

Wisconsin Division of Safety and Buildings Wisconsin Stats. 101.63, 101.73	WISCONSIN UNIFORM BUILDING PERMIT APPLICATION Instructions on back of second ply. The information you provide may be used by other government agency programs [(Privacy Law, s. 15.04 (1)(m))]	Application No. _____ Parcel No. _____
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PERMIT REQUESTED Constr. HVAC Electric Plumbing Erosion Control Other:

Owner's Name	Mailing Address	Tel.
Contractor's Name: <input type="checkbox"/> Con <input type="checkbox"/> Elec <input type="checkbox"/> HVAC <input type="checkbox"/> Plbg	Lic/Cert#	Mailing Address
		Tel.
		FAX#
Contractor's Name: <input type="checkbox"/> Con <input type="checkbox"/> Elec <input type="checkbox"/> HVAC <input type="checkbox"/> Plbg	Lic/Cert#	Mailing Address
		Tel.
		FAX#
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		FAX#
Contractor's Name: <input type="checkbox"/> Con <input type="checkbox"/> Elec <input type="checkbox"/> HVAC <input type="checkbox"/> Plbg	Lic/Cert#	Mailing Address
		Tel.
		FAX#

PROJECT LOCATION Lot area _____ Sq.ft. One acre or more of soil will be disturbed _____ 1/4, _____ 1/4, of Section _____, T _____ N, R _____ E (or) W

Building Address _____ Subdivision Name _____ Lot No. _____ Block No. _____

Zoning District(s) _____ Zoning Permit No. _____ Setbacks: Front _____ ft. Rear _____ ft. Left _____ ft. Right _____ ft.

1. PROJECT <input type="checkbox"/> New <input type="checkbox"/> Repair <input type="checkbox"/> Alteration <input type="checkbox"/> Raze <input type="checkbox"/> Addition <input type="checkbox"/> Move <input type="checkbox"/> Other: _____	3. OCCUPANCY <input type="checkbox"/> Single Family <input type="checkbox"/> Two Family <input type="checkbox"/> Garage <input type="checkbox"/> Other: _____	6. ELECTRIC Entrance Panel Amps: _____ <input type="checkbox"/> Underground <input type="checkbox"/> Overhead 7. WALLS <input type="checkbox"/> Wood Frame <input type="checkbox"/> Steel <input type="checkbox"/> ICF <input type="checkbox"/> Timber/Pole <input type="checkbox"/> Other: _____	9. HVAC EQUIP. <input type="checkbox"/> Furnace <input type="checkbox"/> Radiant Basebd <input type="checkbox"/> Heat Pump <input type="checkbox"/> Boiler <input type="checkbox"/> Central AC <input type="checkbox"/> Fireplace <input type="checkbox"/> Other: _____	12. ENERGY SOURCE <table style="width:100%; border-collapse: collapse;"> <tr> <td style="border: none;">Fuel</td> <td style="border: none;">Nat Gas</td> <td style="border: none;">LP</td> <td style="border: none;">Oil</td> <td style="border: none;">Elec</td> <td style="border: none;">Solid</td> <td style="border: none;">Solar</td> </tr> <tr> <td style="border: none;">Space Htg</td> <td style="border: none;"><input type="checkbox"/></td> </tr> <tr> <td style="border: none;">Water Htg</td> <td style="border: none;"><input type="checkbox"/></td> </tr> </table> <input type="checkbox"/> Dwelling unit has 3 kilowatt or more in electric space heating equipment capacity.	Fuel	Nat Gas	LP	Oil	Elec	Solid	Solar	Space Htg	<input type="checkbox"/>	Water Htg	<input type="checkbox"/>	13. HEAT LOSS _____ BTU/HR Total Calculated Envelope and Infiltration Losses ("Maximum Allowable Heating Equipment Output" on Energy Worksheet; "Total Building Heating Load" on Rescheck report)													
Fuel	Nat Gas	LP	Oil	Elec	Solid	Solar																							
Space Htg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																							
Water Htg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																							
2. AREA INVOLVED (sq ft) <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="border: none;"></th> <th style="border: none;">Unit 1</th> <th style="border: none;">Unit 2</th> <th style="border: none;">Total</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Unfin. Bsmt</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Living Area</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Garage</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Deck</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Totals</td> <td style="border: none;"></td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </tbody> </table>		Unit 1	Unit 2	Total	Unfin. Bsmt				Living Area				Garage				Deck				Totals				4. CONST. TYPE <input type="checkbox"/> Site-Built <input type="checkbox"/> Mfd. per WI UDC <input type="checkbox"/> Mfd. per US HUD 5. STORIES <input type="checkbox"/> 1-Story <input type="checkbox"/> 2-Story <input type="checkbox"/> Other: _____ <input type="checkbox"/> Plus Basement	8. USE <input type="checkbox"/> Seasonal <input type="checkbox"/> Permanent <input type="checkbox"/> Other: _____	10. SEWER <input type="checkbox"/> Municipal <input type="checkbox"/> Sanitary Permit# _____	11. WATER <input type="checkbox"/> Municipal <input type="checkbox"/> On-Site Well	14. EST. BUILDING COST w/o LAND \$ _____
	Unit 1	Unit 2	Total																										
Unfin. Bsmt																													
Living Area																													
Garage																													
Deck																													
Totals																													

I agree to comply with all applicable codes, statutes and ordinances and with the conditions of this permit; understand that the issuance of the permit creates no legal liability, express or implied, on the state or municipality; and certify that all the above information is accurate. If one acre or more of soil will be disturbed, I understand that this project is subject to ch. NR 151 regarding additional erosion control and stormwater management and the owner shall sign the statement on the back of the permit if not signing below. I expressly grant the building inspector, or the inspector's authorized agent, permission to enter the premises for which this permit is sought at all reasonable hours and for any proper purpose to inspect the work which is being done.

I vouch that I am or will be an owner-occupant of this dwelling for which I am applying for an erosion control or construction permit without a Dwelling Contractor Financial Responsibility Certification and have read the cautionary statement regarding contractor responsibility on the reverse side of the last ply.

