

Soil Erosion & Sedimentation Control Program

Iron County, Michigan

Pursuant to Part 91, Soil Erosion and Sedimentation Control, Act 451 of the Public Acts of 1994, as amended.

Administered by: The Iron Baraga Conservation District

2 South 6th Street, Suite 15 - Crystal Falls, Michigan 49920

Phone: (906) 875-3765 Email: ironbaragacd@gmail.com Website: IronBaragaCD.org

PERMITS ARE ISSUED FOR 18 MONTHS AND RENEWED ONE TIME FOR FREE UNLESS OTHERWISE NOTED

PLEASE ASK IF YOU NEED A PERMIT - AFTER THE FACT PERMITS WILL INCUR USE OF A DOUBLE FEE SCALE

QUALIFYING EXEMPTIONS TO AVOID OBTAINING A PART 91 PERMIT:

Schedule of Fees for All Permit Categories

Check Box Below

225 SQUARE FOOT EXEMPTION: A WAIVER WILL BE ISSUED IF LESS THAN 225 SQUARE FEET OF EARTH WILL BE DISTURBED AND WILL NOT CONTRIBUTE SEDIMENT TO LAKES OR STREAMS.	EXEMPTION: 225 SQ. FT. RULE	\$1 Processing Fee - 3 Month	225
	EXEMPTION: 24 HOUR RULE	\$1 Processing Fee - 3 Month	24 hr.
MINOR EARTH CHANGE: A CHANGE OF MINOR NATURE THAT WILL BE STABILIZED WITHIN 24 HOURS OF INITIAL EARTH CHANGE AND NOT CONTRIBUTE SEDIMENT TO LAKES OR STREAMS.	PUBLIC PARKS, HISTORICAL SITES, TRAILS, AND ENVIRONMENTAL QUALITY IMPROVEMENT PROJECTS	IBCD Scholarship Available	PUB
	SEPTIC INSTALL OR REPAIR	\$50 Flat Fee	S
NORMAL ROAD OR DRIVEWAY MAINTENANCE: GRADING OR LEVELING THAT DOES NOT INCREASE WIDTH OR LENGTH OF ROAD OR DRIVEWAY BY MORE THAN A FOOT.	DRIVEWAYS & ACCESS ROADS, NON APA	\$50 Minimum - \$200 Per Mile	D&R
	GARAGE, SHEDS, & SAUNAS	\$100 Flat Fee - Per Parcel	G
	LANDSCAPING, & DECKS	\$100 Per Acre - \$100 Minimum	L&D
	SINGLE FAMILY RESIDENTIAL HOME SITE (HOME, DRIVEWAY, GARAGE, DECK, SAUNA, SEPTIC, WELL, LANDSCAPING AND RETENTION WALLS)	\$300 Flat Fee - Per Parcel	HS
OTHER EXEMPTIONS: PLOWING OR TILLING FOR CROPS, AGRICULTURE, MINING AND LOGGING (ANCILLARY ACTIVITIES), SUCH AS NEW ACCESS ROADS, STAGING AREAS, PROCESSING FACILITIES, BUILDINGS AND STOCKPILES ARE NOT EXEMPT). NONE OF THESE EXEMPTIONS APPLY IF THE ACTIVITY IS A PHASE OF SITE PREPARATION FOR ANOTHER LAND USE OR ACTIVITY THAT WOULD REQUIRE A PERMIT.	CONDOMINIUMS & APARTMENTS	\$500 Per Acre - \$500 Minimum	C&A
	MIXED USE	\$500 Per Acre - \$500 Minimum	MU
	COMMERCIAL, RETAIL, INDUSTRIAL & MANUFACTURING	\$500 Per Acre - \$500 Minimum	CRIM
INSTALL & CONNECTION (ONE PARCEL) BY UTILITIES SERVICE PROVIDERS: NON-EXEMPT ELECTRIC, FUEL, WATER AND SEWER	DIRECTIONAL BORING: UTILITY AND FIBER OPTIC CABLE	\$200 Minimum - \$200 Per Mile Unless Exemption is Issued	BORE
	PUBLIC UTILITIES: DAM WORK, SEWER & WATER, NON APA	\$500 Per Acre - \$500 Minimum	H2O
	PUBLIC UTILITIES: ENERGY PRODUCTION PLANTS, POWER SUBSTATIONS & LINEWORK, NON APA	\$500 Per Acre - \$500 Minimum	E=MC2
	NATURAL GAS OR PETROLEUM PIPELINE (FRESH INSTALL OR REPAIR)	\$500 Per Acre - \$500 Minimum	PIPE
	GRAVEL & SAND PITS FOR CONSTRUCTION AGGREGATE FOR SALE OR CONSTRUCTION USE.	\$500 1 - 10 Acres Add \$100 for Every Acre Beyond 10 5 Year Permit - No Free Renewal	G Pit

ALL PERMITS WILL BE ISSUED WITHIN 30 DAYS OF A SUBMISSION OF A COMPLETE APPLICATION

YOU MAY BE REQUIRED TO SUBMIT PROOF OF ADDITIONAL EGLE/DEQ PERMITS PRIOR TO ISSUANCE

Questions? Call (906) 875-3765 or (906) 367-1203 Ask For: Jennifer Ricker-Feak CEA

Soil Erosion & Sedimentation Control Program of Iron County, Michigan

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LANDOWNER LETTER OF AUTHORIZATION

THIS MUST BE FILLED OUT TO ALLOW ANYONE OTHER THAN THE LANDOWNER TO PULL A PERMIT

THIS FORM MAY BE SUBMITTED BY MAIL, EMAIL, FAX OR IN PERSON

PROJECT ADDRESS:

CONTRACTOR OR AGENT YOU ARE DESIGNATING:

CONTRACTOR ADDRESS:

CONTRACTOR PHONE:

CONTRACTOR CELL:

AS LANDOWNER OF THE PROJECT/PROPERTY DESCRIBED ABOVE, I AUTHORIZE THE PERSON INDICATED BELOW TO ACT ON MY BEHALF FOR THE PURPOSES OF THIS APPLICATION FOR A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT PURSUANT TO PART 91, SOIL EROSION AND SEDIMENTATION CONTROL OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, ACT 451 OF THE PUBLIC ACTS OF 1994 AS AMENDED. I UNDERSTAND THAT I AM RESPONSIBLE FOR ALL EARTH CHANGES RELATED TO THIS PROJECT AND UNDERSTAND THAT PART 91, ACT 451 MAY BE ENFORCED AGAINST ME IN THE EVENT OF ANY VIOLATION OF THAT ACT.

LANDOWNER NAME:

LANDOWNER SIGNATURE:

DATE:

LANDOWNER PHONE:

APPROVAL OF A PERMIT MAY TAKE UP TO A MONTH, PLEASE TURN IN ALL PAPERWORK AS SOON AS POSSIBLE TO ENSURE THAT YOUR BUILDING PROJECT GOES SMOOTHLY AND ACCORDING TO PLAN.

IRON COUNTY SOIL AND SEDIMENTATION CEA HOLDS PART TIME, SEMI-SEASONAL HOURS. THE CEA WILL ATTEMPT TO MAKE EVERY EFFORT TO ASSIST YOU AS QUICKLY AS POSSIBLE, AND WORK WITH YOUR SCHEDULE. PLEASE UNDERSTAND DUE TO THE NATURE OF THE WORK, OUR CEA IS OFTEN IN THE FIELD DURING THE WORKING HOURS. IF YOU ARE UNABLE TO REACH THE CEA DIRECTLY, THE IRON BARAGA CONSERVATION DISTRICT OFFICE STAFF WILL ENSURE THE CEA RETURNS YOUR CALLS AS QUICKLY AS POSSIBLE. (906) 875-3765

PLEASE KEEP IN CONTACT, AND NOTIFY THE IRON COUNTY SOIL AND SEDIMENTATION CEA AS WORK PROGRESSES. YOU SHOULD INFORM THE CEA OF ANY ISSUES YOU EXPERIENCE, AND PROGRESS AT THE SITE. TYPICALLY THE CEA WILL INSPECT YOUR SITE BEFORE, DURING, AND AFTER COMPLETION OF WORK.

ALL PERMITTING FEES MUST BE PAID BEFORE PERMIT WILL BE ISSUED. ADDITIONAL FEES ARISING FROM NEGLIGENCE WILL BE BILLED SEPARATELY IF THEY OCCUR. A DOBLE PERMIT FEE MAY BE ASSESSED IF THIS IS AN AFTER THE FACT PERMIT APPLICATION AND THE WORK DID NOT OCCUR DUE TO AN EMERGENCY DIG SITUATION, FLOOD OR NATURAL DISASTER.

