

DRAWN BY: R.W.
 CHECKD BY: C.W.P.
 C.W.P. 16-1665

DESIGN BY: C.W.P.
 PROJ. NO. 16-1665

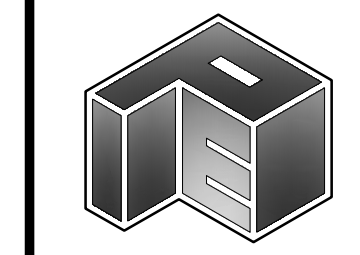
ORIGINAL DATE: MARCH 9, 2017

| DATE | REVISION DESCRIPTION |
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I hereby certify that this plan 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.
CHARLES W. FLOWE
 LIC. NO. 16227
 DATE: 04.05.2017

TROTT BROOK HALL
 RAMSEY, MINNESOTA
 SITE PLAN

PREPARED FOR:
BRAD DUCOMMUN

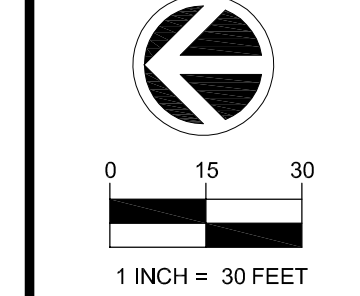


SITE PLANNING & ENGINEERING

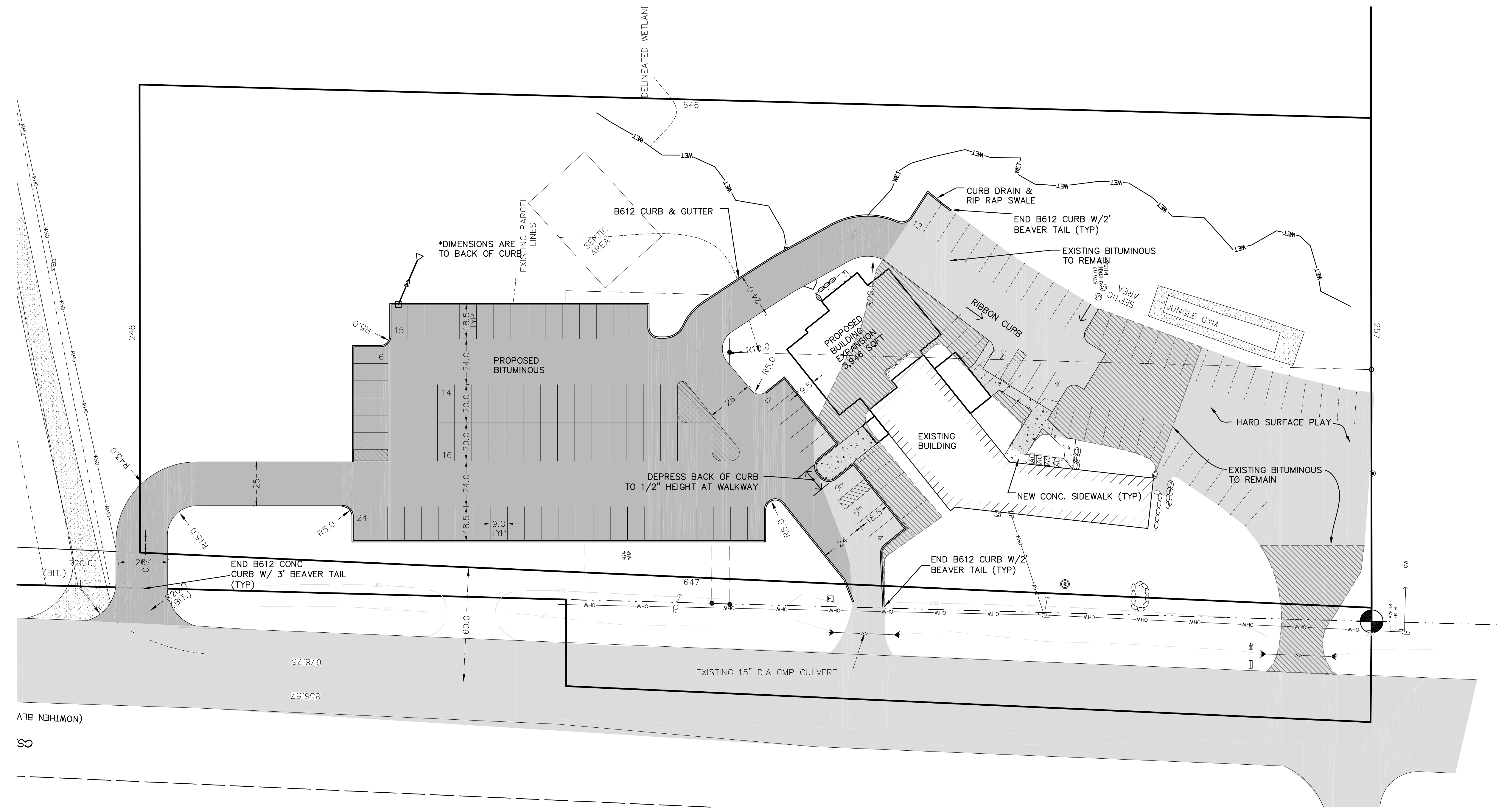
PLOWE ENGINEERING, INC.

6776 LAKE DRIVE
 SUITE 110
 LINO LAKES, MN 55014
 PHONE: (651) 361-8210
 FAX: (651) 361-8701

NORTH



C2



| SURFACE AREAS (WITHIN SITE BOUNDARIES) | |
|---|------------|
| EXISTING | |
| PERVIOUS | 112,208 SF |
| IMPERVIOUS | 45,463 SF |
| TOTAL AREA | 157,671 SF |
| PERCENT IMPERVIOUS | 28.8% |
| PROPOSED | |
| PERVIOUS | 96,897 SF |
| IMPERVIOUS | 60,774 SF |
| TOTAL AREA | 157,671 SF |
| PERCENT IMPERVIOUS | 38.5% |

**CIVIL SITE PLAN
 TROTT BROOK HALL**



4/2/2017

GRADING, DRAINAGE & EROSION CONTROL NOTES

PRIOR TO ANY GRADING OPERATIONS, THE CONTRACTOR SHALL PROVIDE MIMCO INLET PROTECTION (OR OTHER APPROVED EQUAL) FOR ALL STORM SEWER INLETS THAT WILL RECEIVE RUN-OFF FROM CONSTRUCTION ACTIVITIES.

CONTRACTOR TO PROVIDE TOPSOIL STOCKPILES AT LOCATION DESIGNATED BY OWNER. PLACE STOCKPILES AS FAR FROM DRAINAGE WAYS AS POSSIBLE. PROVIDE SILT FENCE AT DOWNSTREAM SIDE OF STOCKPILE LOCATIONS. IF STOCKPILE IS TO BE IN-PLACE LONGER THAN 7 DAYS, PROVIDE SEED AND MULCH.

THE CONTRACTOR SHALL PROVIDE ALL SOD, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

| ITEM | MNDOT SPECIFICATION/NOTES |
|--------------------------|----------------------------------|
| SOD | 3878 |
| SEED ** | 3876 |
| * FOR TURF ESTABLISHMENT | |
| COMMERCIAL TURF | MNDOT MIX 25-131 (220 LBS/ACRE) |
| RESIDENTIAL TURF | MNDOT MIX 25-131 (120 LBS/ACRE) |
| TEMPORARY | |
| FALL COVER | MNDOT MIX 21-112 (100 LBS/ACRE) |
| SPRING/SUMMER | MNDOT MIX 21-111 (100 LBS/ACRE) |
| SOIL-BUILDING COVER | MNDOT MIX 21-113 (110 LBS/ACRE) |
| 1-2 YEARS COVER | MNDOT MIX 22-111 (30.5 LBS/ACRE) |
| 2-5 YEARS COVER | MNDOT MIX 22-112 (40 LBS/ACRE) |
| MULCH | 3882 (TYPE 1 - DISC ANCHORED) |
| FERTILIZER | 3881 |
| WOOD FIBER BLANKET | 3885 (CATEGORY 2) |

* MOW A MINIMUM OF:
RESIDENTIAL TURF - ONCE PER 2 WEEKS
COMMERCIAL TURF - ONCE PER 4 WEEKS

** SEEDS ARE TO BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY AND NPDES PHASE II PERMIT REQUIREMENTS, AND THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS BEST MANAGEMENT PRACTICES FOR MINNESOTA."

THE CONTRACTOR SHALL PROVIDE DESIGNATED CONCRETE TRUCK WASHOUT AREA WITH APPROPRIATE SIGNAGE. WASHOUT AREA IS TO BE A MINIMUM OF 50' FROM STORM DRAINS, DITCHES, PONDS, OR OTHER STORMWATER FEATURES. ALL LIQUID AND SOLID WASTE GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER (E.G. COMPACTED CLAY LINER, IMPERMEABLE GEO-MEMBRANE). AFTER WASTE CONCRETE IS SET, BREAK-UP AND DISPOSE OF PROPERLY.

THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES IN-PLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.

THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.

IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.

THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.

THE CONTRACTOR SHALL SOD ALL DISTURBED DRAINAGE AREAS, INCLUDING SWALES, OVERFLOWS, AROUND STORM SEWER FLARED-END SECTIONS, AND OFF-STREET CATCH BASINS.

UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING.

EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN 72 HOURS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES AND SHALL NOT BE PLACED IN SURFACE WATERS.

ADJACENT STREETS SHALL BE KEPT CLEAN OF CONSTRUCTION MATERIALS, DIRT, AND OTHER UNDESIRABLE MATERIALS. WHEN MATERIALS OR DEBRIS HAVE WASHED/FLOWED ONTO ADJACENT STREETS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP/SCRAPE STREETS AS NECESSARY OR AS DIRECTED BY THE CITY.

CURB & BITUMINOUS NOTES

REMOVAL AND DISPOSAL OF EXISTING STREET MATERIALS AS REQUIRED FOR CONSTRUCTION IS CONSIDERED INCIDENTAL.

SAW-CUT EXISTING BITUMINOUS AND CONCRETE CURB TO PROVIDE BUTT-JOINT.

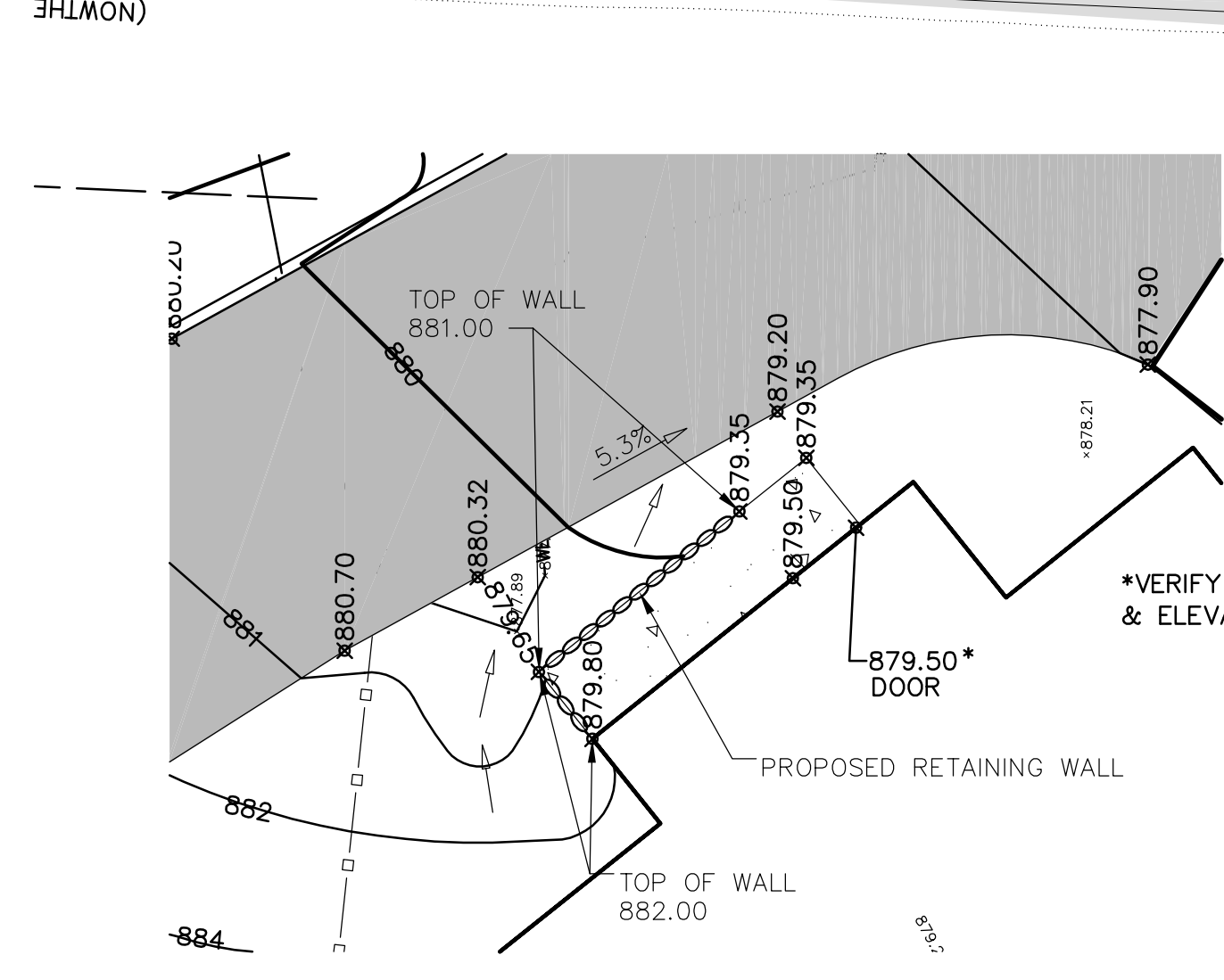
RESTORE DISTURBED STREET TO EXISTING OR BETTER SECTION.

BACKFILLING OF CURB IS INCIDENTAL TO CURB INSTALLATION.

FOUR INCHES OF CLASS 5 UNDER CURB IS INCIDENTAL TO CURB INSTALLATION.

CURB ENDS SHALL TERMINATE IN A THREE-FOOT BEAVER TAIL.

PROPOSED ELEVATIONS ARE CURB GUTTER LINE OR BITUMINOUS SURFACE UNLESS OTHERWISE NOTED.



DETAIL A
(SCALE 1"=10')



**GRADING & DRAINAGE PLAN
TROTT BROOK**

DRAWN BY: R.W.
DESIGN BY: C.W.P.
CHKD BY: C.W.P.
PROJ. NO. 16-1665

ORIGINAL DATE: MARCH 9, 2017

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I hereby certify that this plan 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.

Charlton W. Plowe
CHARLES W. PLOWE LIC. NO. 06227
DATE: 04.05.2017

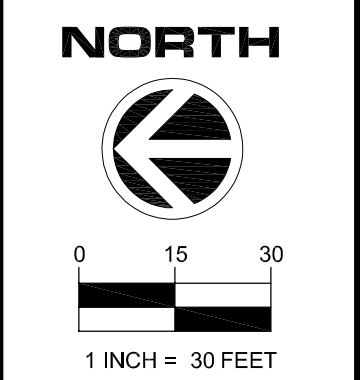
TROTT BROOK
RAMSEY, MINNESOTA
GRADING & DRAINAGE PLAN

PREPARED FOR:
BRAD DUCOMMUN

SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

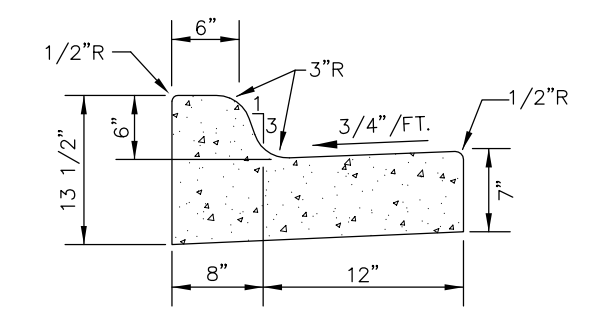
6776 LAKE DRIVE
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4/2/2017

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PROVIDE 4" CLASS 5 UNDER CURB (TYP)

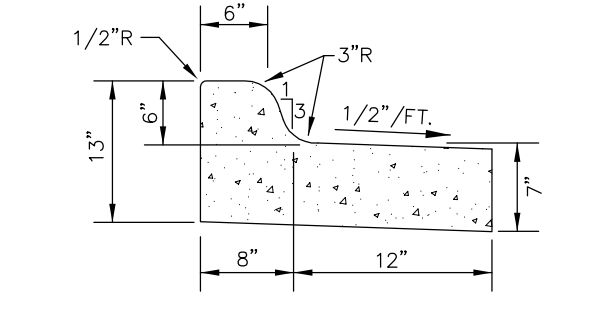


NOTE: FOR MECHANICALLY LAID CURB, SHOE MAY BE TILTED.

B612 CONCRETE CURB & GUTTER

NOT TO SCALE

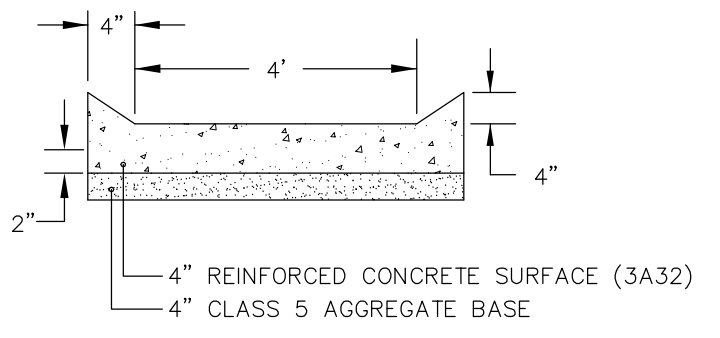
PROVIDE 4" CLASS 5 UNDER CURB (TYP)



NOTE: FOR MECHANICALLY LAID CURB, SHOE MAY BE TILTED.

