIGHT OF WAY LINE	---	---	N/A
EASEMENT LINE	---	---	N/A
LOT LINE	---	---	N/A
CONTROL / BENCHMARK	△	△	N/A
RLS MONUMENT	⊙	⊙	N/A
T-BAR	N/A	⊥	N/A
CHISELED X	N/A	⊗	N/A
CALCULATED MONUMENT	N/A	⊙	N/A
REBAR / NAIL	N/A	•	N/A
CENTERLINE	---	---	N/A
PAVEMENT	▨	▨	✕
PAVERS	▨	▨	✕
CONCRETE	▨	▨	✕
SIDEWALK	▨	▨	✕
GRAVEL	▨	▨	✕
RIP RAP	▨	▨	✕
CURB & GUTTER	▨	▨	✕
STRIPING	▨	▨	✕
TRUNCATED DOMES	▨	N/A	N/A
FLAG POLE	⊙	⊙	⊙
MAIL BOX	⊙	⊙	⊙
POST	⊙	⊙	⊙
BOLLARD	⊙	⊙	⊙
PARKING METER	⊙	⊙	⊙
SIGN	⊙	⊙	⊙
CHAIN LINK FENCE	⊙	⊙	⊙
BARB WIRE FENCE	⊙	⊙	⊙
MISCELLANEOUS FENCE	⊙	⊙	⊙
GUARD RAIL	⊙	⊙	⊙
VEGETATION	⊙	⊙	⊙
TREE	⊙	⊙	⊙
WETLAND	N/A	N/A	N/A
BUILDING	▨	▨	▨
RETAINING WALL	▨	▨	▨
DOORS	▨	▨	▨
OVERHANG	▨	N/A	N/A
STOOP	▨	N/A	N/A
FOOTING	▨	N/A	N/A
DOWN DRAIN	▨	N/A	N/A
MAJOR CONTOUR LINE	---	---	N/A
MINOR CONTOUR LINE	---	---	N/A
TOP OF SLOPE	TOP	TOP	N/A
TOE OF SLOPE	TOE	TOE	N/A
SLOPE CATCH LINE (FILL)	F	N/A	N/A
SLOPE CATCH LINE (CUT)	C	N/A	N/A
FLOW LINE	←	←	N/A
OVERHEAD UTILITY LINE	OH	OH	OH
UTILITY POLE	⊙	⊙	⊙
GUY WIRE	⊙	⊙	⊙
VALVE	⊙	⊙	⊙
UTILITY BOX	⊙	⊙	⊙
METER	⊙	⊙	⊙
CLEANOUT	⊙	⊙	⊙
STORM PIPE	←	←	←
DRAINAGE MANHOLE	⊙	⊙	⊙
CB - SQUARE GRATE	⊙	⊙	⊙
CB - ROUND GRATE	⊙	⊙	⊙
APRON / END SECTION	⊙	⊙	⊙
FORCEMAIN PIPE	FM	FM	FM
SANITARY PIPE	←	←	←
SANITARY MANHOLE	⊙	⊙	⊙
WATER LINE	W	W	W
WATER MANHOLE	⊙	⊙	⊙
HYDRANT	⊙	⊙	⊙
WELL	⊙	⊙	⊙
GAS PIPE	G	G	G
GAS MANHOLE	⊙	⊙	⊙
REGULATOR	⊙	⊙	⊙
ELECTRICAL LINE	E	E	E
ELECTRICAL MANHOLE	⊙	⊙	⊙
LIGHT POLE	⊙	⊙	⊙
TRAFFIC SIGNAL	⊙	⊙	⊙
ELECTRICAL LINE	⊙	⊙	⊙
ELECTRICAL OUTLET	⊙	⊙	⊙
FIBER OPTIC LINE	FO	FO	FO
TELECOM LINE	T	T	T
CABLE TV LINE	CBL	CBL	CBL
COMMUNICATION MH	⊙	⊙	⊙



CIRRUS AIRCRAFT - COMPLETION CENTER

SOIL CORRECTIONS PACKAGE

4946 AIRPORT RD DULUTH, MN

PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF DULUTH



1-800-252-1166

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' AND THE 2014 EDITION OF THE 'MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN.