APPLICANT'S SIGNATURE _____ **DATE SIGNED** _____

APPROVAL CONDITIONS This permit is issued pursuant to the following conditions. Failure to comply may result in suspension or revocation of this permit or other penalty. See attached for conditions of approval.

ISSUING JURISDICTION Town of Village of City of County of State → State-Contracted Inspection Agency#: _____ Municipality Number of Dwelling Location: _____

FEES:	PERMIT(S) ISSUED	WIS PERMIT SEAL #	PERMIT ISSUED BY:
Plan Review \$ _____	<input type="checkbox"/> Construction		Name _____
Inspection \$ _____	<input type="checkbox"/> HVAC		Date _____ Tel. _____
Wis. Permit Seal \$ _____	<input type="checkbox"/> Electrical		Cert No. _____
Other \$ _____	<input type="checkbox"/> Plumbing		
Total \$ _____	<input type="checkbox"/> Erosion Control		



BUILDING PERMIT APPLICATION - NEW OR ADDITION

CITY OF MIDDLETON
 7426 HUBBARD AVE. • MIDDLETON, WI 53562
 608/821-8370 • FAX 608/827-1080
 cityofmiddleton.us

NUMBER
DATE
ISSUED BY

PROJECT ADDRESS	SUITE#	SUBDIVISION AND LOT NUMBER	
APPLICANT	ADDRESS	PHONE	FAX
OWNER (IF DIFFERENT)	ADDRESS	PHONE	FAX

WORK CONSISTS OF

RES. COM. IND. NEW OTHER _____

CONSTRUCTION TYPE	START DATE	EST. COMPLETION DATE
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SETBACKS	FRONT			SIDE R.	SIDE L.	REAR	LOT COVERAGE	ESTIMATED BUILDING COST
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BUILDING CONTRACTOR	QUALIFIER # _____	SQ. FT. (OFFICIAL USE ONLY)	FEES (OFFICIAL USE ONLY)
ADDRESS _____	CONTRACTOR # _____		
LEAD # _____	PHONE _____		
ELECTRICAL CONTRACTOR _____	CONTRACTOR # _____	BASEMENT _____	BUILDING \$ _____
ADDRESS _____	PHONE _____	1ST FLOOR _____	ELECTRIC \$ _____
		2ND FLOOR _____	PLUMBING \$ _____
		DECK _____	HVAC \$ _____
		PORCH _____	FIRE PROT. \$ _____
		GARAGE _____	FIRE ALARM \$ _____
		TOTAL _____ sq. ft.	AA VALVE \$ _____
			TOTAL \$ _____

HEATING CONTRACTOR _____	CONTRACTOR # _____	SUPPRESSION _____	CONTRACTOR # _____
ADDRESS _____	PHONE _____	ADDRESS _____	PH. _____

PLUMBING CONTRACTOR _____	LIC/CERT# _____	FIRE ALARM _____	CONTRACTOR # _____
ADDRESS _____	CONTRACTOR # _____	ADDRESS _____	PH. _____
PHONE _____			
_____ Air Admittance Valve x \$50/ea	= \$ _____		

COMMENTS:

Date paid: _____ Receipt # _____ Impact Fee \$ _____ Total Permit Fee \$ _____

I agree to comply with all applicable codes, statutes and ordinances and with the conditions of this permit, understand that the issuance of the permit creates no legal liability, express or implied, on the city, and certify that all the above information is accurate. I expressly grant the building inspector, or the inspector's authorized agent, permission to enter the premises for which this permit is sought at all reasonable hours and for any proper purpose to inspect the work which is being done.

SIGNATURE OF APPLICANT	DATE
PRINT NAME HERE	

INSPECTION RECORD

REQUIRED BLDG INSP	TYPE	DATE COMPLETE	SUB INSP	DATE COMPLETE
_____	FOOTING	_____	_____	_____
_____	FOUNDATION	_____	_____	_____
_____	INSULATION	_____	_____	_____
_____	ROUGH	_____	_____	_____
_____	FINAL	_____	_____	_____



ZONING PERMIT

CITY OF MIDDLETON • 7426 HUBBARD AVE. • MIDDLETON, WI 53562
 PHONE (608) 821-8370 • FAX (608) 827-1080 • www.cityofmiddleton.us

PERMIT #:	_____
Permit Fee: \$ _____	Fee Paid: <input type="checkbox"/>
Approved By: _____	
Approval Date: / /	

No structure shall be erected or altered without first obtaining a Zoning Permit pursuant to Section 10.127(1) of the City of Middleton Zoning Ordinance as well as the appropriate Building Permit(s). Zoning Permit Fees (pursuant to City of Middleton Code of Ordinances, Section 10.128(1)(g)):

PROJECT CLASS	PRINCIPAL STRUCTURE	ADDITIONS (e.g. garage, deck)	ACCESSORY STRUCTURES (e.g. shed, fence)
One Family and Duplex	\$250	\$50	\$25
Multifamily	\$500	\$250	\$100
Small Commercial / Industrial (up to 20,000 SF)	\$500	\$250	\$100
Large Commercial / Industrial (over 20,000 SF)	\$1,000	\$250	\$100

NOTE: Only one fee is charged per application. If an application includes more than one structure type on the same lot, only the highest fee applies.

SECTION 1 – APPLICATION (TO BE COMPLETED BY APPLICANT)

INSTRUCTIONS:

This application must be accompanied by a Site Plan that illustrates building dimensions and setbacks measured to foundation walls, with dimensions of roof eaves and other overhangs clearly indicated. Fence-only applications may contain less detail.

Prior to plan submittal, applicant should identify lot boundaries and determine whether any public or private easements affect the property. Prior to construction, contact Digger's Hotline at (800) 242-8511. Some properties in the city require the approval of a Neighborhood Architectural Review Committee or Homeowner's Association that is separate from the City permitting process.