A SOIL EROSION CONTROL PERMIT UNDER MCL.324.9113. IS REQUIRED FOR EARTH CHANGES THAT ARE LOCATED WITHIN 500 FEET OF A LAKE, STREAM AND FOR EARTH CHANGES THAT ARE ONE ACRE (43,560 SQUARE FEET) OR MORE IN SURFACE AREA, REGARDLESS OF LOCATION.

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PROJECT ADDRESS OR FIRE #

CITY OR TOWNSHIP:

PROPERTY TAX ID#

TOWNSHIP:

RANGE:

SECTION:

DIRECTIONS TO SITE OR GPS POINT IN DECIMAL DEGREES FORMAT:

IS THERE A LOCKED GATE OR OTHER COMPLICATION FOR EASY ACCESS TO SITE?

CLOSEST LAKE, STREAM, OR WETLAND

DISTANCE FROM EDGE OF DISTURBANCE AREA TO HIGH WATER MARK

LANDOWNER NAME(S):

HOME PHONE:

CELL PHONE:

MAILING ADDRESS:

CITY:

STATE:

ZIP CODE:

LANDOWNER SIGNATURE:

DATE:

CONTRACTOR COMPANY NAME:

SITE FOREMAN OR LEAD PERSONNEL

WORK PHONE:

CELL PHONE:

MAILING ADDRESS:

CITY:

STATE:

ZIP CODE:

CONTRACTOR SIGNATURE:

DATE:

PERMIT FEE:

PLEASE MAKE CHECK OR MONEY ORDER PAYABLE TO:
IRON BARAGA CONSERVATION DISTRICT

CREDIT CARDS ARE ACCEPTED WITH AN ADDITIONAL \$5 PROCESSING FEE

CREDIT CARD NUMBER:

EXPIRATION DATE:

3 DIGIT CODE ON BACK:

CARDHOLDERS NAME:

BILLING ZIP CODE:

PLEASE SIGN FOR PERMISSION TO CHARGE CARD:

OFFICE USE ONLY

APPROVED BY:

APPROVAL DATE:

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THIS PAGE MUST BE FILLED OUT FOR ALL COMMERCIAL AND RESIDENTIAL EARTH CHANGE ACTIVITIES

#1. ON THE MAP, FILL IN THE SCALE (BOTTOM) AND THEN DRAW AND LABEL ALL APPLICABLE EXISTING ITEMS: STREAM, LAKE, DRIVEWAY, HOME, CAMP, LAWN AREA, GARAGE, SEPTIC SYSTEM, WELL, STORAGE BUILDING, CULVERTS, DITCHES, DRAINAGE PATHS, ETC. ALSO INCLUDE MAJOR LAND FEATURES SUCH AS A ROCK BLUFF, SWAMP, RIVER, LAKE, FOREST, ETC.

#2. PLEASE LIST ALL NEW PROPOSED EARTH DISTURBANCE ACTIVITIES (DRIVEWAY, ACCESS ROADS, HOME, CAMP, LAWN AREA, GARAGE, SEPTIC SYSTEM, ADDITION, WELL, STORAGE BUILDING, CULVERTS, DITCHES, ETC.), THE APPROXIMATE SQUARE FEET THAT WILL BE DISTURBED FOR EACH, AND THEN DRAW/LABEL EACH ON THE MAP. YOU MAY ALSO PROVIDE ONE OVERALL TOTAL AREA DISTURBED IF THIS IS EASIER.

DISTURBANCE ACTIVITY:	ESTIMATED AREA IN SQUARE FEET:

#3. PLEASE DRAW A HEAVY OUTLINE AROUND ALL DISTURBED AREAS FOR YOUR PROJECT.

#4. EXISTING GROUND ELEVATIONS. START AT A FLAT AREA AND LABEL THIS •100' ELEVATION. GO OUT IN ALL DIRECTIONS AND GIVE APPROXIMATE ELEVATIONS (DIFFERENCE CAN BE AT LITTLE AS ONE FOOT OR AS MUCH AS TEN) UP OR DOWN RELATIVE TO THE •100'; INCLUDE LAKE, RIVER, ROAD, AND MAJOR LAND AREAS. BE SURE TO INCLUDE ALL AREAS WHERE DISTURBANCE WILL OCCUR.

#5. PROPOSED GROUND ELEVATIONS. USING THE ALREADY LABELED EXISTING ELEVATIONS AS A REFERENCE, USE NEW NUMBERS WITH A BOX AROUND THEM TO REPRESENT THE ELEVATIONS THAT THE GROUND WILL BE WHEN YOU ARE DONE WITH YOUR PROJECT, EVEN IF IT WILL BE THE SAME. ON A SEPARATE PIECE OF PAPER, PLEASE DRAW A CROSS-SECTION FOR NEW ROADS AND AREAS OF SIGNIFICANT CUT OR FILL OF LAND.

#6. CHECK OFF THE TEMPORARY EROSION CONTROL MEASURES (AND DRAW/LABEL ON MAP) THAT YOU WILL USE DURING THE PROJECT TO PREVENT ANY SOIL FROM GETTING INTO A LAKE, STREAM, STORM DRAIN INLET, DITCH, WETLAND, OR ONTO OTHER PROPERTY:

BERM <input type="checkbox"/>	TRENCH <input type="checkbox"/>	RIP RAP <input type="checkbox"/>	SILT FENCE <input type="checkbox"/>	SEDIMENT TRAP <input type="checkbox"/>
STRAW WATTLES <input type="checkbox"/>	EROSION CONTROL BLANKET <input type="checkbox"/>	STRAW BALES <input type="checkbox"/>		
FILTER FABRIC OVER INLET <input type="checkbox"/>	NONE <input type="checkbox"/>	OTHER <input type="checkbox"/>		

#7. CHECK OFF THE PERMANENT EROSION CONTROL MEASURES (AND DRAW/LABEL ON MAP) THAT YOU WILL USE TO RESTORE DISTURBED AREAS WHEN THE PROJECT IS COMPLETED: SEE GENERAL STANDARDS FOR RESTORATION REQUIREMENTS

SOD <input type="checkbox"/>	MULCH <input type="checkbox"/>	WOOD <input type="checkbox"/>	SEED & MULCH <input type="checkbox"/>	GRAVEL <input type="checkbox"/>
PAVEMENT <input type="checkbox"/>	CATCH BASIN <input type="checkbox"/>	RESERVOIR <input type="checkbox"/>		
RETENTION WALL <input type="checkbox"/>	NONE <input type="checkbox"/>	OTHER <input type="checkbox"/>		