AVAILABLE AT:
<http://www.dot.state.mn.us/pre-letting/spec/index.html>

THE 2015 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY.

AVAILABLE AT:
<http://www.duluthmn.gov/engineering/standard-construction-specifications/>

UTILITY DETAIL LEVEL

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

WARNING:
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1-800-252-1166 REQUIRED BY LAW.

BASIS OF BEARING/CONTROL

CONTROL BASED ON THE ST. LOUIS COUNTY TRANSVERSE MERCATOR COORDINATE SYSTEM OF 1996

POINT NAME:	NORTHING:	EASTING:	ELEVATION:
CP (NAIL)	3361259.39	4820777.04	1428.23
BM (TNH)	3361388.31	4820179.12	1421.07

SHEET INDEX

SHEET NO.	DESCRIPTION
C1	TITLE SHEET
C2	EXISTING CONDITIONS AND REMOVALS
C3	SOIL CORRECTIONS
C4	EROSION CONTROL
C5	EROSION CONTROL DETAILS
C6	SWPPP NOTES
TOTAL OF <u>6</u> SHEETS	

Northland
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www.nce-engineers.com
Voice: (218) 727-5995
Fax: (218) 727-7779

CIRRUS AIRCRAFT - COMPLETION CENTER
SOIL CORRECTIONS PACKAGE
4946 AIRPORT RD DULUTH, MN

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
Engineer: David G. Wolf
Lic. No: 40926