ADDRESS OF PROPERTY	WORK CONSISTS OF
OWNER	PROJECT REPRESENTATIVE (Contractor, Coordinator, Other)
NAME	CONTACT NAME
BUSINESS NAME or CO-OWNER'S NAME (if applicable)	BUSINESS NAME (if applicable)
MAILING ADDRESS	MAILING ADDRESS
CITY, STATE, ZIP	CITY, STATE, ZIP
DAYTIME PHONE #	DAYTIME PHONE #
EMAIL	EMAIL

PROJECT CLASS (Check One)	<input type="checkbox"/> SINGLE FAMILY	<input type="checkbox"/> DUPLEX	<input type="checkbox"/> MULTIFAMILY	<input type="checkbox"/> SMALL COMMERCIAL / INDUSTRIAL (up to 20,000 SF)
	<input type="checkbox"/> LARGE COMMERCIAL / INDUSTRIAL (over 20,000 SF)			
PROJECT SCOPE (Check all that apply)	<input type="checkbox"/> NEW STRUCTURE	<input type="checkbox"/> ADDITION	<input type="checkbox"/> ALTERATION	
STRUCTURE TYPE (Check all that apply)	<input type="checkbox"/> PRINCIPAL STRUCTURE	<input type="checkbox"/> GARAGE	<input type="checkbox"/> DECK	<input type="checkbox"/> SHED
	<input type="checkbox"/> FENCE	<input type="checkbox"/> POOL	<input type="checkbox"/> OTHER _____	

SITE DATA (not required for fence-only applications)	LOT AREA (sq.ft.)	IMPERVIOUS SURFACE AREAS		
		EXISTING	PLANNED CHANGES	
		STRUCTURES (include roof eaves & other overhangs)	SF	SF
		DRIVEWAYS, PARKING AREAS, WALKWAYS	SF	SF
OTHER FLAT SURFACES (patios, uncovered decks)	SF	SF		

I, the undersigned, do hereby certify that the above information is correct and agree that in the performance of this work I will be bound by and submit to all statutes of the State of Wisconsin, conform to all applicable codes and ordinances of the City of Middleton, and abide by all other applicable rules and regulations. Furthermore, I understand that the City of Middleton is not responsible for enforcing neighborhood covenants, and any granted zoning variances apply only for the specific structure(s) reviewed by the Zoning Board of Appeals.

SIGNATURE OF APPLICANT (must be owner or project representative listed above)	DATE
_____	_____



Building Permit # _____
 Date Issued: _____

IMPACT FEES
 CITY OF MIDDLETON
 7426 HUBBARD AVE.
 MIDDLETON, WI 53562
 608-821-8370 • FAX 608-827-1080
 www.cityofmiddleton.us

On November 6, 2007, the Common Council approved the creation of City Ordinance section 3.11 establishing Public Impact Fees, pursuant to Wis. Stats. § 66.0617. You may pay these fees at this time or within 14 days of the issuance of your Building Permit. **ANY PERSON FAILING TO TIMELY PAY AN IMPACT FEE DUE IN FULL AFTER ISSUANCE OF A BUILDING PERMIT SHALL BE SUBJECT TO SUMMARY REVOCATION OF SAID BUILDING PERMIT THE DAY AFTER THE IMPACT FEE WAS DUE IN FULL.**

AMOUNT OF EXEMPTION for Low Cost Housing purposes: \$ _____

Public Facilities Needs Assessment and Impact Fee

Impact Fee	Single Family & Duplex (per DU)	Multi-Family 2+ bedrooms (per DU)	Multi-Family 1 bedroom (per DU)	Commercial new or add. (per SF)	Industrial new or add. (per SF)	This Project
Law Enforcement	\$742	\$556	\$371	\$0.230	\$0.140	\$
Fire	\$238	\$179	\$119	\$0.070	\$0.050	\$
EMS	\$260	\$195	\$130	\$0.080	\$0.050	\$
Total	\$1,240	\$930	\$620	\$0.380	\$0.240	\$

Project Address _____

SF & Duplex
 MF 2+ bedroom
 MF 1 bedroom
 Commercial
 Industrial

DU/SF _____

Project Name and Description _____

Applicant _____ Address _____ Phone _____ Fax _____

Landowner _____ Address _____ Phone _____ Fax _____

I certify that all information is correct and that all pertinent City Ordinances will be complied with in performing the work for this project.

Signature of Applicant _____ Date _____

Print Name _____

Date paid _____ Receipt # _____ Total Impact Fee \$ _____

WATER CALCULATION WORKSHEET



CITY OF MIDDLETON
 7426 HUBBARD AVE.
 MIDDLETON, WI, 53562
 TELEPHONE: (608) 827-1070
 (608) 827-1080 fax

Property _____ Permit No. _____

Information Needed For Service & Distribution Sizing

1. Demand of building in G.P.M. _____.
2. Low pressure at main in street _____.
3. Difference in elevation. Main to meter _____ . Pressure loss in _____ P.S.I.
4. Difference in elevation. Meter to highest fixture _____ . Pressure loss in _____ P.S.I.
5. Size of water meter _____ . Pressure loss in _____ P.S.I.
6. Distance main to meter _____ . Pressure loss in _____ P.S.I.
7. Distance meter to furthest fixture _____ .

Your First Goal Is To Find The Available Pressure After The Water Meter. To obtain this, you must:

1. Find pressure loss due to friction in water service. If using "K" copper, look at "K" copper chart [H62.13(4)(c) Table 16A]. Using the G.P.M. demand of building, go horizontally to size of service you want to use. Look straight down and find pressure loss per 100'.

Example: Demand of building is 20 G.P.M. We think a 1" service is necessary. Follow 20 G.P.M. to the 1" line. Look straight down, The pressure loss per 100' is approximately 17 lbs. On this building we have a 120' service. The method used for finding this loss is $\frac{17}{100} = \frac{X}{120}$.

X = pressure loss through service. You must cross multiply and divide $17 \times 120 \div 100 = 20$ lbs. loss due to friction.