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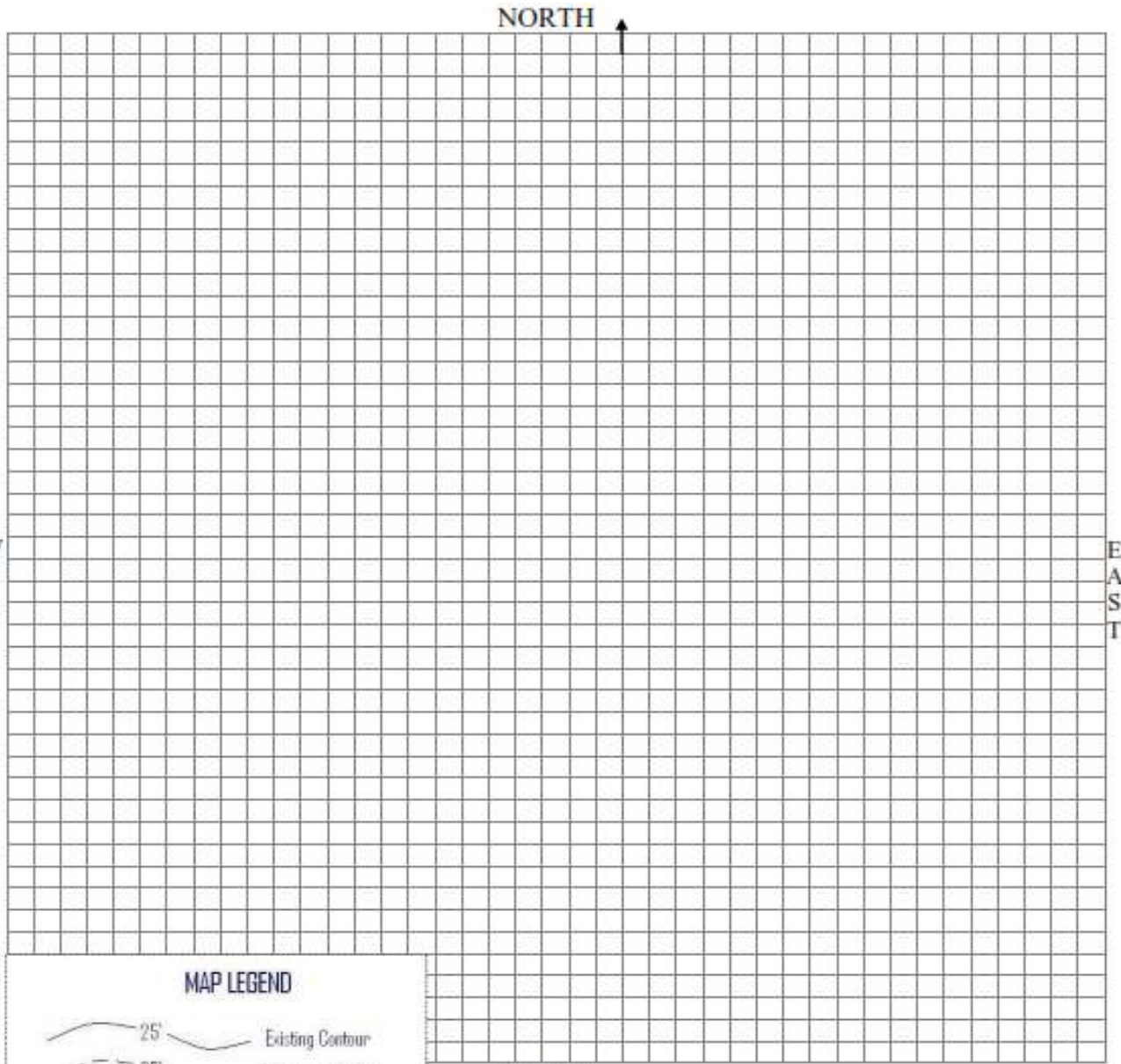
THIS PAGE MUST BE FILLED OUT FOR ALL COMMERCIAL AND RESIDENTIAL EARTH CHANGE ACTIVITIES

#7. PLEASE FILL IN THE APPROXIMATE DATES FOR THE PROJECT

INSTALLATION OF TEMPORARY EROSION CONTROLS	
EXCAVATION OF SITE	
CONSTRUCTION	
BACKFILL & ROUGH GRADE	
FINAL GRADE	
PERMIT CLOSEOUT (VEGETATION MUST BE REESTABLISHED)	

YOU MAY USE A PLAT MAP, LAND SURVEY MAP OR A SATELLITE IMAGE AS WELL.

****NOTE: IF BLUEPRINTS OR TOPO MAPS ARE AVAILABLE FOR THE PROJECT, THEY MUST BE USED IN PLACE OF THIS MAP.**



MAP LEGEND

	25'	Existing Contour
	25'	Proposed Contour
		Disturbance Boundary
		Berm
		Silt Fence
		Stockpile

SCALE: 1 inch = _____ feet
(no more than 100 feet for Residential & Commercial)
(no more than 200 feet if Sand & Gravel Pit)

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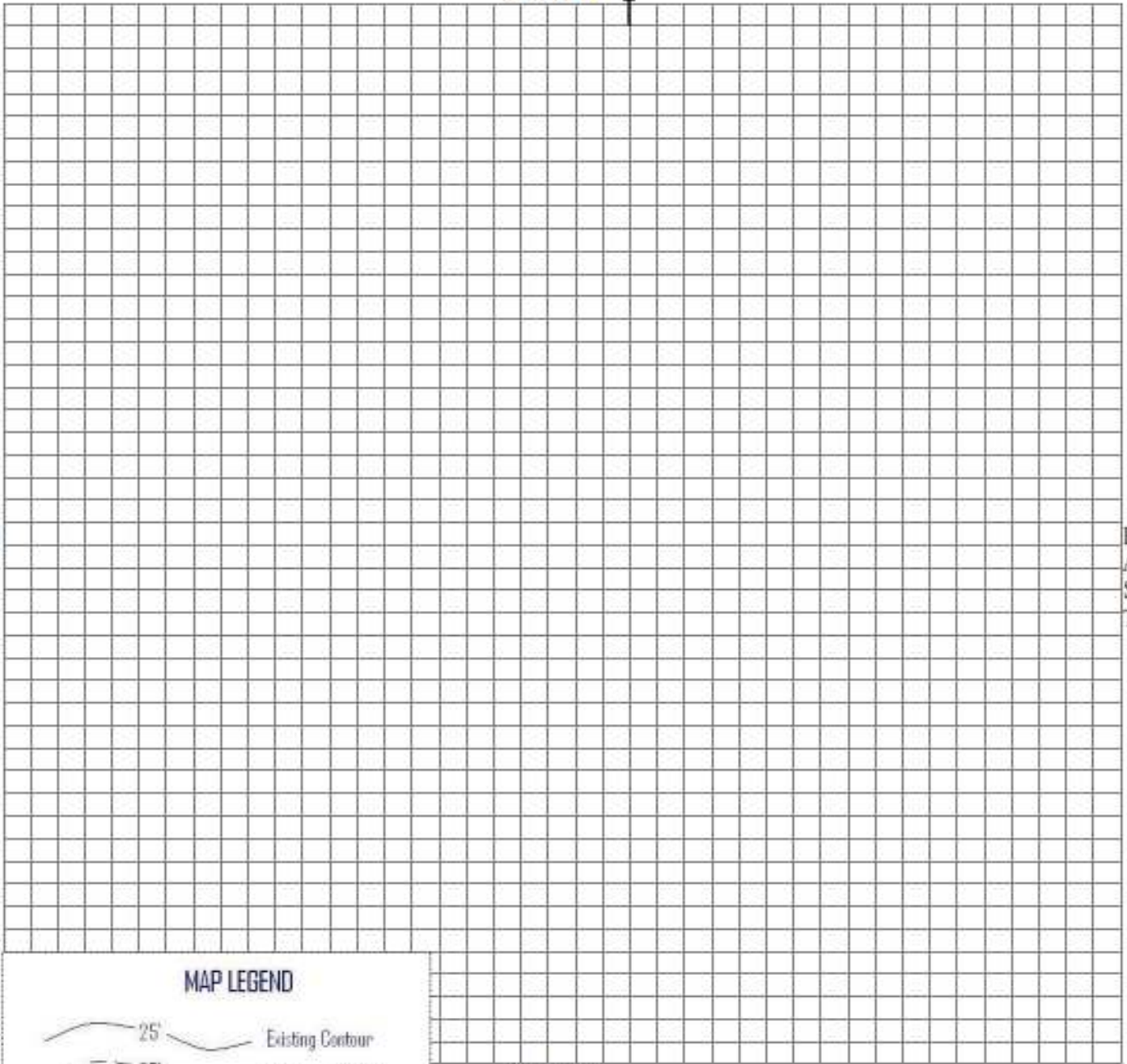
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NORTH

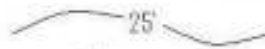
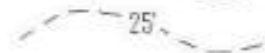