revision
Proj #: 15-322.2-C
Date: 10/22/2015
Drawn By: JDO
Checked By: TPD

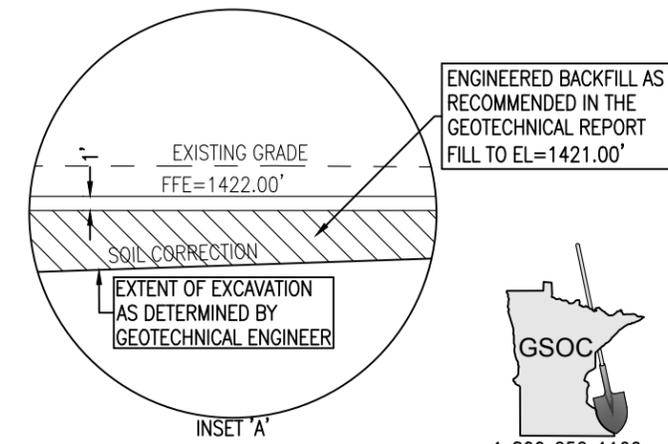
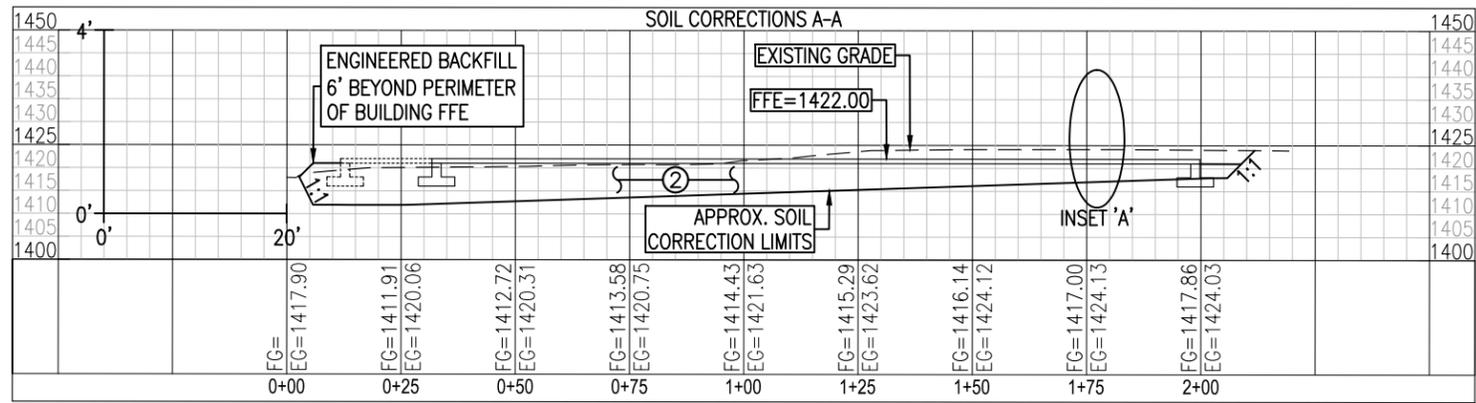
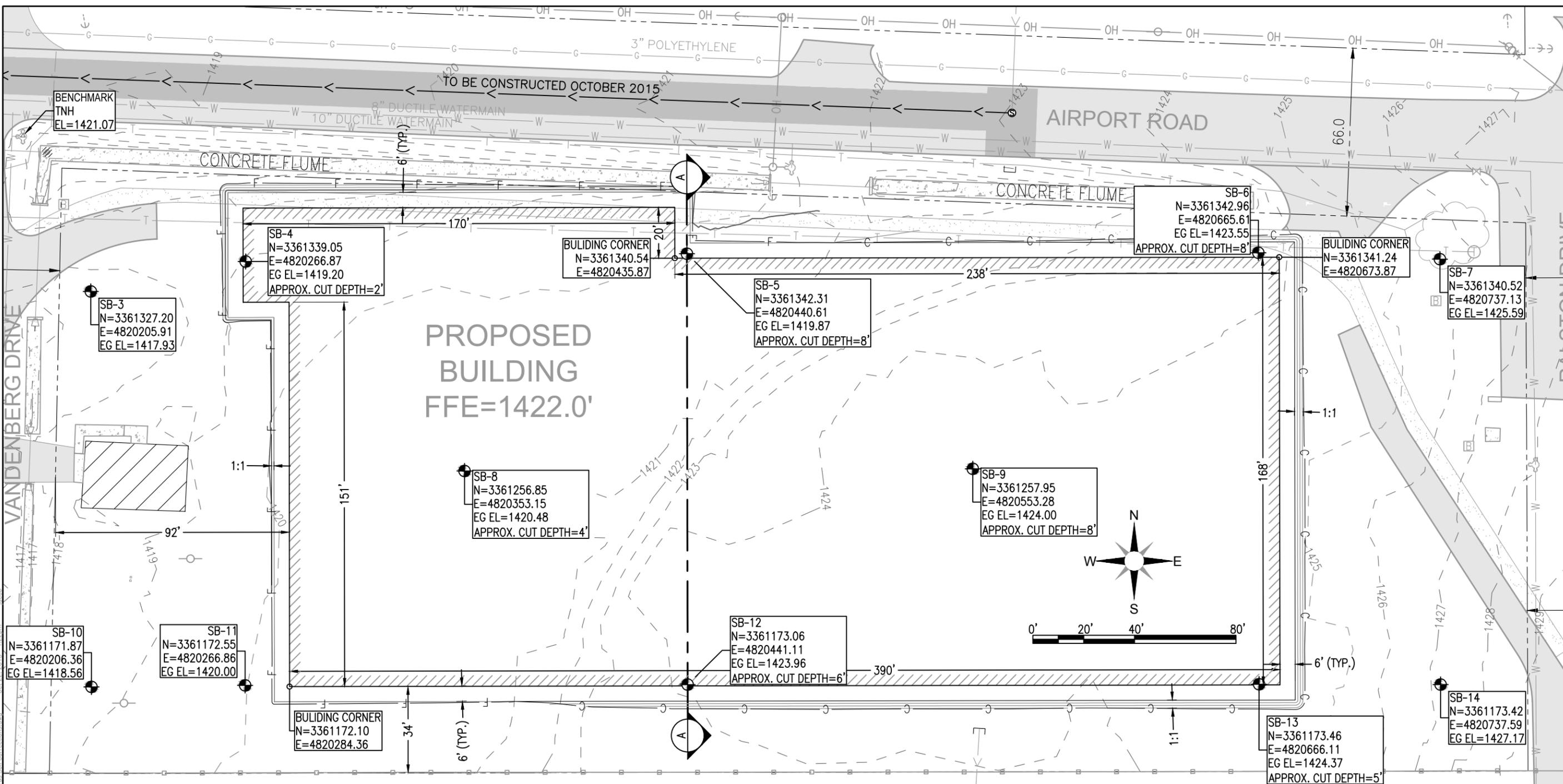
TITLE SHEET
Sheet Title
Sheet Number
C1