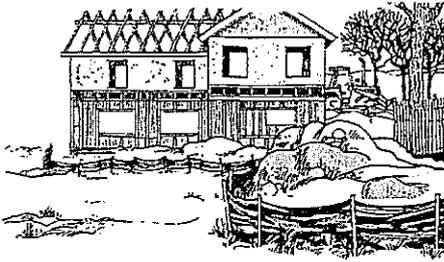
2. Find pressure loss due to elevation (main to meter). Take this distance and multiply by .434.
3. Find pressure loss due to meter. Look at last page in Water Distribution Manual.
4. Add together loss due to friction (Step 1). Loss due to elevation (Step 2) and loss due to meter (Step 3). Subtract these from the minimum street pressure. This gives you available pressure after the water meter.

Using The Following Formula, Find Uniform Pressure Loss. $A = \frac{B - (C+D+E) \times 100}{F}$

Where

- A. _____ Pressure available for uniform loss P.S.I./100.
- B. _____ Available pressure after water meter.
- C. _____ Pressure needed at furthestmost or controlling fixture.
- D. _____ Difference in elevation between water meter and highest fixture in feet x .434.
Pressure loss in _____ P.S.I.
- E. _____ Pressure loss due to heater, softener, etc.
- F. _____ Total length between water meter and furthest fixture in feet x 1.5 (loss due to fittings and valves).
- G. **Size of water service.**
- H. _____ Distribution pipe size after meter.

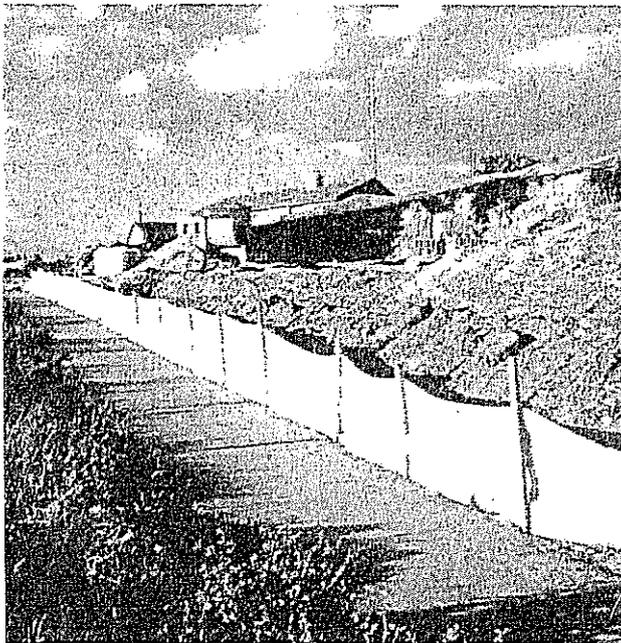
With uniform pressure loss, go to applicable Table per distribution sizing.



Erosion Control for Home Builders

By controlling erosion, home builders help keep our lakes and streams clean.

Eroding construction sites are a leading cause of water quality problems in Wisconsin. For every acre under construction, about a dump truck and a half of soil washes into a nearby lake or stream unless the builder uses erosion controls. Problems caused by this sediment include:



Taxes

Cleaning up sediment in streets, sewers and ditches adds extra costs to local government budgets.

Lower property values

Neighboring property values are damaged when a lake or stream fills with sediment. Shallow areas encourage weed growth and create boating hazards.

Poor fishing

Muddy water drives away fish like northern pike that rely on sight to feed. As it settles, sediment smothers gravel beds where fish like smallmouth bass find food and lay their eggs.

Nuisance growth of weeds and algae

Sediment carries fertilizers that fuel algae and weed growth.

Dredging

The expense of dredging sediment from lakes, harbors and navigation channels is paid for by taxpayers.

This fact sheet includes the diagrams and step-by-step instructions needed by builders on most home sites. Additional controls may be needed for sites that have steep slopes, are adjacent to lakes and streams, receive a lot of runoff from adjacent land, or are larger than an acre. If you need help developing an erosion control plan or training your staff, contact your local building inspection, zoning or erosion control office.

Controlling Erosion is Easy

Erosion control is important even for home sites of an acre or less.

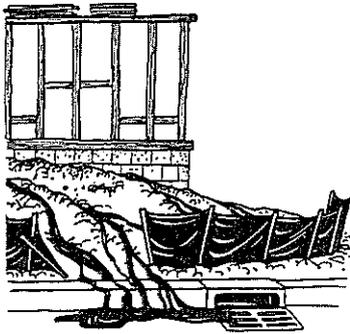
The materials needed are easy to find and relatively inexpensive – straw bales or silt fence, stakes, gravel, plastic tubes, and grass seed.

Putting these materials to use is a straightforward process.

Only a few controls are needed on most sites:

- Preserving existing trees and grass where possible to prevent erosion;
- Revegetating the site as soon as possible;
- Silt fence or straw bales to trap sediment on the downslope sides of the lot;

- Soil piles located away from any roads or waterways;
- Access drive used by all vehicles to limit tracking of mud onto streets;
- Cleanup of sediment carried off-site by vehicles or storms; and
- Downspout extenders to prevent erosion from roof runoff.



A poorly installed silt fence will not prevent soil erosion. Fabric must be buried in a trench and sections must overlap (see diagram on back of this fact sheet).

WARNING! Extra measures may be needed if your site:

- is within 300 feet of a stream or wetland;
- is within 1000 feet of a lake;
- is steep (slopes of 12% or more);
- receives runoff from 10,000 sq. ft. or more of adjacent land;
- has more than an acre of disturbed ground.

For information on appropriate measures for these sites, contact your local building inspection, zoning or erosion control office.

Straw Bale or Silt Fence

- Install within 24 hours of land disturbance.
- Install on downslope sides of site parallel to contour of the land.
- Extended ends upslope enough to allow water to pond behind fence.
- Bury eight inches of fabric in trench (see back page).
- Stake (two stakes per bale).
- Leave no gaps. Stuff straw between bales, overlap sections of silt fence, or twist ends of silt fence together.
- Inspect and repair once a week and after every ½-inch rain. Remove sediment if deposits reach half the fence height. Replace bales after three months.
- Maintain until a lawn is established.