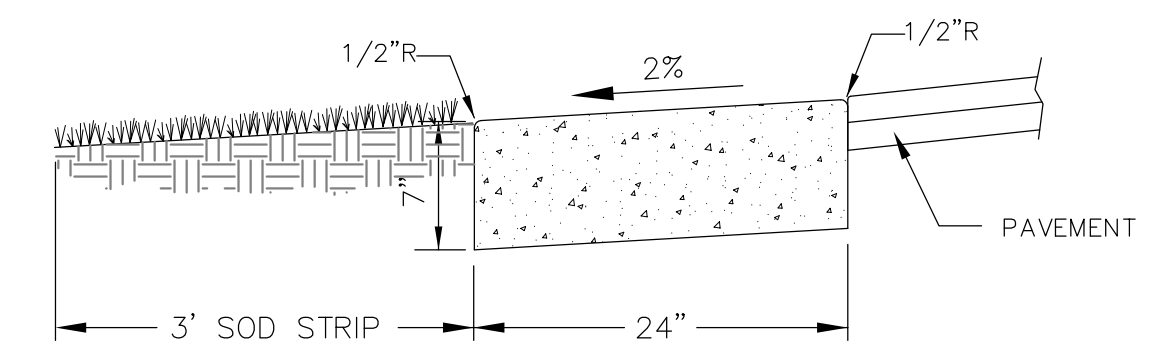
B612 CONCRETE CURB & GUTTER (TIP-OUT)