S:\ENGR - Civil\Projects\15-322-C - Cirrus Aircraft\Drawings\SHEETS - Cirrus Soil Corrections.dwg Oct 22, 2015 - 4:21pm jacob

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Engineer: David G. Wolf

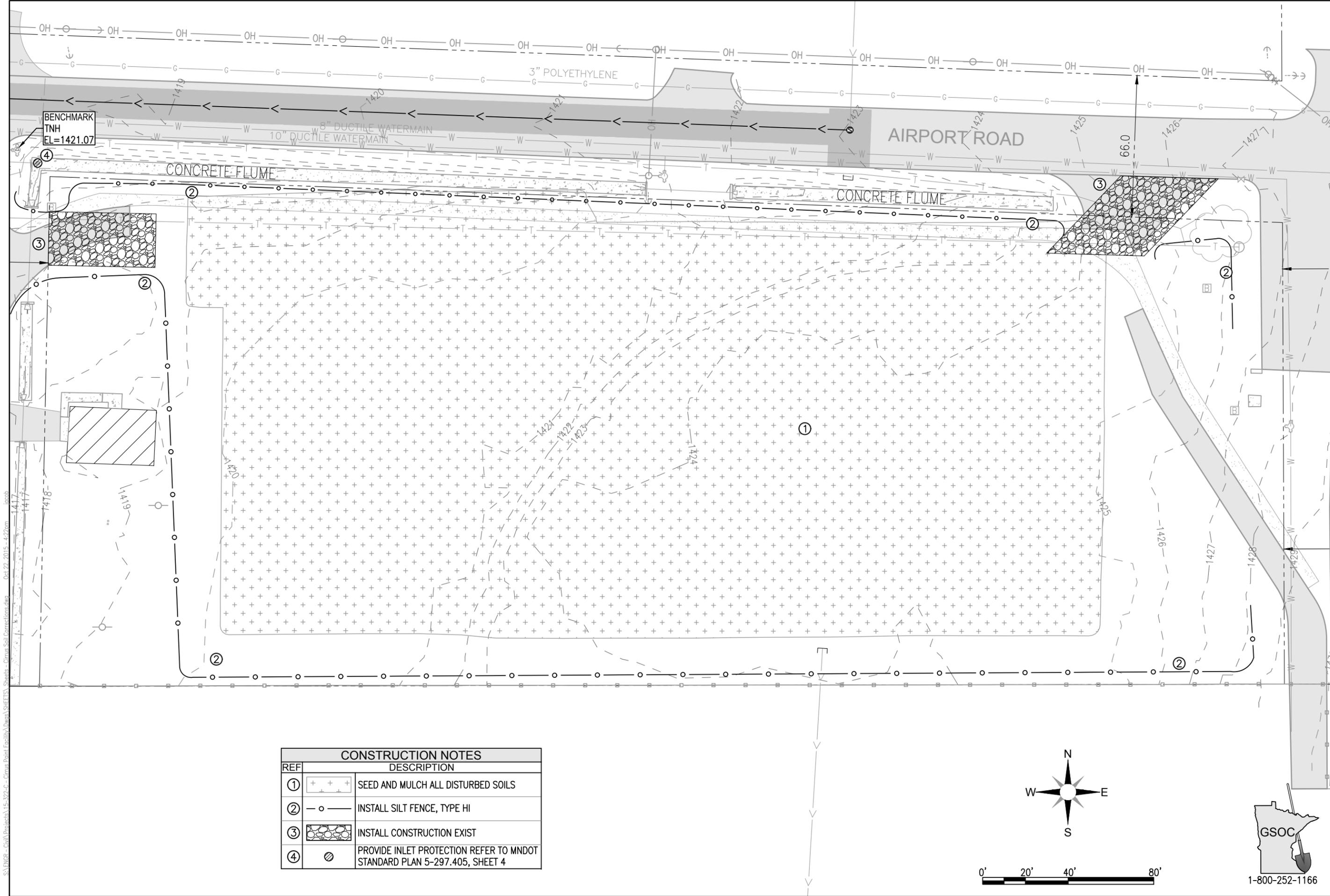
Lic. No: 40926



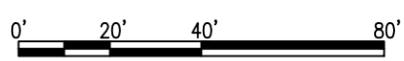
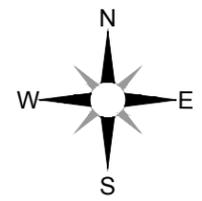
CONSTRUCTION NOTES