Soil Piles

- Locate away from any downslope street, driveway, stream, lake, wetland, ditch or drainage way.
- Temporary seed such as annual rye or winter wheat is recommended for topsoil piles.

Access Drive

- Install an access drive using two-to-three-inch aggregate prior to placing the first floor decking on foundation.
- Lay stone six inches deep and at least seven feet wide from the foundation to the street (or 50 feet if less).
- Use to prevent tracking mud onto the road by all vehicles.
- Maintain throughout construction.
- In clay soils, use of geotextile under the stone is recommended.

Sediment Cleanup

- By the end of each work day, sweep or scrape up soil tracked onto the road.
- By the end of the next work day after a storm, clean up soil washed off-site.

Sewer Inlet Protection

- Protect on-site storm sewer inlets with straw bales, silt fences or equivalent measures.
- Inspect, repair and remove sediment deposits after every storm.

Downspout Extenders

- Not required, but highly recommended.
- Install as soon as gutters and downspouts are completed to prevent erosion from roof runoff.
- Use plastic drainage pipe to route water to a grassed or paved area.
- Maintain until a lawn is established.

Preserving Existing Vegetation

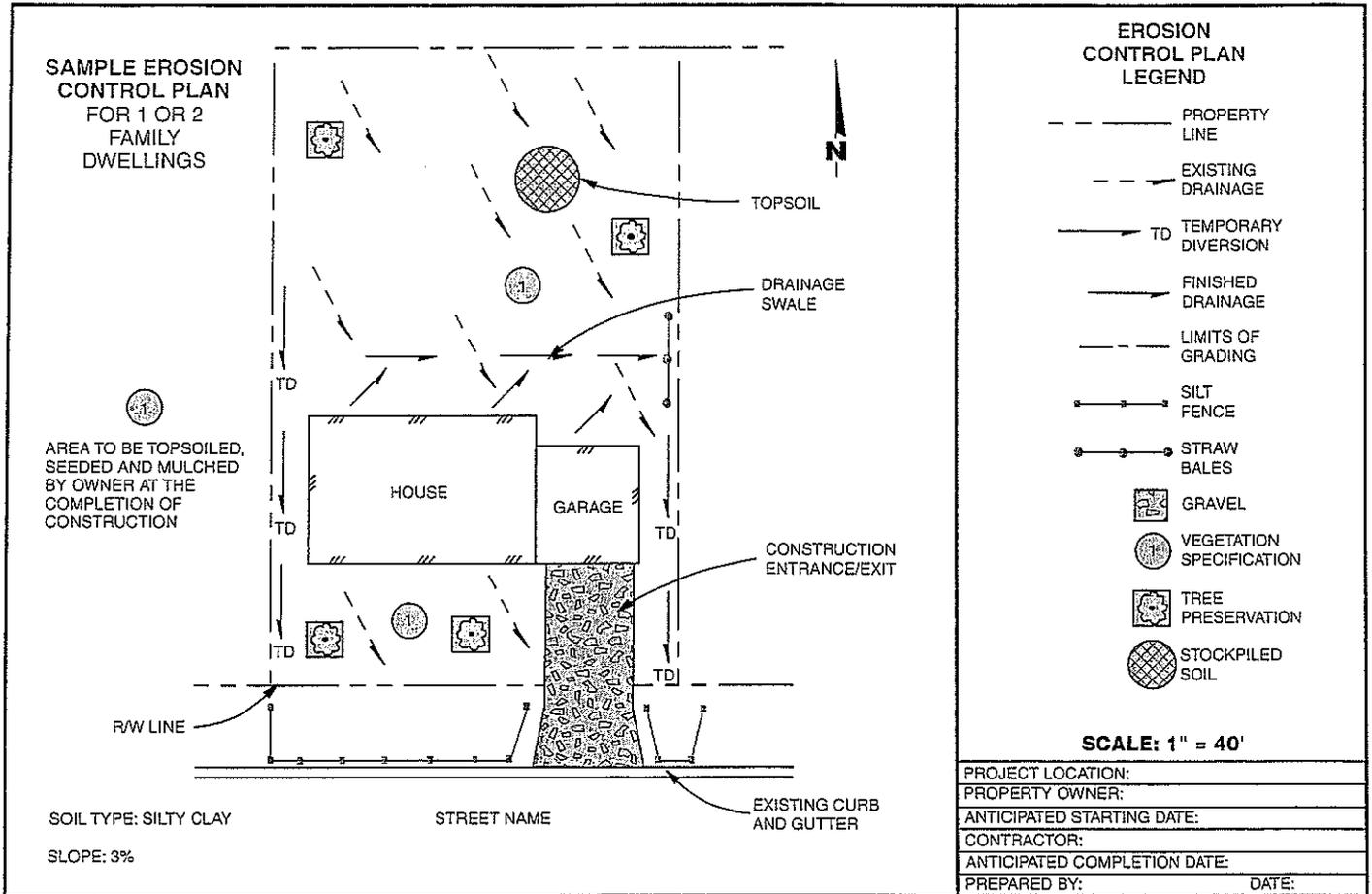
- Wherever possible, preserve existing trees, shrubs, and other vegetation.
- To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
- Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

Revegetation

- Seed, sod or mulch bare soil as soon as possible. Vegetation is the most effective way to control erosion.

Seeding And Mulching

- Spread four to six inches of topsoil.
- Fertilize and lime if needed according to soil test (or apply 10 lb./1000 sq. ft. of 10-10-10 fertilizer).
- Seed with an appropriate mix for the site (see table).
- Rake lightly to cover seed with ¼" of soil. Roll lightly.
- Mulch with straw (70-90 lb. or one bale per 1000 sq. ft.).
- Anchor mulch by punching into the soil, watering, or by using netting or other measures on steep slopes.
- Water gently every day or two to keep soil moist. Less watering is needed once grass is two inches tall.