NOT TO SCALE



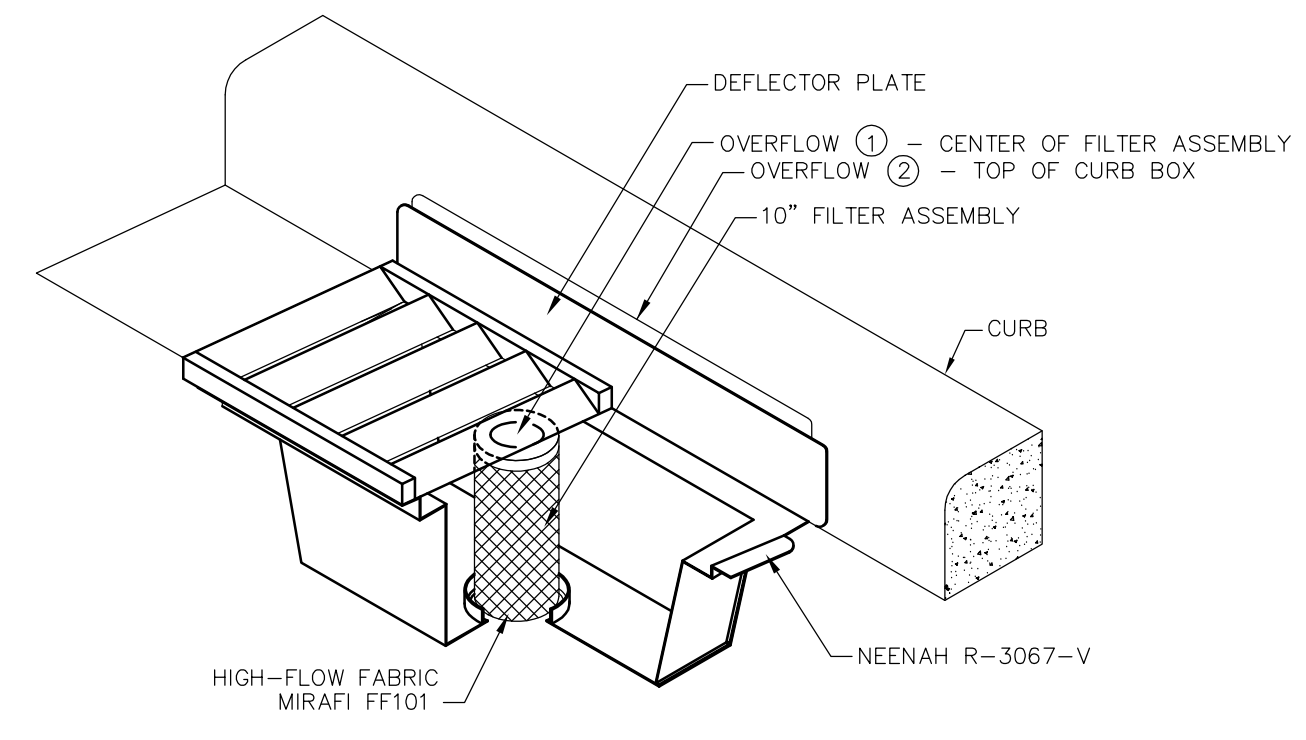
CONCRETE SPILLWAY

NOT TO SCALE



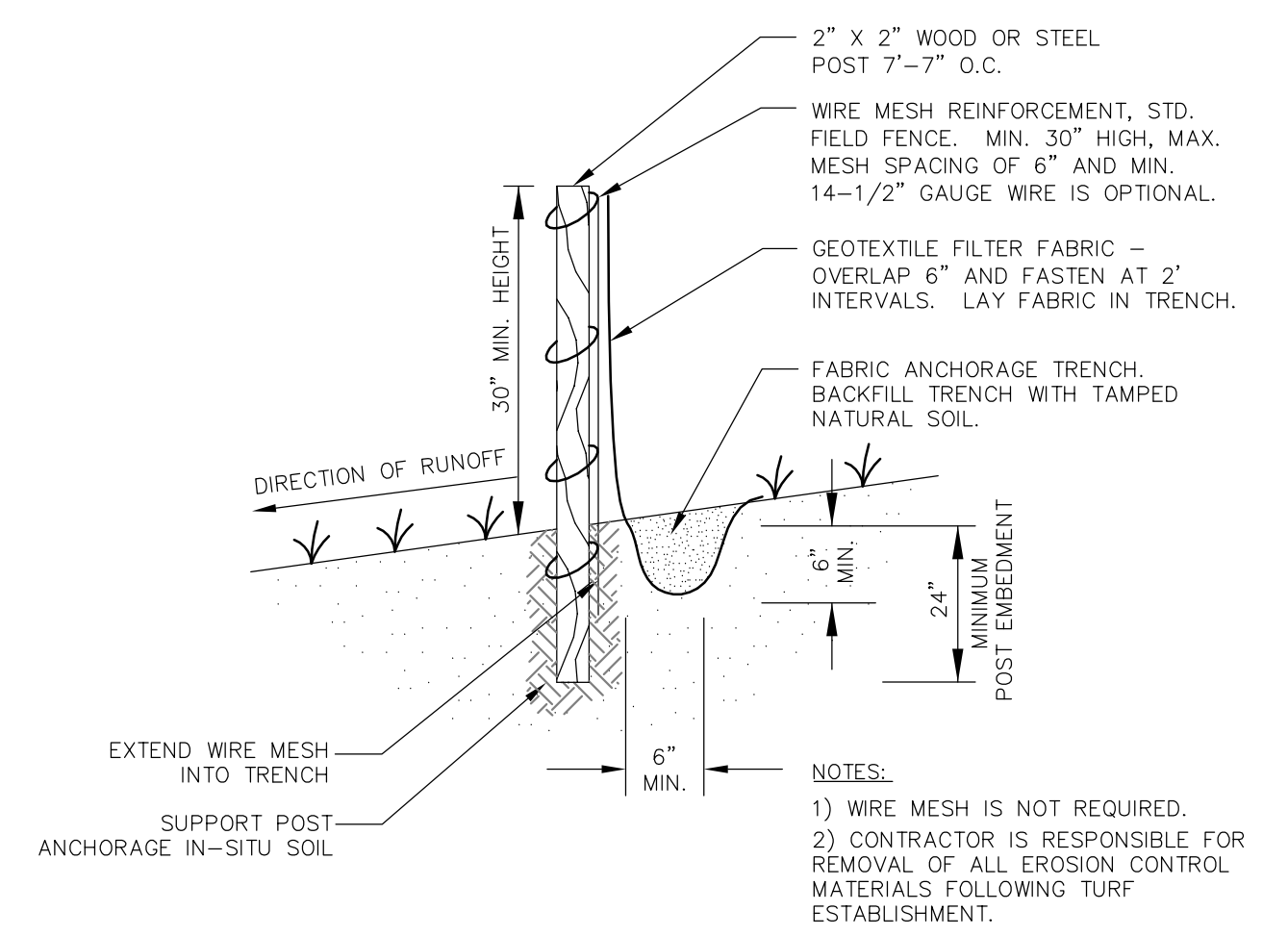
CONCRETE RIBBON CURB

NOT TO SCALE



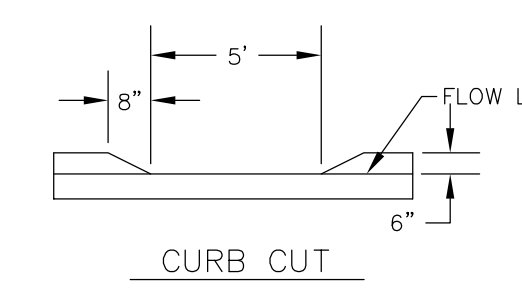
WIMCO INLET PROTECTION

NOT TO SCALE

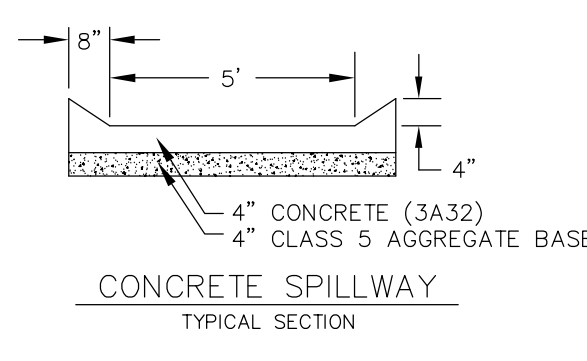


SILT FENCE

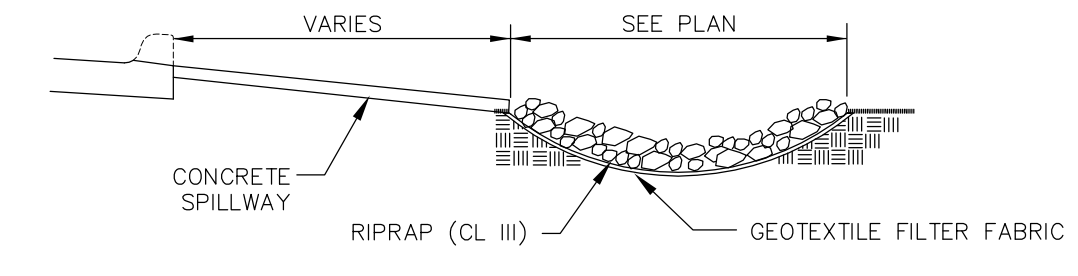
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CURB CUT



CONCRETE SPILLWAY TYPICAL SECTION



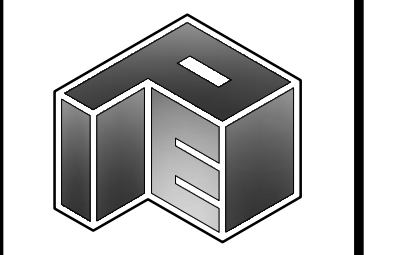
CURB DRAIN OPENING

NOT TO SCALE

I hereby certify that this plan 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.
CHARLES W. FLOWE
 LIC. NO. 16227
 DATE: 04.05.2017

TROTT BROOK HALL
RAMSEY, MINNESOTA
 DETAILS

PREPARED FOR:
BRAD DUCOMMUN



SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

6776 LAKE DRIVE
 SUITE 110
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 PHONE: (651) 361-8210
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DETAILS TROTT BROOK HALL

C4

PART II.C. – TERMINATION OF COVERAGE

1. TERMINATION OF COVERAGE WHEN CONSTRUCTION IS COMPLETE: ALL PERMITEE(S) MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCOA ON A FORM PROVIDED BY THE COMMISSIONER WITHIN 30 DAYS AFTER ALL ACTIVITIES REQUIRED FOR FINAL STABILIZATION (SEE PART IV.G.) ARE COMPLETE. THE PERMITEE(S)' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT.

2. TERMINATION OF COVERAGE WHEN TRANSFER OF OWNERSHIP OCCURS: ALL PERMITEE(S) MUST SUBMIT A NOT ON A FORM PROVIDED BY THE COMMISSIONER WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITEE(S)' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT.

3. PERMITEE(S) MAY TERMINATE PERMIT COVERAGE PRIOR TO COMPLETION OF ALL CONSTRUCTION ACTIVITY IF ALL OF THE FOLLOWING CONDITIONS ARE MET. AFTER THE PERMIT IS TERMINATED UNDER THIS PART, IF THERE IS ANY SUBSEQUENT DEVELOPMENT ON THE REMAINING PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WAS NOT COMPLETE, NEW PERMIT COVERAGE MUST BE OBTAINED IF THE SUBSEQUENT DEVELOPMENT ITSELF OR AS PART OF THE REMAINING COMMON PLAN OF DEVELOPMENT OR SALE WILL RESULT IN LAND DISTURBING ACTIVITIES OF ONE (1) OR MORE ACRES IN SIZE.

- A. CONSTRUCTION ACTIVITY HAS CEASED FOR AT LEAST 90 DAYS.
B. AT LEAST 90 PERCENT (BY AREA) OF ALL ORIGINALLY PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED AND PERMANENT COVER ESTABLISHED ON THOSE AREAS.
C. ON AREAS WHERE CONSTRUCTION ACTIVITY IS NOT COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED.
D. THE SITE IS IN COMPLIANCE WITH PART IV.G.2. AND PART IV.G.3. AND WHERE APPLICABLE, PART IV.G.4. OR PART IV.G.5.

4. PERMITEE(S) MAY TERMINATE COVERAGE UPON APPROVAL BY THE MPCOA IF INFORMATION IS SUBMITTED TO THE MPCOA DOCUMENTING THAT TERMINATION IS APPROPRIATE BECAUSE THE PROJECT IS CANCELED.

PART III.A.3 – TRAINING DOCUMENTATION

TRAINING DOCUMENTATION: THE PERMITEE(S) SHALL ENSURE THE INDIVIDUALS IDENTIFIED IN PART III.F. HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS. THE PERMITEE(S) SHALL ENSURE THE TRAINING IS RECORDED IN OR WITH THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS THE PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. DOCUMENTATION SHALL INCLUDE:

- A. NAMES OF THE PERSONNEL ASSOCIATED WITH THIS PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART III.F.1. OF THIS PERMIT.
B. DATES OF TRAINING AND NAME OF INSTRUCTOR(S) AND ENTITY PROVIDING TRAINING.
C. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.

PART III.B – SWPPP AMENDMENTS

THE PERMITEE(S) MUST AMEND THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPs THAT ARE DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS CONCERNS WHENEVER:

- 1. THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS.
2. INSPECTIONS OR INVESTIGATIONS BY SITE OWNER OR OPERATORS, USEPA OR MPCOA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS OR THAT THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2).
3. THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVES OF MINIMIZING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR THE SWPPP IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THIS PERMIT.
4. AT ANY TIME AFTER PERMIT COVERAGE IS EFFECTIVE, THE MPCOA MAY DETERMINE THAT THE PROJECT'S STORMWATER DISCHARGES MAY CAUSE, HAVE REASONABLE POTENTIAL TO CAUSE, OR CONTRIBUTE TO NON-ATTAINMENT OF ANY APPLICABLE WATER QUALITY STANDARD, OR THAT THE SWPPP DOES NOT INCORPORATE THE APPLICABLE REQUIREMENTS IN PART III.A.8., (IMPAIRED WATERS AND TMDLS), IF A WATER QUALITY STANDARD CHANGES DURING THE TERM OF THIS PERMIT, THE MPCOA WILL MAKE A DETERMINATION AS TO WHETHER A MODIFICATION OF THE SWPPP IS NECESSARY TO ADDRESS THE NEW STANDARD. IF THE MPCOA MAKES SUCH DETERMINATION(S) OR ANY OF THE DETERMINATIONS IN PARTS III.B.1.–3., THE MPCOA WILL NOTIFY THE PERMITEE(S) IN WRITING. IN RESPONSE, THE PERMITEE(S) MUST AMEND THE SWPPP TO ADDRESS THE IDENTIFIED CONCERNS AND SUBMIT INFORMATION REQUESTED BY THE MPCOA, WHICH MAY INCLUDE AN INDIVIDUAL PERMIT APPLICATION. IF THE MPCOA'S WRITTEN NOTIFICATION REQUIRES A RESPONSE, FAILURE TO RESPOND WITHIN THE SPECIFIED TIMEFRAME CONSTITUTES A PERMIT VIOLATION.

PART III.C. – TEMPORARY SEDIMENT BASINS

WHERE FIVE (5) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, THE PERMITEE(S) MUST PROVIDE A TEMPORARY SEDIMENT BASIN TO PROVIDE TREATMENT TO THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS. A TEMPORARY SEDIMENT BASIN MAY BE CONVERTED TO A PERMANENT BASIN AFTER CONSTRUCTION IS COMPLETE. THE TEMPORARY BASIN IS NO LONGER REQUIRED WHEN PERMANENT COVER HAS REDUCED THE ACREAGE OF DISTURBED SOIL TO LESS THAN FIVE (5) ACRES DRAINING TO A COMMON LOCATION. THE PERMITEE(S) IS/ARE ENCOURAGED, BUT NOT REQUIRED, TO INSTALL TEMPORARY SEDIMENT BASINS WHERE APPROPRIATE IN AREAS WITH STEEP SLOPES OR HIGHLY ERODIBLE SOILS EVEN IF LESS THAN FIVE (5) ACRES DRAINS TO ONE AREA. THE BASINS MUST BE DESIGNED AND CONSTRUCTED ACCORDING TO THE FOLLOWING REQUIREMENTS:

- 1. THE BASINS MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO–YEAR, 24-HOUR STORM FROM EACH ACRE DRAINED TO THE BASIN, EXCEPT THAT IN NO CASE SHALL THE BASIN PROVIDE LESS THAN 1,800 CUBIC FEET OF LIVE STORAGE FROM EACH ACRE DRAINED TO THE BASIN.
2. WHERE THE CALCULATION IN PART III.C.1. HAS NOT BEEN PERFORMED, A TEMPORARY SEDIMENT BASIN PROVIDING 1600 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINED TO THE BASIN SHALL BE PROVIDED FOR THE ENTIRE DRAINAGE AREA OF THE TEMPORARY BASIN.
3. TEMPORARY BASIN OUTLETS MUST BE DESIGNED TO PREVENT SHORT–CIRCUITING AND THE DISCHARGE OF FLOATING DEBRIS. THE BASIN MUST BE DESIGNED WITH THE ABILITY TO ALLOW COMPLETE BASIN DRAWDOWN FOR MAINTENANCE ACTIVITIES, AND MUST INCLUDE A STABILIZED EMERGENCY OVERTFLOW TO PREVENT FAILURE OF POND INTEGRITY. THE OUTLET STRUCTURE MUST BE DESIGNED TO WITHDRAW WATER FROM THE SURFACE IN ORDER TO MINIMIZE THE DISCHARGE OF POLLUTANTS, EXCEPT THAT THE USE OF A SURFACE WITHDRAWAL MECHANISM FOR DISCHARGE OF THE BASIN MAY BE TEMPORARILY SUSPENDED DURING FROZEN CONDITIONS. ENERGY DISSIPATION MUST BE PROVIDED FOR THE BASIN OUTLET (SEE PART IV.B.5.).
4. SEDIMENT BASINS MUST BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONE REQUIRED UNDER APPENDIX A.C.3. AND MUST BE DESIGNED TO AVOID DRAINING WATER FROM WETLANDS UNLESS THE IMPACT TO THE WETLAND IS IN COMPLIANCE WITH THE REQUIREMENTS OF APPENDIX A, PART D.
5. THE TEMPORARY BASINS MUST BE CONSTRUCTED AND MADE OPERATIONAL PRIOR TO 10 OR MORE ACRES OF DISTURBED SOIL DRAINING TO A COMMON LOCATION.
6. WHERE A TEMPORARY SEDIMENT BASIN MEETING THE REQUIREMENTS OF THIS PART IS INFEASIBLE, EQUIVALENT SEDIMENT CONTROLS SUCH AS SMALLER SEDIMENT BASINS, AND/OR SEDIMENT TRAPS, SILT FENCES, VEGETATIVE BUFFER STRIPS, OR ANY APPROPRIATE COMBINATION OF MEASURES ARE REQUIRED FOR ALL DOWN–SLOPE BOUNDARIES OF THE CONSTRUCTION AREA AND FOR SIDE–SLOPE BOUNDARIES AS DICTATED BY INDIVIDUAL SITE CONDITIONS. IN DETERMINING WHETHER INSTALLING A SEDIMENT BASIN IS INFEASIBLE, THE PERMITEE(S) MUST CONSIDER PUBLIC SAFETY AND MAY CONSIDER FACTORS SUCH AS SITE SOILS, SLOPE, AND AVAILABLE AREA ON SITE. THIS DETERMINATION OF INFEASIBILITY MUST BE DOCUMENTED IN THE SWPPP PRE PART III.A.5.

PART III.E – RECORD RETENTION

THE SWPPP (ORIGINAL OR COPIES) INCLUDING, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITEE(S) WHO HAS/HAVE OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER THE FIELD OFFICE OR IN AN ON–SITE VEHICLE DURING NORMAL WORKING HOURS.

ALL OWNER(S) MUST KEEP THE FOLLOWING RECORDS ON FILE FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOT AS OUTLINED IN PART II.C. THIS DOES NOT INCLUDE ANY RECORDS AFTER SUBMITTAL OF

- 1. THE FINAL SWPPP
2. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT
3. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION (PART IV.E. INSPECTIONS AND MAINTENANCE)

PART III.E – RECORD RETENTION (CONT)

4. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT–OF–WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE AND
5. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.

PART III.F. – TRAINING REQUIREMENTS

THE PERMITEE(S) SHALL ENSURE THE FOLLOWING INDIVIDUALS IDENTIFIED IN THIS PART HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS.

- 1. WHO MUST BE TRAINED:
A. INDIVIDUAL(S) PREPARING THE SWPPP FOR THE PROJECT
B. INDIVIDUAL(S) OVERSEEING IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP AND INDIVIDUAL(S) PERFORMING INSPECTIONS AS REQUIRED IN PART IV.E. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCOA.
C. INDIVIDUAL(S) PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs. AT LEAST ONE INDIVIDUAL ON A PROJECT MUST BE TRAINED IN THESE JOB DUTIES.
2. TRAINING CONTENT: THE CONTENT AND EXTENT OF TRAINING MUST BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT FOR THE PROJECT. AT LEAST ONE INDIVIDUAL PRESENT ON THE PERMITTED PROJECT SITE (OR AVAILABLE TO THE PROJECT SITE IN 72 HOURS) MUST BE TRAINED IN THE JOB DUTIES DESCRIBED IN PART III.F.1.B. AND PART III.F.1.C.
3. THE PERMITEE(S) SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. AN UPDATE REFRESHER–TRAINING MUST BE ATTENDED EVERY THREE (3) YEARS STARTING THREE (3) YEARS FROM THE ISSUANCE DATE OF THIS PERMIT.

IV.B. EROSION PREVENTION PRACTICES

- 1. THE PERMITEE(S) MUST PLAN FOR AND IMPLEMENT APPROPRIATE BMPs SUCH AS CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, INSPECTION AND MAINTENANCE OF PART IV.E. AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION AS NECESSARY TO COMPLY WITH THIS PERMIT AND PROTECT WATERS OF THE STATE. THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE DELINEATED (E.G., WITH FLAGS, STAKES, SIGNS, SILT FENCE ETC.) ON THE PROJECT SITE BEFORE WORK BEGINS. THE PERMITEE(S) MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT THAT HAVE STEEP SLOPES. FOR THOSE SLOPED AREAS WHICH MUST BE DISTURBED, THE PERMITEE(S) MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING).
2. THE PERMITEE(S) MUST STABILIZE ALL EXPOSED SOIL AREAS (INCLUDING STOCKPILES). STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
3. IF USING STORMWATER CONVEYANCE CHANNELS, THE PERMITEE(S) MUST DESIGN THE CHANNELS TO ROUTE WATER AROUND UNSTABILIZED AREAS ON THE SITE AND TO REDUCE EROSION, UNLESS INFEASIBLE. THE PERMITEE(S) MUST USE EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, RIPRAP, OR GROUDED RIPRAP AT OUTLETS WITHIN AND ALONG THE LENGTH OF ANY CONSTRUCTED STORMWATER CONVEYANCE CHANNEL, AND AT ANY OUTLET, TO PROVIDE A NON–EROSIVE FLOW VELOCITY, TO MINIMIZE EROSION OF CHANNELS AND THEIR EMBANKMENTS, OUTLETS, ADJACENT STREAM BANKS, SLOPES, AND DOWNSTREAM WATERS DURING DISCHARGE CONDITIONS.
4. THE PERMITEE(S) MUST STABILIZE THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF WATER STABILIZATION OF THE LAST 200 LINEAL FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.

THE PERMITEE(S) SHALL COMPLETE STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 7 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.

TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK–DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED DURING THE TEMPORARY PERIOD OF ITS USE AS A SEDIMENT CONTAINMENT SYSTEM. THESE AREAS MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

APPLYING MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES IS NOT ACCEPTABLE STABILIZATION IN ANY PART OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE.

5. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.

6. UNLESS INFEASIBLE DUE TO LACK OF PEROUS OR VEGETATED AREAS, THE PERMITEE(S) MUST DIRECT DISCHARGES FROM BMPs TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. THE PERMITEE(S) MUST USE VELOCITY DISSIPATION DEVICES IF NECESSARY TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

PART IV.C. – SEDIMENT CONTROL PRACTICES

- 1. THE PERMITEE(S) MUST EMPLOY SEDIMENT CONTROL PRACTICES AS NECESSARY TO MINIMIZE SEDIMENT FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS. A. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS THAT ARE DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK–CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.
B. IF THE DOWN GRADIENT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), THE PERMITEE(S) MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPs TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN PART III.B. 1.–3.
2. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS AND BE LOCATED UPGRADIENT OF ANY BUFFER ZONES. THE PERIMETER SEDIMENT CONTROL PRACTICE MUST BE IN PLACE BEFORE ANY UPGRADIENT LAND–DISTURBING ACTIVITIES BEGIN. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.
3. THE PERMITEE(S) SHALL RE–INSTALL ALL SEDIMENT CONTROL PRACTICES THAT HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT–TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES. IMMEDIATELY AFTER THE SHORT–TERM ACTIVITY HAS BEEN COMPLETED, THE PERMITEE(S) SHALL COMPLETE ANY SHORT–TERM ACTIVITY THAT REQUIRES REMOVAL OF SEDIMENT CONTROL PRACTICES AS QUICKLY AS POSSIBLE. THE PERMITEE(S) MUST RE–INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT–TERM ACTIVITY IS NOT COMPLETED.
4. ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMPs DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A COLLAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED BY THE PERMITEE(S) OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MNDOT ENGINEER). THE PERMITEE(S) MUST DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP.
5. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.
6. WHERE VEHICLE TRAFFIC LEAVES ANY PART OF THE SITE (OR ONTO PAVED ROADS WITHIN THE SITE):
A. THE PERMITEE(S) MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE. EXAMPLES OF VEHICLE TRACKING BMPs INCLUDE (BUT ARE NOT LIMITED TO) ROCK PADS, MUD MATS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS.
B. THE PERMITEE(S) MUST USE STREET SWEEPING IF SUCH VEHICLE TRACKING BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET (SEE PART IV.E.5.D.).
7. THE PERMITEE(S) MUST INSTALL TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN PART III.C. OF THIS PERMIT.