REF	DESCRIPTION
①	CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES
②	PLACE STRUCTURAL FILL. SEE INSET 'A'





CONSTRUCTION NOTES	
REF	DESCRIPTION
①	SEED AND MULCH ALL DISTURBED SOILS
②	INSTALL SILT FENCE, TYPE HI
③	INSTALL CONSTRUCTION EXIST
④	PROVIDE INLET PROTECTION REFER TO MNDOT STANDARD PLAN 5-297.405, SHEET 4



1-800-252-1166

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

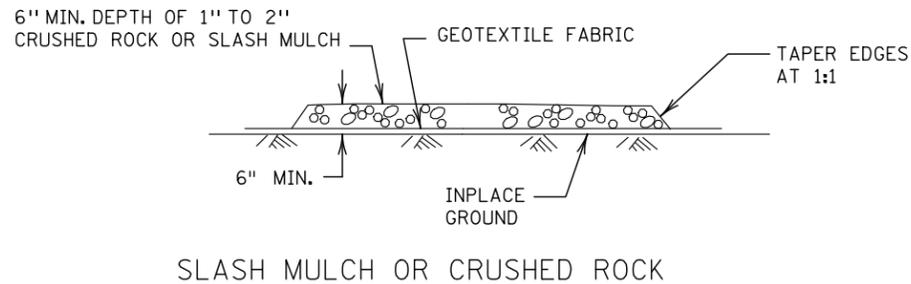
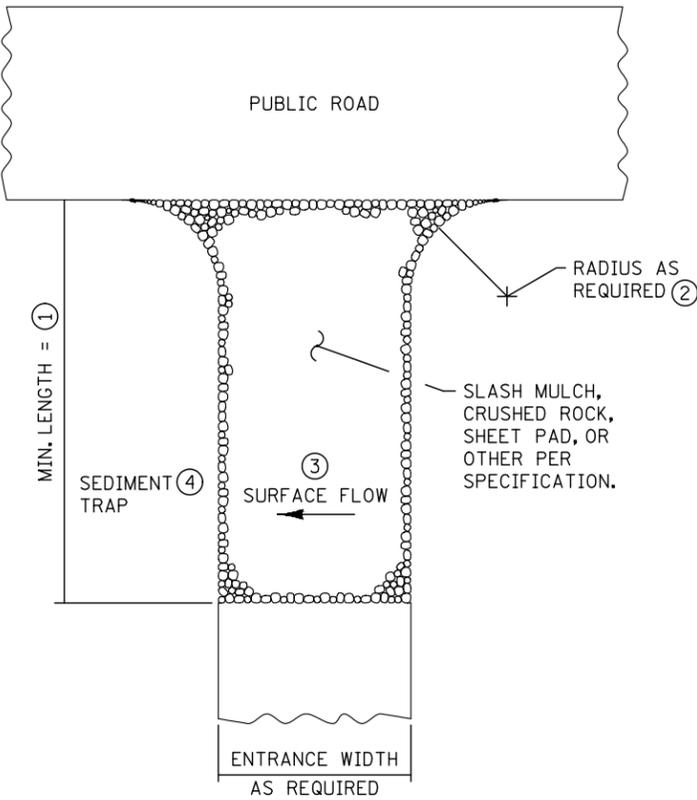
[Signature]
 Engineer: David G. Bolt
 Lic. No: 40926

revision _____
 Proj #: 15-322.2-C
 Date: 10/22/2015
 Drawn By: JDO
 Checked By: TPD