Sodding

- Spread four to six inches of topsoil.
- Fertilize and lime if needed according to soil test (or apply 10 lb./1000 sq. ft. of 10-10-10 fertilizer).
- Lightly water the soil.
- Lay sod. Tamp or roll lightly.
- On slopes, lay sod starting at the bottom and work toward the top. Laying in a brickwork pattern. Peg each piece down in several places.
- Initial watering should wet soil six inches deep (or until water stands one inch deep in a straight-sided container). Then water lightly every day or two to keep soil moist but not saturated for two weeks.
- Generally, the best times to sod and seed are early fall (Aug. 15-Sept. 15) or spring (May).

If construction is completed after September 15, final seeding should be delayed. Sod may be laid until November 1. Temporary seed (such as rye or winter wheat) may be planted until October 15. Mulch or matting may be applied after October 15, if weather permits. Straw bale or silt fences must be maintained until final seeding or sodding is completed in spring (by June 1).

Typical Lawn Seed Mixtures

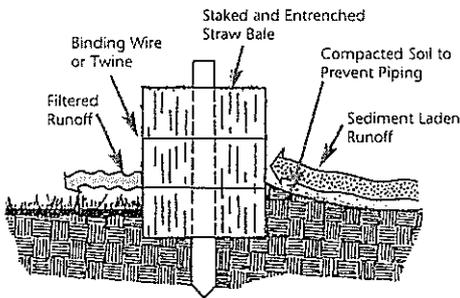
Grass	Percent by Weight	
	Sunny Site	Shady Site
Kentucky bluegrass	65%	15%
Fine fescue	20%	70%
Perennial ryegrass	15%	15%
Seeding rate (lb./1000 sq. ft.)	3-4	4-5

Source: R.C. Newman, Lawn Establishment, UW-Extension, 1988.

COMMONLY USED EROSION CONTROLS

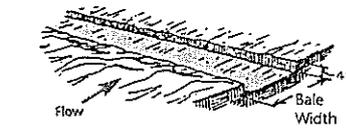
Straw Bale Fences

Cross Section of Straw Bale Installation

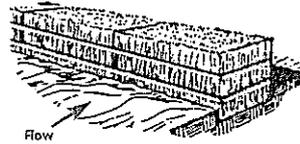


Source: Michigan Soil Erosion and Sedimentation Control Guidebook, 1975.

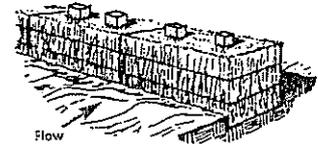
How to Install a Straw Bale Fence



1. Excavate a 4" deep trench.



2. Place bales in trench with bindings around sides away from the ground. Leave no gaps between bales.



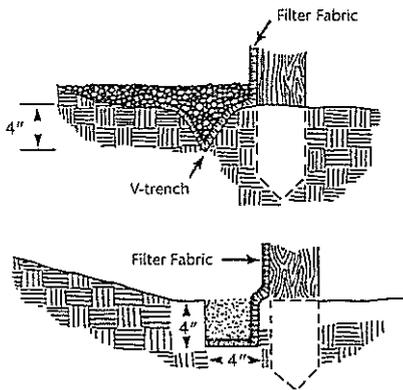
3. Anchor bales using two steel rebar or 2" x 2" wood stakes per bale. Drive stakes into the ground at least 8".



4. Backfill and compact the excavated soil.

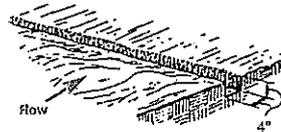
Silt Fences

Cross Sections of Trenches for Silt Fences

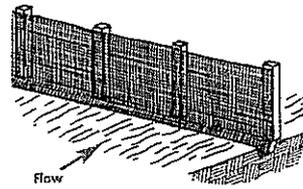


Sources: North Carolina Erosion and Sediment Control Planning and Design Manual, 1988.

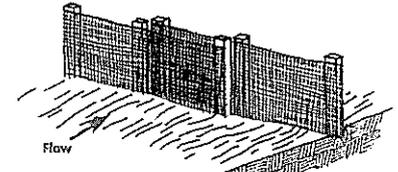
How to Install a Silt Fence



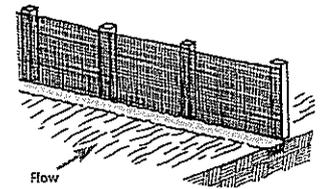
1. Excavate a 4" x 4" trench along the contour.



2. Stake the silt fence on downslope side of trench. Extended 8" of fabric into the trench.



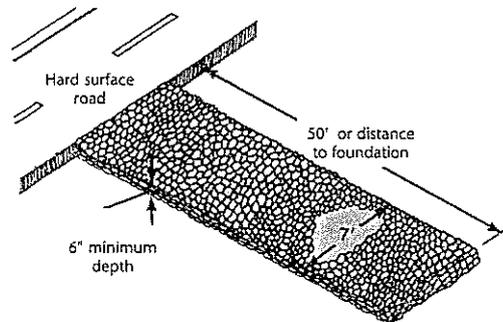
3. When joints are necessary, overlap ends for the distance between two stakes.



4. Backfill and compact the excavated soil.

Access Drive

How to Install an Access Drive



1. Install as soon as possible after start of grading.
2. Use two-to-three-inch aggregate stone.
3. Drive must be at least seven feet wide and 50 feet long or the distance to the foundation, whichever is less.
4. Replace as needed to maintain six-inch depth.



Printed on recycled paper

GWQ001 Erosion Control for Home Builders

DNR WT-457-96

R-1-00-10M-25-S

This publication is available from county UW-Extension offices or from Extension Publications, 630 W. Mifflin St., Madison, WI 53703. (608) 262-3346.

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Author: Carolyn Johnson, UW-Extension.

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Editing and design by the Environmental Resources Center, University of Wisconsin-Extension.