PART IV.C. – SEDIMENT CONTROL PRACTICES (CONT.)

8. THE PERMITEE(S) MUST MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL. MINIMIZING SOIL COMPACTION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA OF THE SITE DICTATES THAT IT BE COMPACTED.
9. THE PERMITEE(S) MUST PRESERVE A 50 FOOT NATURAL BUFFER OR (IF A BUFFER IS INFEASIBLE ON THE SITE) PROVIDE REDUNDANT SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. THE PERMITEE(S) IS/ARE NOT REQUIRED TO ENHANCE THE QUALITY OF THE VEGETATION THAT ALREADY EXISTS IN THE BUFFER OR PROVIDE VEGETATION IF NONE EXIST. HOWEVER, PERMITEE(S) CAN IMPROVE THE NATURAL BUFFER WITH VEGETATION.

PART IV.D. – DEWATERING AND BASIN DRAINING

1. THE PERMITEE(S) MUST DISCHARGE TURBID OR SEDIMENT–LOADED WATERS RELATED TO DEWATERING OR BASIN DRAINING TO PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE PERMITEE(S) MAY DISCHARGE FROM THE TEMPORARY OR PERMANENT SEDIMENTATION BASINS TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER. IT MUST BE TREATED WITH THE APPROPRIATE BMPs, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM PROPERTIES. IF THE PERMITEE(S) MUST DISCHARGE WATER THAT CONTAINS OIL OR GREASE, THE PERMITEE(S) MUST USE AN OIL–WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G. CARTRIDGE FILTERS, ABSORBENT PADS) PRIOR TO DISCHARGING THE WATER. THE PERMITEE(S) MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING, OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES.
2. ALL WATER FROM DEWATERING OR BASIN–DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

3. IF THE PERMITEE(S) IS/ARE USING FILTERS WITH BACKWASH WATER, THE PERMITEE(S) MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE PERMITEE(S) MAY DISCHARGE BACKWASH WATER TO THE SANITARY SEWER IF PERMISSION IS GRANTED BY THE SANITARY SEWER AUTHORITY. THE PERMITEE(S) MUST REPLACE AND CLEAN THE FILTER MEDIA USED IN DEWATERING DEVICES WHEN REQUIRED TO RETAIN ADEQUATE FUNCTION

PART IV.E. – INSPECTIONS AND MAINTENANCE

1. THE PERMITEE(S) MUST ENSURE THAT A TRAINED PERSON (AS IDENTIFIED IN PART III.A.3.A.) WILL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS OF ANY RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. FOLLOWING AN INSPECTION THAT OCCURS WITHIN 24 HOURS AFTER A RAINFALL EVENT, THE NEXT INSPECTION MUST BE CONDUCTED WITHIN SEVEN (7) DAYS AFTER THE RAINFALL EVENT.
2. ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION MUST BE RECORDED WITHIN 24 HOURS IN WRITING AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP IN ACCORDANCE WITH PART III.E. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE:

- A. DATE AND TIME OF INSPECTIONS
B. NAME OF PERSON(S) CONDUCTING INSPECTIONS
C. FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED
D. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES)
E. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCH (0.5 INCHES) IN 24 HOURS. RAINFALL AMOUNTS MUST BE OBTAINED BY A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE. A WEATHER STATION THAT IS WITHIN 1 MILE OF YOUR LOCATION OR A WEATHER REPORTING SYSTEM THAT PROVIDES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES.
F. IF ANY DISCHARGE IS OBSERVED TO BE OCCURRING DURING THE INSPECTION, A RECORD OF ALL POINTS OF THE PROPERTY FROM WHICH THERE IS A DISCHARGE MUST BE MADE, AND THE DISCHARGE SHOULD BE DESCRIBED (I.E., COLOR, ODOR, FLOATING, SETTLED, OR SUSPENDED SOLIDS, FOAM, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS) AND PHOTOGRAPHED.
G. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN PART III.B. WITHIN SEVEN (7) CALENDAR DAYS.

3. INSPECTION FREQUENCY ADJUSTMENT
A. WHERE PARTS OF THE PROJECT SITE HAVE PERMANENT COVER, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, THE PERMITEE(S) MAY REDUCE INSPECTIONS OF THE AREAS WITH PERMANENT COVER TO ONCE PER MONTH.
B. WHERE CONSTRUCTION SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AREAS AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, THE SITE MUST BE INSPECTED DURING NON–FROZEN GROUND CONDITIONS AT LEAST ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS. FOLLOWING THE TWELFTH MONTH OF PERMANENT COVER AND NO CONSTRUCTION ACTIVITY, INSPECTIONS MAY BE TERMINATED UNTIL CONSTRUCTION ACTIVITY IS ONCE AGAIN INITIATED UNLESS THE PERMITEE(S) IS/ARE NOTIFIED IN WRITING BY THE MPCOA THAT EROSION ISSUES HAVE BEEN DETECTED AT THE SITE AND INSPECTIONS NEED TO RESUME.
C. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE INSPECTIONS MAY BE SUSPENDED UNTIL INSPECTIONS AND MAINTENANCE SCHEDULED TO BEGIN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR 24 HOURS PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.

4. THE PERMITEE(S) IS/ARE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPs, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs, UNTIL ANOTHER PERMITEE HAS OBTAINED COVERAGE UNDER THIS PERMIT ACCORDING TO PART III.E.5. IF THE PROJECT HAS UNDERGONE FINAL STABILIZATION, AND AN NOT HAS BEEN SUBMITTED TO THE MPCOA.

5. THE PERMITEE(S) MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS DURING ALL ROUTINE AND POST–RAINFALL EVENT INSPECTIONS. ALL NONFUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS UNLESS ANOTHER TIME FRAME IS SPECIFIED BELOW. THE PERMITEE(S) MUST INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

- A. ALL PERIMETER CONTROL DEVICES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE–HALF (1/2) OF THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR THEREAFTER AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
B. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES ONE–HALF (1/2) THE STORAGE VOLUME. SEDIMENT REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART IV.D.).
C. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION DURING EACH INSPECTION. THE PERMITEE(S) MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. THE PERMITEE(S) SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. THE PERMITEE(S) IS/ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.
D. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF–SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES BOTH ON AND OFF SITE WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART IV.C.6.
E. STREETS AND OTHER AREAS ADJACENT TO THE PROJECT MUST BE INSPECTED FOR EVIDENCE OF OFF–SITE ACCUMULATIONS OF SEDIMENT. IF SEDIMENT IS PRESENT, IT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF–SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
6. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITY IS REACHING THE INFILTRATION AREA. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT EQUIPMENT IS NOT BEING DRIVEN ACROSS THE INFILTRATION AREA.

PART IV.F. – POLLUTION PREVENTION MANAGEMENT MEASURES

THE PERMITEE(S) SHALL IMPLEMENT THE FOLLOWING POLLUTION PREVENTION MANAGEMENT MEASURES ON THE SITE:

- 1. STORAGE, HANDLING, AND DISPOSAL OF CONSTRUCTION PRODUCTS, MATERIALS, AND WASTES: THE PERMITEE(S) SHALL COMPLY WITH THE FOLLOWING TO MINIMIZE THE EXPOSURE TO STORMWATER OF ANY OF THE PRODUCTS, MATERIALS, OR WASTES. PRODUCTS OR WASTES WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER ARE NOT HELD TO THIS REQUIREMENT.
A. BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
B. PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT THE DISCHARGE OF POLLUTANTS OR PROTECTED BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
C. HAZARDOUS MATERIALS, TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM–BASED ADDUCTS, WOOD PRESERVATIVE ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.
D. SOLID WASTE MUST BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.
E. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.
2. FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLES; SPILL PREVENTION AND RESPONSE: THE PERMITEE(S) SHALL TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. THE PERMITEE(S) MUST CONDUCT FUELING IN A CONTAINED AREA UNLESS INFEASIBLE. THE PERMITEE(S) MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. THE PERMITEE(S) MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. § 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE.
3. VEHICLE AND EQUIPMENT WASHING: IF THE PERMITEE(S) WASH THE EXTERIOR OF VEHICLES OR EQUIPMENT ON THE PROJECT SITE, WASHING MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF FROM THE WASHING AREA MUST BE CONTAINED IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF. THE PERMITEE(S) MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS. NO ENGINE DEGREASING IS ALLOWED ON SITE.
4. CONCRETE AND OTHER WASHOUTS WASTE: THE PERMITEE(S) MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. THE LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND, AND THE CONTAINMENT MUST BE DESIGNED SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCOA RULES. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY THAT REQUIRES SITE PERSONNEL TO UTILIZE THE PROPER FACILITIES FOR DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES.