WEST

EAST



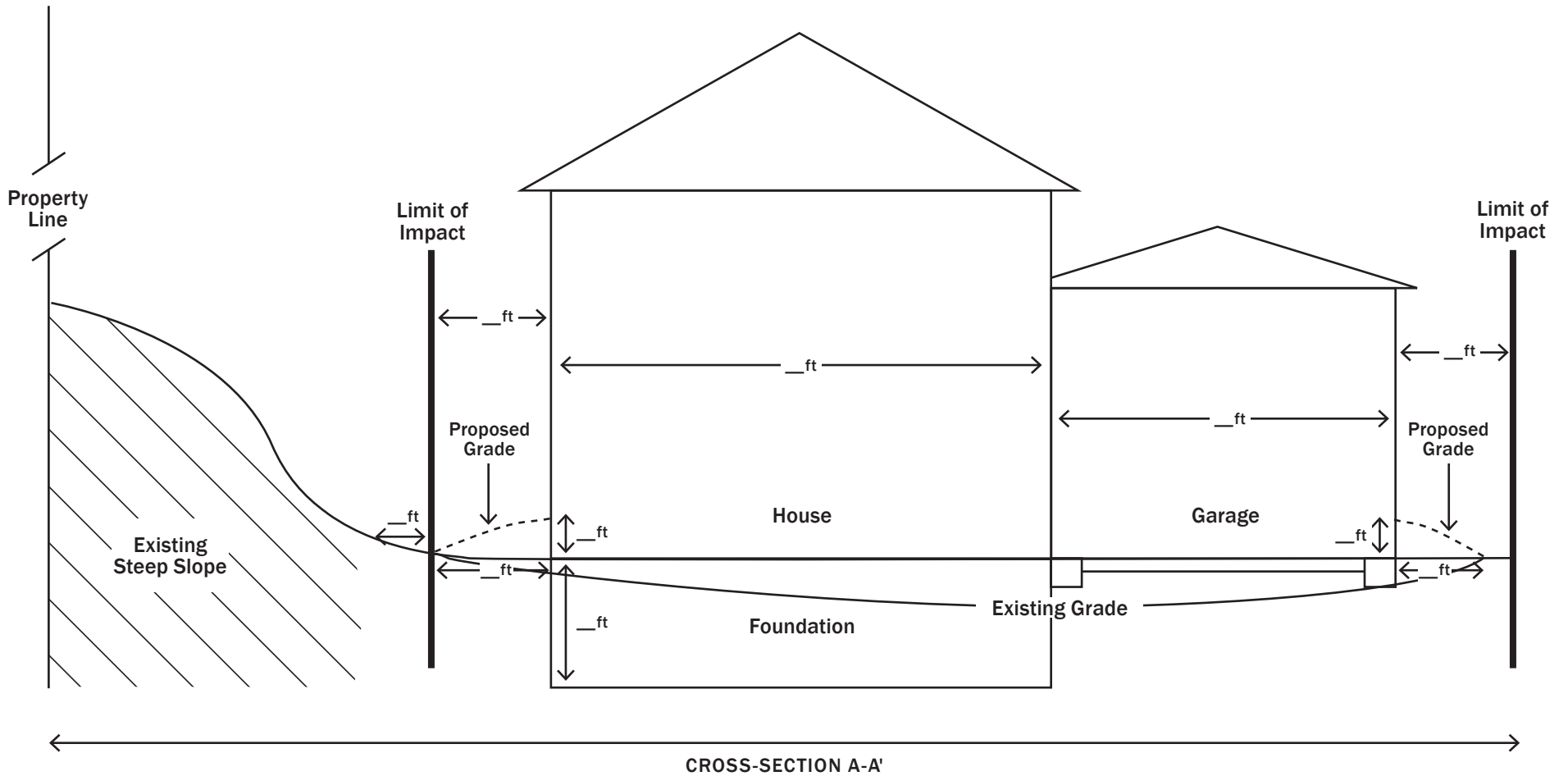
MAP LEGEND

-  Existing Contour
-  Proposed Contour
-  Disturbance Boundry
-  Berm
-  Silt Fence
-  Stockpile

SOUTH

SCALE: 1 inch= _____ feet
(no more than 100 feet for Residential & Commercial)
(no more than 200 feet if Sand & Gravel Pit)

Sample Drawing: Construction in a Critical Dune Area - Steep Slopes (Cross-section A-A')

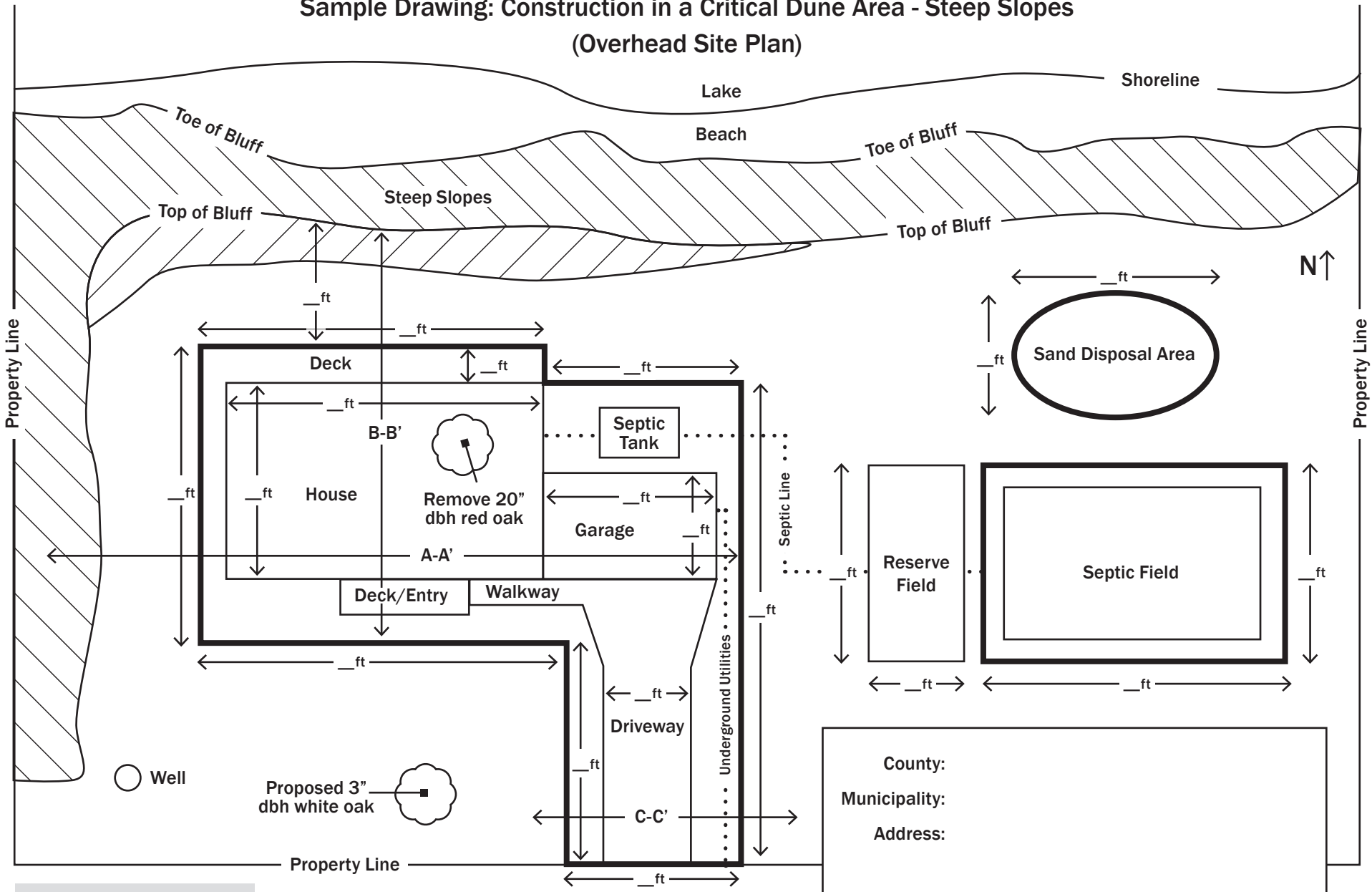


**SHOW DIMENSIONS,
GRADE CHANGES, AND
DEPTH OF EXCAVATION**



County:
Municipality:
Address:
Date:
Drawn by:

Sample Drawing: Construction in a Critical Dune Area - Steep Slopes (Overhead Site Plan)