Planned
Not Planned

Indicate management strategy by checking (✓) the appropriate box:

Management Strategies

- Temporary stabilization of disturbed areas.

Note: It is recommended that disturbed areas and soil piles left inactive for extended periods of time be stabilized by seeding (between April 1st and September 15th), or by other cover, such as tarping or mulching.

- Permanent stabilization of site by re-vegetation or other means as soon as possible (lawn establishment).

Indicate re-vegetation method: Seed Sod Other _____

Expected date of permanent re-vegetation: _____

Re-vegetation responsibility of: Builder Owner/Buyer

Is temporary seeding or mulching planned if site is not seeded by Sept. 15 or sodded by Nov. 15? Yes No

- Use of downspout and/or sump pump outlet extensions.

Note: It is recommended that flow from downspouts and sump pump outlets be routed through plastic drainage pipe to stable areas such as established sod or pavement.

- Trapping sediment during dewatering operations.

Note: Sediment-laden discharge water from pumping operations should be ponded behind a sediment barrier until most of the sediment settles out.

- Proper disposal of building material waste so that pollutants and debris are not carried off-site by wind or water.

- Maintenance of erosion control practices.

- Sediment will be removed from behind sediment fences and barriers before it reaches a depth that is equal to half the barrier's height.
- Breaks and gaps in sediment fences and barriers will be repaired immediately. Decomposing straw bales will be replaced (typical bale life is three months).
- All sediment that moves off-site due to construction activity will be cleaned up before the end of the same workday.
- All sediment that moves off-site due to storm events will be cleaned up before the end of the next workday.
- Gravel access drives will be maintained throughout construction.
- All installed erosion control practices will be maintained until the disturbed areas they protect are stabilized.

For more assistance on plan preparation, refer to Chapters ILHR 20 & 21 of the Wisconsin Uniform Dwelling Code, the DNR Wisconsin Construction Site Best Management Handbook, and UW-Extension publication *Erosion Control for Home Builders*.

The Wisconsin Uniform Dwelling Code and the *Wisconsin Construction Site Best Management Handbook* are available through State of Wisconsin Document Sales, 608/266-3558.

Erosion Control for Home Builders (GWQ001) can be ordered through Cooperative Extension Publications, 608/262-3346 or the Department of Industry, Labor and Human Relations, 608/267-9360.

EROSION CONTROL REGULATIONS

UNIFORM DWELLING CODE (DILHR)

PROJECTS AFFECTED

- All new 1 and 2 family dwellings in Wisconsin started on or after December 1, 1992.
- Additions to dwellings built after June 1, 1980.

APPLICATION PROCESS

- Erosion control plan must be submitted with building permit application to the local building inspector in communities where the dwelling code is enforced
- Erosion control plan must show:
 - Location of the dwelling, other buildings, wells, surface waters and disposal systems on the site with respect to property lines
 - Direction of all slopes on the site
 - Location and type of erosion control measures

CONTROLS REQUIRED

- Silt fences or straw bales along downslope sides and side slopes
- Gravel access drive
- Straw bales, filter fabric fences or other barriers to protect on-site sewer inlets
- Additional controls if needed for steep slopes or other special conditions

STORMWATER PERMIT (DNR)

PROJECTS AFFECTED

- Any construction project that disturbs 5 acres or more
- Smaller sites that are part of a planned development involving 5 acres or more of land disturbance
- Effective October 1, 1992 for any new or continuing project
- Exceptions: Indian tribal lands and work done by local government staff

APPLICATION PROCESS

- File a "notice of intent" application (Form #3400-161) with the Department of Natural Resources (DNR) 30 days before construction begins
- Application must include:
 - Timetable for land disturbing activities and installation of erosion control measures including project start and completion dates

LOCAL ORDINANCES

Check with your county, and city, village or town for any local erosion control ordinances including shoreland zone requirements. Except for new 1 & 2 family dwellings, local ordinances may be more strict than state regulations. They may also require erosion control on construction projects not affected by state or federal regulations.

MAINTENANCE AND WASTE DISPOSAL

- Sediment controls must be maintained until the site is stabilized by mulching and seeding, sodding or landscaping
- All building waste must be properly disposed to prevent pollutants and debris from being carried off-site

ENFORCEMENT

- Erosion control inspections will be made during or after regular inspections (footing and foundation, rough construction, final, etc.)
- Violations must be corrected within 72 hours
- Stop work orders may be issued for noncompliance

FOR MORE INFORMATION, CONTACT

- Local building inspector
- Department of Industry, Labor and Human Relations (DILHR), Safety and Buildings Division, P.O. Box 7969, Madison, Wisconsin 53707, (608) 267-5113

—Proposed erosion and storm water pollution control practices during and after construction

—Documentation that an erosion control and storm water management plan which meets DNR standards has been prepared (plan does not need to be submitted with the application)

—Other information related to site location and permit holder

CONTROLS REQUIRED

- Erosion control measures specified in the Wisconsin Construction Site Best Management Practice Handbook
- Measures to control storm water after construction

FOR MORE INFORMATION, CONTACT

- Department of Natural Resources, Storm Water Permits, P.O. Box 7921, Madison, WI 53707-7921, (608) 266-7078

A publication of the University of Wisconsin—Extension, in cooperation with the Wisconsin Department of Natural Resources and Department of Industry, Labor & Human Relations, Ron Struss, UWEX Water Quality Specialist, Western Area, and Carolyn D. Johnson, UWEX Water Quality Specialist, Southeast Area.

University of Wisconsin—Extension is an EEO/Affirmative Action employer and provides equal opportunities in employment and programming, including Title IX requirements. GWQ001A Standard Erosion Control Plan for 1 & 2 Family Dwelling Construction Sites 1-06-93-15M

EROSION CONTROL PLAN CHECKLIST

Completed
Not Applicable

Check (✓) appropriate boxes below, and complete the site diagram with necessary information.