THE PERMITEE(S) MUST ENSURE FINAL STABILIZATION OF THE SITE. FINAL STABILIZATION IS NOT COMPLETE UNTIL ALL REQUIREMENTS OF PARTS IV.G.1.–5. ARE COMPLETE:

- 1. ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL SOILS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH DENSITY OVER THE ENTIRE PEROUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS.
2. THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS IN PART III.D. AND IS OPERATING AS DESIGNED. TEMPORARY OR PERMANENT SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS HAVE BEEN CLEANED OF ANY ACCUMULATED SEDIMENT. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS AND DITCHES ARE STABILIZED WITH PERMANENT COVER.
3. ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMPs (SUCH AS SILT FENCE) HAVE BEEN REMOVED ON THE PORTIONS OF THE SITE FOR WHICH THE PERMITEE(S) IS/ARE RESPONSIBLE. BMPs DESIGNED TO DECOMPOSE ON SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN PLACE.
4. FOR RESIDENTIAL CONSTRUCTION ONLY, INDIVIDUAL LOTS ARE CONSIDERED FINALLY STABILIZED IF THE STRUCTURE(S) ARE FINISHED AND TEMPORARY EROSION PROTECTION AND DOWNGRADIENT PERIMETER CONTROL HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN SOLD TO THE HOMEOWNER. ADDITIONALLY, THE PERMITEE HAS DISTRIBUTED THE MPCOA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER TO INFORM THE HOMEOWNER OF THE NEED FOR, AND BENEFITS OF, PERMANENT COVER.
5. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROP, FIELD PASTURE OR RANGE LAND) THE DISTURBED LAND HAS BEEN RETURNED TO ITS PRECONSTRUCTION AGRICULTURAL USE.

PART IV.G. FINAL STABILIZATION

THE PERMITEE(S) MUST ENSURE FINAL STABILIZATION OF THE SITE. FINAL STABILIZATION IS NOT COMPLETE UNTIL ALL REQUIREMENTS OF PARTS IV.G.1.–5. ARE COMPLETE:

- 1. ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL SOILS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH DENSITY OVER THE ENTIRE PEROUS SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSION CONDITIONS.
2. THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS IN PART III.D. AND IS OPERATING AS DESIGNED. TEMPORARY OR PERMANENT SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS HAVE BEEN CLEANED OF ANY ACCUMULATED SEDIMENT. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS AND DITCHES ARE STABILIZED WITH PERMANENT COVER.
3. ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMPs (SUCH AS SILT FENCE) HAVE BEEN REMOVED ON THE PORTIONS OF THE SITE FOR WHICH THE PERMITEE(S) IS/ARE RESPONSIBLE. BMPs DESIGNED TO DECOMPOSE ON SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN PLACE.
4. FOR RESIDENTIAL CONSTRUCTION ONLY, INDIVIDUAL LOTS ARE CONSIDERED FINALLY STABILIZED IF THE STRUCTURE(S) ARE FINISHED AND TEMPORARY EROSION PROTECTION AND DOWNGRADIENT PERIMETER CONTROL HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN SOLD TO THE HOMEOWNER. ADDITIONALLY, THE PERMITEE HAS DISTRIBUTED THE MPCOA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER TO INFORM THE HOMEOWNER OF THE NEED FOR, AND BENEFITS OF, PERMANENT COVER.
5. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROP, FIELD PASTURE OR RANGE LAND) THE DISTURBED LAND HAS BEEN RETURNED TO ITS PRECONSTRUCTION AGRICULTURAL USE.

Table with 2 columns: DRAWN BY, DESIGN BY, CHKCD BY, PROJ. NO., C.W.P., 16-1665

ORIGINAL DATE: MARCH 9, 2017

Table with 2 columns: REVISION DESCRIPTION, DATE

I hereby certify that this plan 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. CHARLES W. PLOWE LIC. NO. 16227 DATE: 04.05.2017

TROTT BROOK HALL RAMSEY, MINNESOTA STORM WATER POLLUTION PREVENTION PLAN

PREPARED FOR: BRAD DUCCOMUN

Site Planning & Engineering PLOWE ENGINEERING, INC. 6776 LAKE DRIVE SUITE 111 LINO LAKES, MN 55014 PHONE: (651) 361-8210 FAX: (651) 361-9701

Storm Water Pollution Prevention Plan TROTT BROOK HALL C5.1

SITE SPECIFIC INFORMATION

PROJECT NAME
TROTT BROOK HALL

PROJECT LOCATION
17301 NORTHEN BLVD NW, RAMSEY, MN 55303
LATITUDE: 45.285201
LONGITUDE: -93.439523

PROJECT OWNER
TROTT BROOK CHURCH

CONSTRUCTION ACTIVITY DESCRIPTION

THE PROJECT INCLUDES THE CONSTRUCTION OF AN ADDITION ON THE EXISTING BUILDING AND A NEW PARKING LOT EXPANSION. EXISTING SOILS TYPES CONSIST OF FINE AND MEDIUM SANDS WITH SOME TRACES OF SAND WITH SILT.

| SITE AREAS | BEFORE CONSTRUCTION | AFTER CONSTRUCTION |
|----------------------------|---------------------|--------------------|
| TOTAL SITE AREA | 3.62 ACRES | |
| TOTAL ESTIMATED IMPERVIOUS | 1.04 ACRES | 1.40 ACRES |
| TOTAL ESTIMATED PERVIOUS | 2.58 ACRES | 2.22 ACRES |

TOTAL DISTURBED AREA
1.81 ACRES

RECEIVING WATERS WITHIN ONE MILE

| NAME OF WATER BODY | TYPE OF WATER BODY | SPECIAL WATER | IMPAIRED WATER |
|--------------------|--------------------|---------------|----------------|
| ON-SITE POND | POND | NO | NO |
| ON-SITE WETLANDS | WETLAND | NO | NO |
| CO. DITCH NO.27 | CREEK | NO | NO |
| OFF-SITE PONDS | POND | NO | NO |
| FISH LAKE | LAKE | NO | NO |

SITE MAP AND DESIGN CALCULATIONS

SEE STORM WATER DRAINAGE REPORT FOR QUANTIFICATION OF STORM WATER MANAGEMENT REQUIREMENTS AND DRAINAGE AREA MAPS.

SOILS, SLOPES, VEGETATION

SOIL TYPE(S): SEE "CONSTRUCTION ACTIVITY DESCRIPTION" FOR LIST OF SOILS TYPES.

SLOPES: PROPOSED SLOPES WILL BE GENERALLY MODERATE AND ARE NOT EXPECTED TO EXCEED 3:1.

VEGETATION: SEED AND MULCH IS PROPOSED FOR DISTURBED AREAS.

PERSON WHO PREPARED SWPPP ("DESIGNER")

CHARLES W. PLOWE
PLOWE ENGINEERING, INC.
6776 LAKE DRIVE
LINO LAKES, MN 55014
(651) 361-8200

PERSON WHO WILL OVERSEE IMPLEMENTATION OF SWPPP ("CONTRACTOR")

TBD

PERSON(S) WHO WILL INSPECT ON-SITE ESC MEASURES ("INSPECTOR")

TBD

TRAINING DOCUMENTATION

DOCUMENTATION MUST ACCOMPANY THE SWPPP INDICATING THAT THE INDIVIDUALS IDENTIFIED IN PART III.F. HAVE BEEN TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF PART III.F. DOCUMENTATION SHALL INCLUDE:

A. NAMES OF THE PERSONNEL ASSOCIATED WITH THIS PROJECT THAT ARE REQUIRED TO BE TRAINED PER PART III.F.1. OF THIS PERMIT.

B. DATES OF TRAINING AND NAME OF INSTRUCTOR(S) AND ENTITY PROVIDING TRAINING.

C. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.

SITE SEQUENCING & ESC NOTES

PRIOR TO ANY LAND-DISTURBING ACTIVITY, THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLAN. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE. SILT FENCE SHALL REMAIN IN-PLACE UNTIL THE FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G.

THE CONTRACTOR SHALL PERFORM SITE GRADING ON AN AREA-BY-AREA BASIS TO MINIMIZE UNSTABILIZED AREAS. AS EACH AREA IS COMPLETED, ALL EXPOSED SOILS MUST HAVE TEMPORARY EROSION CONTROL PROTECTION OR PERMANENT COVER WITHIN SEVEN (7) DAYS.