**SHOW DIMENSIONS,
LIMITS OF IMPACT,
GRADE CHANGES,
VEGETATION REMOVAL
AND LANDSCAPING**

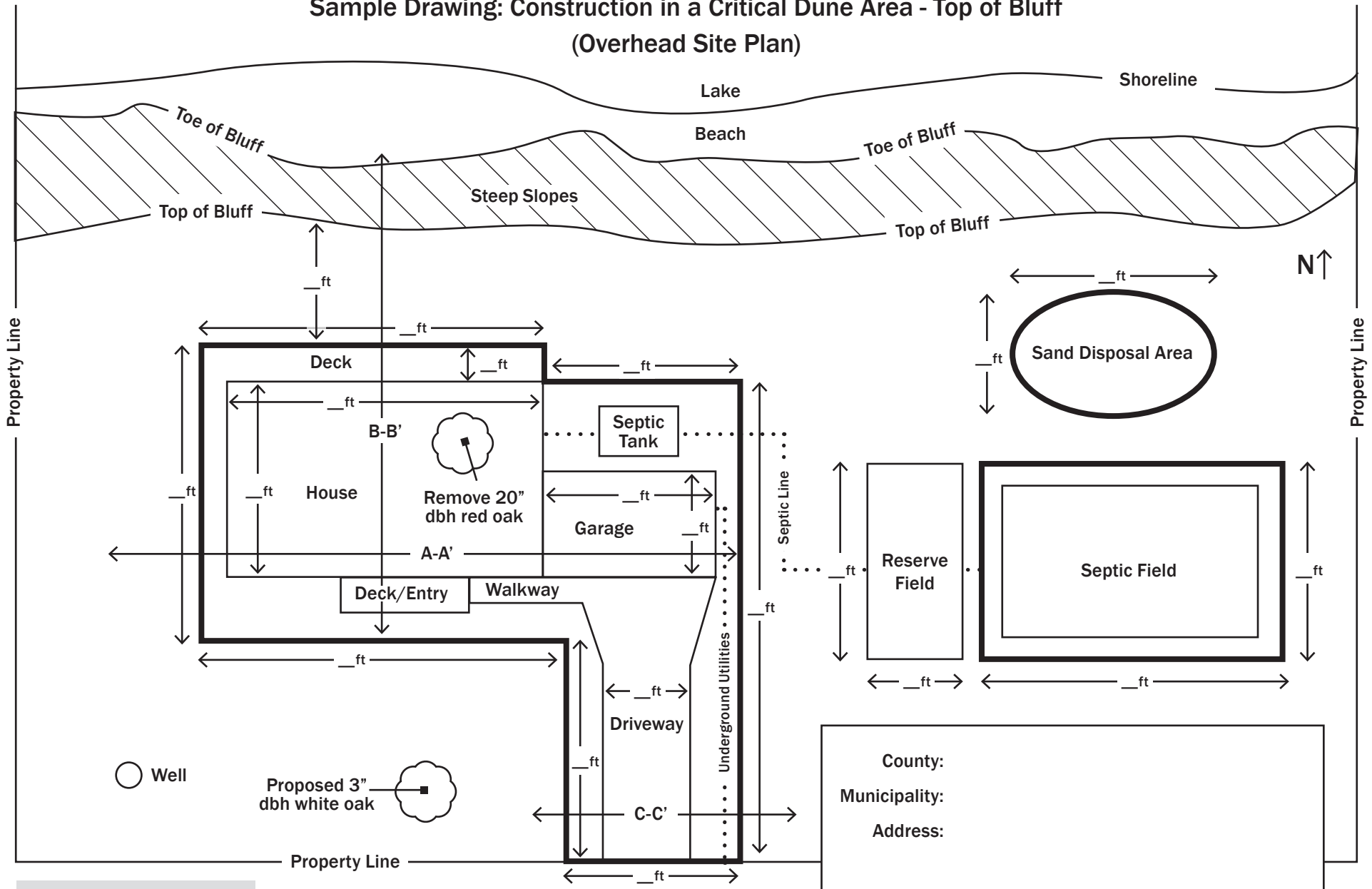
— = Limits of impact



County: _____
Municipality: _____
Address: _____

Date: _____
Drawn by: _____

Sample Drawing: Construction in a Critical Dune Area - Top of Bluff (Overhead Site Plan)



**SHOW DIMENSIONS,
LIMITS OF IMPACT,
GRADE CHANGES,
VEGETATION REMOVAL
AND LANDSCAPING**

— = Limits of impact



County: _____
 Municipality: _____
 Address: _____
 Date: _____
 Drawn by: _____

GENERAL REQUIREMENTS AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL PLANS

EARTH CHANGE – A HUMAN MADE CHANGE IN THE NATURAL COVER OR TOPOGRAPHY OF LAND, INCLUDING CUT AND FILL ACTIVITIES, WHICH MAY RESULT IN OR CONTRIBUTE TO SOIL EROSION OR SEDIMENTATION OF THE WATERS OF THE STATE, AS DEFINED IN MCL

324.9101. THIS SHALL INCLUDE WITHOUT BEING LIMITED TO EXCAVATING, FILLING, STOCKPILING, GRADING, CLEARING, GRUBBING, AND STUMPING.

STREAM – A NATURAL OR ARTIFICIAL RIVER, CREEK OR OTHER SURFACE WATERCOURSE WHICH MAY OR MAY NOT BE SERVING AS A DRAIN (AS DEFINED IN ACT NO. 40 OF THE PUBLIC ACTS OF 1956, AS AMENDED BY MCL 280.1 ET SEQ.) AND WHICH HAS DEFINITE BANKS, A BED, AND VISIBLE EVIDENCE OF THE CONTINUED FLOW OR CONTINUED OCCURRENCE OF WATER, INCLUDING THE CONNECTING WATERS OF THE GREAT LAKES [SEE MICHIGAN ADMINISTRATIVE CODE R323.1701 (K)]. THIS INCLUDES A DITCH, GULLY, RAVINE, ETC. THAT IS SERVING AS A RIVER, STREAM OR CREEK.

LAKE – ALL NATURAL AND ARTIFICIAL INLAND LAKES OR IMPOUNDMENTS THAT HAVE DEFINITE BANKS, A BED, VISIBLE EVIDENCE OR A CONTINUED OCCURRENCE OF WATER, AND A SURFACE AREA OF WATER THAT IS EQUAL TO OR GREATER THAN ONE ACRE, INCLUDING MANMADE PONDS GREATER THAN ONE ACRE LAKES [SEE MICHIGAN ADMINISTRATIVE CODE R323.1701 (D)]. “LAKE” DOES NOT INCLUDE SEDIMENT BASINS AND BASINS CONSTRUCTED FOR THE SOLE PURPOSE OF STORM WATER RETENTION, COOLING WATER, OR TREATING POLLUTED WATER.

25-YEAR FREQUENCY, 24-HOUR DURATION EVENT – THE AMOUNT OF RAINFALL IN DETERMINING A 25-YEAR FREQUENCY, 24- HOUR DURATION EVENT IS DEPENDENT UPON THE SITE LOCATION AND THE STORM FREQUENCY. A 25-YEAR (OR 4% CHANCE) EVENT IS DEFINED AS AN EVENT WHICH CONTRIBUTES 4.17 INCHES OF WATER IN A 24-HOUR PERIOD (TAKEN FROM MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY SOIL EROSION AND SEDIMENTATION CONTROL TRAINING MANUAL, SOILS AND RUNOFF SECTION

NOTE: PLEASE FOLLOW THESE GENERALLY ACCEPTED PROCEDURES AND SIMPLE HINTS TO PREVENT ANY EROSION/SEDIMENTATION.

- KEEP ALL EXCAVATED MATERIAL UP THE GRADE FROM EXCAVATION AND WATER.
- CLEAR ONLY WHAT IS NEEDED.
- KEEP A BUFFER BETWEEN DEVELOPMENT AND WATER.
- IF POSSIBLE, WORK IN PHASES (ESPECIALLY IN VERY SENSITIVE AREAS).
- ROUTINELY CHECK TEMPORARY CONTROLS (PARTICULARLY AFTER A RAIN EVENT).
- VEGETATE SITE AS SOON AS POSSIBLE.
- REMOVE TEMPORARY CONTROLS AS SOON AS PERMANENT CONTROLS ARE IN PLACE AND FUNCTIONING/ESTABLISHED.

THE DOCUMENTS SUBMITTED FOR OUR REVIEW MUST SHOW A REASONABLE REPRESENTATION OF ALL OF THE CONTROL MEASURES THAT ARE ANTICIPATED TO BE NECESSARY DURING ALL STAGES OF THE EARTH CHANGE, I.E., FROM THE TIME THAT THE SITE IS STRIPPED OF THE EXISTING VEGETATION UNTIL THE SITE IS PERMANENTLY STABILIZED WITH A NON-ERODIBLE SURFACE (NOTE: A SITE THAT HAS BEEN SEEDED AND MULCHED IS NOT CONSIDERED TO BE PERMANENTLY STABILIZED UNTIL THE SURFACES ARE WELL VEGETATED).

THE DOCUMENTS MUST INCLUDE DETAILED DRAWINGS SHOWING THE PROPER USE, MATERIALS, AND INSTALLATION OF ALL TEMPORARY AND PERMANENT EROSION/SEDIMENT CONTROL MEASURES ALONG WITH THE REQUIREMENT THAT THE CONTROL MEASURES BE PROPERLY INSTALLED, MAINTAINED, RELOCATED, MODIFIED, ETC. AS NECESSARY TO PERFORM THEIR INTENDED FUNCTION AND BE IN COMPLIANCE WITH THE LAW.