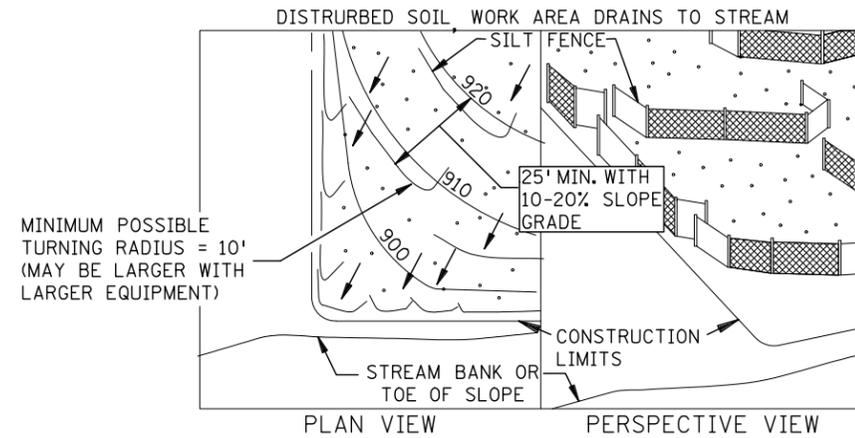
EROSION CONTROL
 Sheet Title _____
 Sheet Number _____

C4

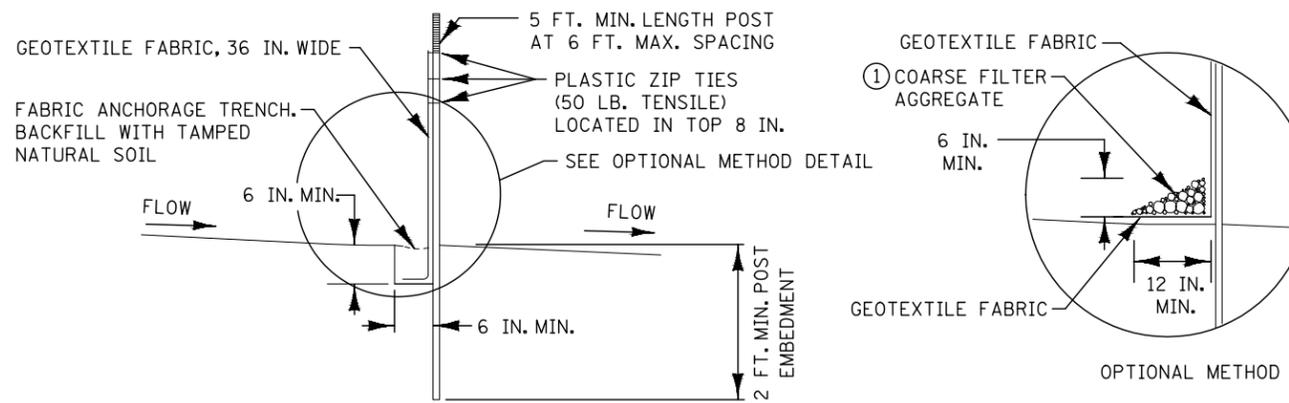
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SLASH MULCH OR CRUSHED ROCK



J-HOOK INSTALLATION



- NOTES:
SEE SPECS. 2573, 3149 & 3886.
- ① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.
 - ② TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

SILT FENCE TYPE HI ②
(HAND INSTALLED)

DISTURBED SOILS CALCULATIONS	
DESCRIPTION	AREA
TOTAL AREA	3.01 ACRES
TOTAL DISTURBED AREA	1.90 ACRES
EXISTING IMPERVIOUS AREA	0.152 ACRES
POST CONSTRUCTION IMPERVIOUS AREA	0.00 ACRES
CHANGE IN IMPERVIOUS AREA	0.152 ACRE DECREASE

BMP ITEMS	
DESCRIPTION	APPROXIMATE QUANTITIES
SEED AND MULCH	2 ACRES
SILT FENCE	1400 LF
INLET PROTECTION	1 EA
CONSTRUCTION EXIT	1 EA

- NOTES:
SEE SPECS. 2573 & 3882.
- ① MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
 - ② PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
 - ③ IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
 - ④ IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
 - ⑤ IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
 - ⑥ MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

TEMPORARY SEDIMENT CONTROL
CONSTRUCTION EXIT ⑤⑥

NTS.

NTS.