THE CONTRACTOR SHALL PROVIDE ALL SOD, SEED, MULCH AND FERTILIZER WHICH SHALL CONFORM WITH THE FOLLOWING MNDOT SPECIFICATIONS AS MODIFIED BELOW.

| ITEM | MNDOT SPECIFICATION/NOTES |
|--------------------------|----------------------------------|
| SOD | 3878 |
| SEED ** | 3876 |
| * FOR TURF ESTABLISHMENT | |
| COMMERCIAL TURF | MNDOT MIX 25-131 (220 LBS/ACRE) |
| RESIDENTIAL TURF | MNDOT MIX 25-131 (120 LBS/ACRE) |
| TEMPORARY | |
| FALL COVER | MNDOT MIX 21-112 (100 LBS/ACRE) |
| SPRING/SUMMER | MNDOT MIX 21-111 (100 LBS/ACRE) |
| SOIL-BUILDING COVER | MNDOT MIX 21-113 (110 LBS/ACRE) |
| 1-2 YEARS COVER | MNDOT MIX 22-111 (30.5 LBS/ACRE) |
| 2-5 YEARS COVER | MNDOT MIX 22-112 (40 LBS/ACRE) |
| MULCH | 3882 (TYPE 1 - DISC ANCHORED) |
| FERTILIZER | 3881 |
| WOOD FIBER BLANKET | 3885 (CATEGORY 2) |

* MOW A MINIMUM OF:
RESIDENTIAL TURF - ONCE PER 2 WEEKS
COMMERCIAL TURF - ONCE PER 4 WEEKS

** SEEDED AREAS SHALL BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.

TEMPORARY OR PERMANENT MULCH MUST BE UNIFORMLY APPLIED BY MECHANICAL OR HYDRAULIC MEANS AND STABILIZED BY DISC-ANCHORING OR USE OF HYDRAULIC SOIL STABILIZERS.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY AND NPDES PHASE II PERMIT REQUIREMENTS, AND THE MPCA'S "PROTECTING WATER QUALITY IN URBAN AREAS BEST MANAGEMENT PRACTICES FOR MINNESOTA."

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL ADJACENT PROPERTY LINES AND MAKE SURE THE EROSION CONTROL PRACTICES INPLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.

THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF BUILDING CONSTRUCTION. SILT FENCE TO BE REMOVED ONLY AFTER COMPLETION OF BUILDING CONSTRUCTION AND UPON ESTABLISHMENT OF VEGETATION.

THE CONTRACTOR SHALL PROVIDE WOOD FIBER BLANKET FOR ALL AREAS OF CONCENTRATED FLOW AND FOR ALL SLOPES 3:1 OR GREATER.

PROTECT ALL STORM WATER MANAGEMENT FACILITIES FROM CONSTRUCTION RUN-OFF. CONTRACTOR TO INSTALL AND CONSTRUCT SAID FACILITIES ONCE SITE HAS BEEN STABILIZED.

IF ANY SLOPES APPEAR TO BE FAILING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILT FENCE, BIOROLLS AND EROSION CONTROL BLANKET AS NEEDED.

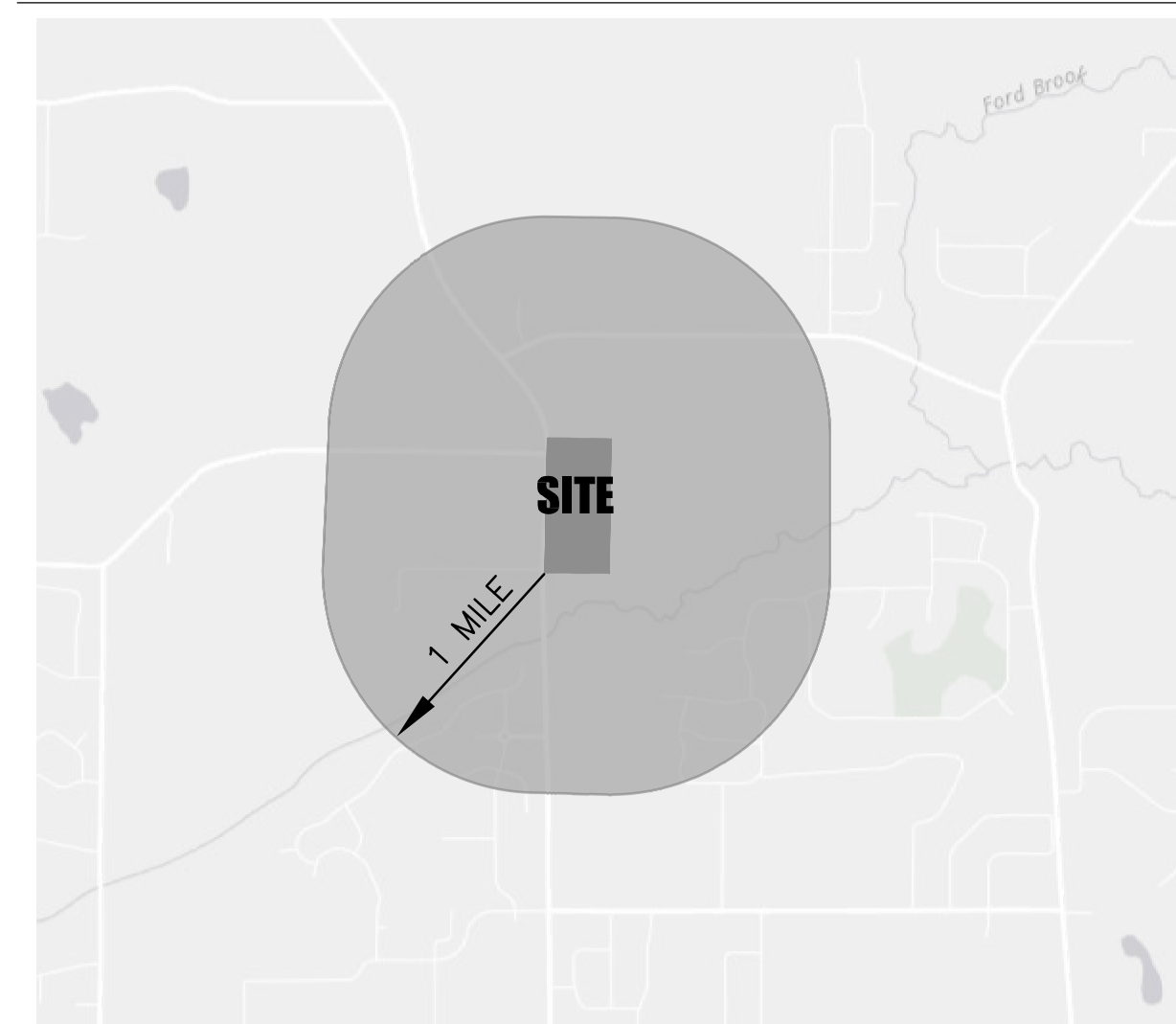
THE CONTRACTOR SHALL FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.

UPON GRADING COMPLETION THE CONTRACTOR SHALL PROVIDE NATIVE TOPSOIL, SEED, AND MULCH ANCHORED WITH A STRAIGHT SET DISC WITHIN 48 HOURS OF FINAL GRADING.

EXCESS SOIL SHOULD BE TREATED LIKE OTHER EXPOSED SOIL AND STABILIZED WITHIN 72 HOURS. ANY SOIL STOCKPILES ARE TO HAVE SILT FENCE PLACED ON DOWNSTREAM SIDES AND SHALL NOT BE PLACED IN SURFACE WATERS.

ADJACENT STREETS SHALL BE KEPT CLEAN OF CONSTRUCTION MATERIALS, DIRT, AND OTHER UNDESIRABLE MATERIALS. WHEN MATERIALS OR DEBRIS HAVE WASHED/FLOWED ONTO ADJACENT STREETS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP/SCRAPE STREETS AS NECESSARY OR AS DIRECTED BY THE CITY.

MAP OF SURFACE WATERS



NO IMPAIRED WATERS WITHIN ONE MILE.

C.1 DURING CONSTRUCTION

A. ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

B. TEMPORARY SEDIMENT BASIN REQUIREMENTS DESCRIBED IN PART III.B.1-5 MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.

C.2 POST CONSTRUCTION

THE WATER QUALITY VOLUME THAT MUST BE TREATED BY THE PROJECT PERMANENT STORMWATER MANAGEMENT SYSTEM DESCRIBED IN PART III.C. SHALL BE ONE (1) INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT. WHERE SITE CONDITIONS ALLOW, AT LEAST 1/2 INCH OF WATER QUALITY VOLUME MUST BE INFILTRATED. SEE PART III.C.2 FOR MORE INFORMATION ON INFILTRATION DESIGN AND APPROPRIATE SITE CONDITIONS. IF IT IS DETERMINED THAT SITE CONDITIONS ARE NOT APPROPRIATE FOR INFILTRATION (E.G. LACK OF 3 FT. OF SEPARATION TO SEASONALLY SATURATED GROUND WATER, PROXIMITY TO BEDROCK, CONTAMINATED SOILS) THE REASONS SHOULD BE DOCUMENTED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT. INFILTRATION IS NOT REQUIRED IN HYDROLOGIC SOIL GROUP D SOILS.

DRAWN BY: R.W.
DESIGN BY: C.W.P.
CHCKD BY: C.W.P.
PROJ. NO. 16-1665
ORIGINAL DATE: MARCH 9, 2017

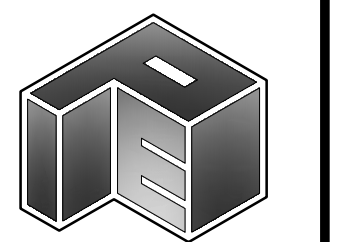
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I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Charles W. Plowe
CHARLES W. PLOWE
LIC. NO. 16227
DATE: 04.05.2017

TROTT BROOK HALL
RAMSEY, MINNESOTA
STORM WATER POLLUTION PREVENTION PLAN

PREPARED FOR:
BRAD DUCOMMUN



SITE PLANNING & ENGINEERING

PLOWE ENGINEERING, INC.

6776 LAKE DRIVE
SUITE 110
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STORM WATER POLLUTION PREVENTION PLAN
TROTT BROOK HALL

C5.2