EROSION AND SEDIMENT CONTROLS ARE REQUIRED FOR EARTH CHANGES ABOVE THE WATERLINE TO PREVENT SEDIMENT FROM ENTERING THE WATER. PROPER EROSION CONTROL MEASURES ARE REQUIRED ALONG ALL WATERBODY EDGES FOR PROJECTS THAT ARE CLOSE TO A LAKE/STREAM. LARGER COMMERCIAL PROJECTS WILL BE REQUIRED TO INSTALL AND MAINTAIN BERMS/TRENCHES/ SEDIMENT TRAPS FOR EROSION CONTROL.

THE DOCUMENTS MUST INCLUDE A PROJECT SCHEDULE AND SEQUENCE WITH SUFFICIENT DETAIL TO SHOW THAT THE FOLLOWING REQUIREMENTS WILL BE MET:

- 1) EARTH CHANGES SHALL BE STAGED TO KEEP THE AREA OF THE DISTURBED EARTH SURFACES AS SMALL AS PRACTICABLE FOR THE SHORTEST POSSIBLE PERIOD OF TIME;
- 2) ALL DISTURBED EARTH SURFACES SHALL BE EXPEDITIOUSLY BROUGHT TO THE FINAL GRADE AND PERMANENTLY STABILIZED;

3) THE SURFACE RESTORATION WORK SHALL BE A CONTINUOUS OPERATION AND SHALL PROCEED CONCURRENTLY WITH OTHER ITEMS OF WORK;

4) THE WORK SCHEDULE AND SEQUENCE TO BE FOLLOWED IS THE ONE THAT WILL HAVE THE LEAST POTENTIAL FOR CAUSING EROSION/SEDIMENT DAMAGE.

ALL STREAM CROSSING SLOPES [BOTH SIDES] MUST BE STABILIZED WITH NON-WOVEN FILTER FABRIC AND RIP-RAP [ANGULAR OR FIELD STONE] FROM WATER LINE UP TO TOP OF ROAD BASE, REGARDLESS OF SLOPE.

ALL DISTURBED EARTH SURFACES STEEPER THAN 3:1 AND UP TO 2:1 (HORZ:VERT) SHALL BE RESTORED WITH PEGGED SOD, EROSION CONTROL BLANKET, OR OTHER PRE-APPROVED EQUIVALENT. ALL DISTURBED EARTH SURFACES STEEPER THAN 2:1 (HORZ:VERT) SHALL BE RESTORED WITH ROCK RIP-RAP, EROSION CONTROL BLANKET, OR OTHER PRE-APPROVED EQUIVALENT. NO NEW SLOPES SHALL BE CONSTRUCTED STEEPER THAN 1:1 UNLESS SPECIFICALLY WAIVED BY THE SOIL EROSION INSPECTOR. EARTH SURFACES ON PRE- EXISTING SLOPES STEEPER THAN 2:1 ARE TO BE ARMORED WITH RIPRAP, EROSION CONTROL BLANKET, OR OTHER PRE-APPROVED EQUIVALENT. THESE REQUIREMENTS APPLY TO ALL DITCH/CUT/FILL SLOPES.

IN ALL AREAS OF CHANNELIZED FLOW, IF THE WATER VELOCITY IS BETWEEN 4 FPS AND 6 FPS FOR A 25-YR/24-HR STORM, THE CHANNEL SHALL BE RESTORED WITH PEGGED SOD OR OTHER PRE-APPROVED EQUIVALENT. THE SOD SHALL EXTEND A MINIMUM OF 1' ABOVE THE CHANNEL BOTTOM, MEASURED VERTICALLY, OR ABOVE THE NORMAL DEPTH OF FLOW FOR A 25-YR/24-HR STORM. THE SOD SEAMS SHALL BE STAGGERED IN THE DIRECTION PARALLEL WITH THE FLOW OF WATER. IN V-BOTTOM DITCHES THE SOD SEAMS SHALL NOT BE INSTALLED IN THE BOTTOM OF THE VEE. THE SOD SHALL B.E ENTRENCHED SUCH THAT THE TOP OF THE ROOT MAT IS TO THE LINE AND GRADE OF THE ADJACENT GROUND IN ALL AREAS OF CHANNELIZED FLOW, IF THE WATER VELOCITY IS GREATER THAN 6 FPS FOR A 25-YR/24-HR STORM, THE CHANNEL SHALL BE ARMORED WITH RIPRAP, PAVEMENT, OR OTHER PRE-APPROVED EQUIVALENT MATERIALS. THE ARMOR SHALL EXTEND A MINIMUM OF 1 FOOT ABOVE THE CHANNEL BOTTOM, MEASURED VERTICALLY, OR ABOVE THE NORMAL DEPTH OF FLOW FOR A 25-YR/24-HR STORM, WHICHEVER IS THE GREATEST. REGARDLESS OF THE VELOCITY, ALL AREAS OF CHANNELIZED FLOW HAVING A CONTINUOUS BASEFLOW SHALL BE PERMANENTLY STABILIZED WITH RIPRAP, PAVEMENT, OR OTHER PRE-APPROVED METHOD (BIOENGINEERING IS ENCOURAGED). THE RIPRAP, PAVEMENT, ETC. SHALL EXTEND ABOVE THE CHANNEL BOTTOM TO THE NORMAL DEPTH OF THE BASEFLOW. THE SURFACES WITHIN THE CHANNEL ABOVE THE NORMAL DEPTH OF BASEFLOW MUST BE RESTORED ACCORDING TO THE VELOCITY AND NORMAL DEPTH REQUIREMENTS FOR A 25-YR/24-HR STORM AS DISCUSSED PREVIOUSLY. ALL RIPRAP SHALL BE SIZED SUCH THAT THE SMALLEST STONES WILL NOT BE DISPLACED BY THE WATER VELOCITIES RESULTING FROM A 25-YR/24-HR STORM. THE DEPTH OF THE RIPRAP SHALL BE 1.5 TIMES THE SMALLEST STONE DIMENSION OR 8 INCHES, WHICHEVER IS THE GREATEST. ALL RIPRAP SHALL BE UNDERLAIN BY GEOTEXTILE FABRIC. ALL RIPRAP SHALL BE ENTRENCHED SUCH THAT THE TOP OF THE RIPRAP IS TO THE LINE AND GRADE OF THE ADJACENT GROUND.

WHERE SUBSURFACE WATER MOVEMENT OR EXCAVATIONS BELOW THE WATER TABLE MAY CAUSE SEEPS, SOIL EROSION, SOIL SLIPPAGE, SLOUGHING, CAVING, OR OTHER EARTH MOVEMENT, ADEQUATE SUBSURFACE DRAINAGE FACILITIES AND PERMANENT SURFACE STABILIZATION MEASURES SHALL BE INSTALLED AS NECESSARY TO PREVENT SLOPE INSTABILITY, SOIL EROSION, AND SEDIMENTATION.

THE SAME END RESULT OF STRUCTURAL STABILITY IS REQUIRED FOR EARTH IMPOUNDMENTS. THE SUITABILITY OF THE IN-PLACE FOUNDATION SOILS MUST BE ANALYZED; THE EMBANKMENT CROSS-SECTION, SOILS, COMPACTION, OUTLET STRUCTURES, ETC. MUST BE ENGINEERED TO PREVENT SLOPE INSTABILITY, PIPING, SEEPAGE, SETTLEMENT, ETC. THIS ALSO APPLIES TO EXISTING EARTH FILLS THAT WILL BE SUBJECTED TO AN INCREASE IN THE BACKWATER ELEVATION DUE TO AN ALTERATION OF THE DRAINAGE STRUCTURES OR DUE TO STORMWATER DIVERSIONS. ANTI-SEEPAGE COLLARS MUST BE INSTALLED ON ALL IMPOUNDMENT PIPE OUTLETS. ON THE INTERIOR SURFACES OF IMPOUNDMENTS, THE PERMANENT STABILIZATION METHOD, MATERIALS, PLANT SPECIES, ETC. MUST BE CAREFULLY CHOSEN TO ENSURE THAT THE METHOD IS APPROPRIATE FOR THE RANGE OF WATER LEVEL FLUCTUATIONS, AND/OR INUNDATION DURATION AND FREQUENCY OF OCCURRENCE.

THE EXISTING SURFACE COVER TYPES MUST ALSO BE ANALYZED AND MODIFIED AS NECESSARY IN AREAS THAT ARE NOT BEING DISTURBED BUT WILL BE EXPERIENCING A CHANGE IN WATER VELOCITIES, THE RANGE OF WATER LEVEL FLUCTUATIONS, AND/OR INUNDATION DURATION AND FREQUENCY OF OCCURRENCE DUE TO STORMWATER DIVERSIONS AND/OR ALTERATIONS OF DRAINAGE CONTROL STRUCTURES. THE STATE LAW REQUIRES THAT ALL DRAINAGE CONVEYANCES BE DESIGNED TO PREVENT EROSION VELOCITIES, THEREFORE, IN THE LOCATIONS WHERE THE EXISTING GROUND SURFACE COVER WILL BE SUBJECTED TO EROSION VELOCITIES AS A RESULT OF THIS PROJECT, THE USE OF ENERGY DISSIPATORS AND VELOCITY CONTROL STRUCTURES WILL BE REQUIRED UNLESS ALL AFFECTED SURFACES ARE PROTECTED AS NECESSARY TO PREVENT LONG TERM EROSION PROBLEMS. THE PLANS MUST SHOW DETAIL DRAWINGS OF THE CONFIGURATION AND DIMENSIONS OF ALL RIPRAP CULVERT APRONS, ENERGY DISSIPATORS, SPILLWAYS, AND DOWN DRAINS. ALL RIPRAP DOWN DRAINS AND IMPOUNDMENT SPILLWAYS MUST BE ENGINEERED USING THE USDA "ROCK CHUTE" DESIGN METHOD OR OTHER APPROPRIATE "ENGINEERED" METHOD.

PERFORMANCE GUARANTEES:

PERFORMANCE GUARANTEES ARE REQUIRED AT THE DISCRETION OF THE COUNTY ENFORCEMENT AGENCY FOR MOST EARTH CHANGES THAT EXCEED 1000 CUBIC YARDS ONE ACRE OF EARTHWORK. IF REQUIRED THE PROJECT MUST BE BONDED FOR \$1000 PER

ACRE OF WORK. THE PERFORMANCE GUARANTEE MAY BE IN THE FORM OF A SURETY BOND, CASH BOND, OR IRREVOCABLE LETTER OF CREDIT. IF THE PROJECT OWNER IS A GOVERNMENT AGENCY, IN LIEU OF A BOND, AN AGREEMENT MAY BE ENTERED INTO BETWEEN THE PROJECT OWNER AND THE SOIL EROSION INSPECTOR WHEREBY THE OWNER AGREES TO ACT ON THE BOND ON OUR BEHALF IN THE EVENT THAT THE CONTRACTOR DEFAULTS IN PERFORMING THE PERMIT REQUIREMENTS. HOWEVER, FOR THIS OPTION TO BE CONSIDERED, THE CONTRACTOR MUST BE BONDED TO THE OWNER FOR 100% OF THE PERMIT REQUIREMENTS, I.E., THE CONTRACT DOCUMENTS MUST INCORPORATE ALL OF THE WORK AS APPROVED AND REQUIRED BY THIS OFFICE.

MAINTENANCE:

THE STATE LAW REQUIRES THAT THE SOIL EROSION AND SEDIMENT CONTROL PLAN INCLUDE "A PROGRAM PROPOSAL FOR THE CONTINUED MAINTENANCE OF ALL PERMANENT SOIL EROSION CONTROL FACILITIES WHICH REMAIN AFTER PROJECT COMPLETION, INCLUDING THE DESIGNATION OF THE PERSON RESPONSIBLE FOR THE MAINTENANCE..."

GRAVEL PITS

EROSION AND SEDIMENT DEPOSITION ARE CONCERNS FOR SOME SAND AND GRAVEL OPERATIONS. EROSION NORMALLY PROCEEDS AT A SLOW RATE, BUT WHEN PROTECTIVE VEGETATIVE COVER IS REMOVED AND UNDERLYING SOIL EXPOSED, THE RATE IS GREATLY ACCELERATED. DISTURBED LAND MAY EXPERIENCE EROSION RATES AS MUCH AS 1,000 TIMES THAT OF UNDISTURBED LAND. THE GREATER THE DISTANCE AND SLOPE, THE MORE DIFFICULT EROSION IS TO CONTROL. INCREASING VOLUME AND VELOCITY OF RUNOFF WATERS ALSO CONTRIBUTES TO THE SEVERITY OF EROSION. DAMAGE FROM SEDIMENTATION CAUSED BY EROSION IS COSTLY IN BOTH ECONOMIC AND ENVIRONMENTAL TERMS. SEDIMENT DEPOSITION CAN DESTROY FISH SPAWNING BEDS, REDUCE STORAGE VOLUME IN RESERVOIRS, CLOG STREAMS, AND MAY CARRY TOXIC CHEMICALS. IMPACTS FROM SEDIMENT DEPOSITION ARE CUMULATIVE AND THE ULTIMATE COSTS MAY NOT BE EVIDENT FOR YEARS. BENEFITS THAT COME FROM A GRAVEL PIT PLAN ARE EARLY IDENTIFICATION OF ENVIRONMENTAL CONCERNS, EFFICIENT REMOVAL OF THE GRAVEL RESOURCE, AND COST-EFFECTIVE RECLAMATION. WITH PLANNING, MATERIALS ARE PLACED IN THE APPROPRIATE LOCATION DURING STRIPPING OPERATIONS. AREAS REQUIRING FILL MATERIAL ARE IDENTIFIED. FINAL LANDFORMS ARE CONSTRUCTED DURING ACTIVE MINING. OTHER BENEFITS THAT MAY BE REALIZED FROM A MINING PLAN ARE:

- APPROPRIATE LOCATION OF ROADS, BERMS, SCREENS, AND PROCESSING FACILITIES.
- PROPER PLACEMENT OF STORED MATERIALS TO AVOID DOUBLE HANDLING.
- EFFICIENT USE OF EQUIPMENT FOR COST-EFFECTIVE CONSTRUCTION OF FINAL LANDFORMS.
- BEST USE OF AVAILABLE FILL MATERIAL.
- USE OF PROGRESSIVE RECLAMATION.
- REDUCED OPERATING COSTS.
- GOOD PUBLIC RELATIONS WITHIN THE COMMUNITY.

A PART 91 PERMIT IS REQUIRED FOR A GRAVEL PIT. MORE PERMITS OR ZONING VARIANCES MAY BE REQUIRED AND WILL DEPEND ON YOUR OPERATION; SOMETIMES MULTIPLE PERMITS MAY BE REQUIRED (I.E. IF THERE ARE STORM WATER DISCHARGES AND PROCESS WASTEWATER DISCHARGES, THEN BOTH PERMITS WOULD BE REQUIRED).

1. PART 31, INDUSTRIAL STORM WATER PERMIT: THIS IS A FEDERAL REGULATION THAT IS ADMINISTERED BY THE STATE. IF THE STORM WATER THAT FALLS ON THE GRAVEL PIT DISCHARGES AS A POINT SOURCE TO A SURFACE WATER (LAKE, STREAM OR WETLAND), THEN THIS PERMIT WOULD BE REQUIRED. IF YOU ARE ABLE TO CONTAIN THE STORM WATER IN YOUR PIT AND DO NOT LET IT DISCHARGE, THEY YOU WOULD BE EXEMPT FROM THIS PERMIT (I.E. NO POINT SOURCE DISCHARGE). PLEASE CONTACT **MS. LINDSEY RINGUETTE** (EGLE-WATER RESOURCES DIVISION) AT **(906) 250-3819**
2. PART 31, MINING WASTEWATER (FORMERLY SAND AND GRAVEL MINING) PERMIT: THIS IS A FEDERAL REGULATION THAT IS ADMINISTERED BY THE STATE. IF YOU WASH YOUR GRAVEL AND DISCHARGE THE WASH WATER (WASTEWATER) TO A SURFACE WATER (LAKE, STREAM OR WETLAND), THEN THIS PERMIT WOULD BE REQUIRED. PLEASE CONTACT THE EGLE-WATER RESOURCES DIVISION.
3. PART 31, GROUNDWATER PERMIT: THIS IS A STATE REGULATION. IF YOU WASH YOUR GRAVEL AND DISCHARGE THE WASH WATER (WASTEWATER) TO THE GROUND, THEN THIS PERMIT WOULD BE REQUIRED. PLEASE CONTACT **MR. RANDY CONROY** (EGLE-WATER RESOURCES DIVISION) AT **906-236-1362**.
4. PART 303, WETLANDS PROTECTION: IF YOU DISTURB (DREDGE, FILL, DRAIN, ETC...) A WETLAND, YOU MAY HAVE TO OBTAIN THIS PERMIT. PLEASE CONTACT THE EGLE-WATER RESOURCES DIVISION.
5. PART 301, INLAND LAKES AND STREAMS: IF YOU CONDUCT ANY WORK DIRECTLY ALONG OR WITHIN A LAKE OR STREAM, OR CONSTRUCT LARGE WASH WATER PONDS, YOU MAY HAVE TO OBTAIN THIS PERMIT. PLEASE CONTACT THE EGLE-WATER RESOURCES DIVISION (FOR IRON, IT IS CURRENTLY **JIM CARON** **(906) 875-2071**).
6. DISPOSAL OF SOLID AND HAZARDOUS WASTE: PLEASE CONTACT THE EGLE-MATERIALS MANAGEMENT DIVISION FOR FURTHER INFORMATION. IF BLASTING OCCURS, THEN MSHA MAY ALSO BE INVOLVED.

CRAFTING YOUR GRAVEL PIT SITE PLAN:

PURPOSE: A PIT MANAGEMENT PLAN PROVIDES THE DIRECTION NEEDED TO MINE A DEPOSIT IN AN EFFICIENT AND ENVIRONMENTALLY ACCEPTABLE MANNER AND TO LEAVE THE AREA IN A SAFE AND PRODUCTIVE CONDITION.

DESCRIPTION: A PIT MANAGEMENT PLAN IS A COMBINATION OF MAPS AND WRITTEN INFORMATION THAT DESCRIBE THE MANY ASPECTS OF MANAGING A GRAVEL RESOURCE FROM THE START OF OPERATIONS TO FINAL RECLAMATION. THEY CAN BE SIMPLE TO COMPLEX DEPENDING ON THE CHARACTERISTICS OF THE DEPOSIT AND ITS LOCATION. THERE ARE NO COOKBOOK RECIPES; THEY NEED TO BE SITE-SPECIFIC.

INFORMATION THAT SHOULD BE INCLUDED:

DESCRIPTION OF THE DEPOSIT:

- TOPOGRAPHIC MAP
- TEST HOLE LOCATIONS AND DESCRIPTIONS (IF APPLICABLE)
- SUMMARY OF TEST HOLE RESULTS – TYPES AND QUANTITIES OF MATERIALS FOUND AND THEIR LOCATION (IF APPLICABLE)
- DEPTH OF OVERBURDEN AND TOPSOIL
- PLANS FOR FUTURE EXPANSION

SITE PREPARATION:

- ACCESS – WHERE AND WHAT CONTROLS: GATES, FENCES, BERMS, SIGNS
- TIMBER REMOVAL
- VEGETATION RETENTION
- CLEARING AND GRUBBING
- SALVAGE AND STORAGE OF TOPSOIL
- STORAGE OR DISPOSAL OF WOODY DEBRIS
- STORAGE OR DISPOSAL OF OVERBURDEN
- SCALES, BUILDINGS OR OTHER FACILITIES
- LANDLINE SURVEYS (IF APPLICABLE)
- TOPOGRAPHIC SURVEY FOR FUTURE VOLUME CHECKS (IF APPLICABLE)

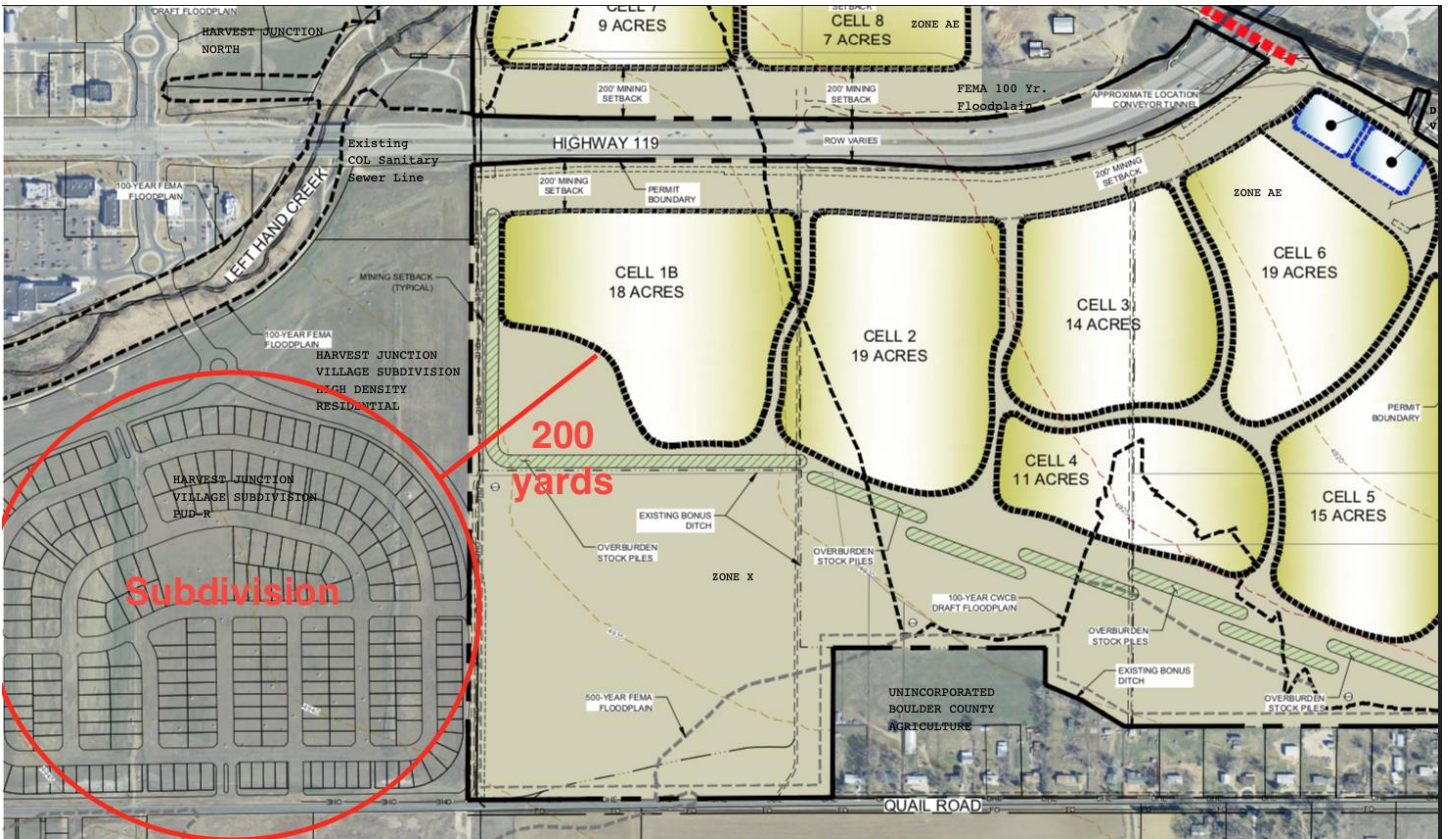
MINING:

- SEQUENCE OF DEVELOPMENT, MINING AND RECLAMATION
- WHAT TYPES OF MATERIALS ARE TO BE MINED FROM WHAT AREAS?
- GRADES OF THE PIT FLOOR
- MINING ELEVATIONS ABOVE OR BELOW THE WATER TABLE
- F. RUN-OFF CONTROL
- GRADES OF THE SIDE SLOPES
- STORAGE AREA FOR COARSE OR FINE REJECTS
- STORAGE AREA FOR FINISHED PRODUCTS

RECLAMATION PLANNING - DESIRED FUTURE CONDITION OF THE SITE CONSIDERING:

- ENVIRONMENTAL PROTECTION
- AESTHETICS
- WILDLIFE PROVISIONS
- RECREATIONAL PROVISIONS
- WATER DIVERSION OR PROTECTION
- SLOPING
- VEGETATION
- COSTS

EXAMPLE GRAVEL PIT SITE PLAN IMAGES



www.reddit.com



<http://www.swcrrproject.com/frequently-asked-questions/faq-north-gravel-site/>