Site Characteristics

- North arrow, scale, and site boundary. Indicate and name adjacent streets or roadways.
- Location of existing drainageways, streams, rivers, lakes, wetlands or wells.
- Location of storm sewer inlets.
- Location of existing and proposed buildings and paved areas.
- The disturbed area on the lot.
- Approximate gradient and direction of slopes before grading operations.
- Approximate gradient and direction of slopes after final grading operations.
- Overland runoff (sheet flow) coming onto the site from adjacent areas.

Erosion Control Practices

- Location of temporary soil storage piles.
Note: Soil storage piles should be placed behind a sediment fence, a 10 foot wide vegetative strip, or should be covered with a tarp or more than 25 feet from any downslope road or drainageway.
- Location of gravel access drive(s).
Note: Gravel drive should have 2 to 3 inch aggregate stone laid at least 7 feet wide and 6 inches thick. Drives should extend from the roadway 50 feet or to the house foundation (whichever is less).
- Location of sediment controls (filter fabric fence, straw bale fence or 10-foot wide vegetative strips) that will prevent eroded soil from leaving the site.
- Location of sediment barriers around on-site storm sewer inlets.
- Location of diversions.
Note: Although not specifically required by code, it is recommended that concentrated flow (drainageways) be diverted (re-directed) around disturbed areas. Overland runoff (sheet flow) from adjacent areas greater than 10,000 sq. ft. should also be diverted around disturbed areas.
- Location of practices that will be applied to control erosion on steep slopes (greater than 12% grade).
Note: Such practices include maintaining existing vegetation, placement of additional sediment fences, diversions, and re-vegetation by sodding or by seeding with use of erosion control mats.
- Location of practices that will control erosion in areas of concentrated runoff flow.
Note: Unstabilized drainageways, ditches, diversions, and inlets should be protected from erosion through use of such practices as in-channel fabric or straw bale barriers, erosion control mats, staked sod, and rock rip-rap. When used, a given in-channel barrier should not receive drainage from more than two acres of unpaved area, or one acre of paved area. In-channel practices should not be installed in perennial streams (streams with year-round flow.)
- Location of other planned practices not already noted.

Standard Erosion Control Plan for 1 & 2 Family Dwelling Construction Sites

According to Chapters ILHR 20 & 21 of the Wisconsin Uniform Dwelling Code, a soil erosion control plan needs to be submitted and approved prior to the issuance of building permits for 1 & 2 family dwelling units in those jurisdictions where the soil erosion control provisions of the Uniform Dwelling Code are enforced. This Standard Erosion Control Plan is provided to assist in meeting this requirement.

Instructions:

1. Complete this plan by filling in requested information, completing the site diagram and marking (✓) appropriate boxes on the inside of this form.
2. In completing the site diagram, give consideration to potential erosion that may occur before, during, and after grading. Water runoff patterns can change significantly as a site is reshaped.
3. Submit this plan at the time of building permit application.

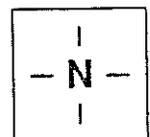
Site Diagram

Scale: 1 inch = _____ feet

**EROSION
CONTROL PLAN
LEGEND**

- — — — — PROPERTY LINE
- — — — — EXISTING DRAINAGE
- — — — — TD TEMPORAR' DIVERSION
- — — — — FINISHED DRAINAGE
- — — — — LIMITS OF GRADING
- ■ ■ ■ ■ SILT FENCE
- ● ● ● ● STRAW BALES
- ▣ GRAVEL
- ① VEGETATION SPECIFICAT
- ⊕ TREE PRESERVAT
- ⊗ STOCKPILE SOIL

Please indicate north by completing the arrow below.



PROJECT LOCATION _____

BUILDER _____ OWNER _____

WORKSHEET COMPLETED BY _____ DATE _____



BUILDING INSPECTION DEPARTMENT

CITY OF MIDDLETON
7426 HUBBARD AVENUE
MIDDLETON, WI 53562-3118

PH 608.821.8370 FAX 608.827.1080

E-MAIL: sellarson@ci.middleton.wi.us

E-MAIL: jameson@ci.middleton.wi.us

WEB: www.cityofmiddleton.us

Required Erosion Control Measures Installation/Maintenance Agreement

1. All erosion control procedures shall be installed to maximize performance.
2. Erosion control procedures shall be installed according to the timeframe set forth in the UDC (perimeter controls within 24 hours of land disturbance and non-tracking access drive prior to framing above the first floor decking).
3. Sediment shall be removed from behind sediment controls once it has reached a depth that is equal to half the control's height.
4. Breaks and gaps in sediment controls shall be repaired. Decomposing straw bales shall be replaced.
5. All sediment that moves off-site due to construction activity shall be cleaned before the end of the next workday.
6. All sediment that moves off-site due to storm events shall be cleaned before the end of the next workday.
7. Non-tracking access drives shall be maintained throughout construction.
8. All erosion control procedures shall be maintained until site is stabilized.
9. Final grading and restoration shall comply with the approved grading plan for the subdivision, including any spot elevations that may be shown.

Agreement:

I hereby certify that I understand the construction site control provisions of the Wisconsin Uniform Dwelling Code, and that I accept responsibility for carrying out the erosion control plan as approved by the City of Middleton

Name of Responsible Party

Telephone number

Signature

Date

Approval

City of Middleton

Date

Contractors Responsibility for Tree Protection

Before any construction is commenced, you must protect all City terrace trees with a barrier of staked construction fence. The protective barrier must encompass a square around the tree each side equal to the distance from the sidewalk to the curb (or a minimum of 6' if there is no sidewalk). The City Forester or their designee must inspect and approve protective measures before excavation or construction can begin.

City of Middleton Forester Mark Wegner (608)821-8360

20.06 DAMAGE TO TREES AND SHRUBS.

(1) No person shall, in any public area or private area without the permission of the owner, break, injure, mutilate, kill or destroy any tree or shrub, permit any animal under his or her control to do so, permit any fire to injure any portion of any tree or shrub, permit any leak to exist in any gas line within the root zone of any tree or shrub, permit any toxic chemical to seep, drain, or be emptied on or about any tree or shrub, or permit electric wires to come into contact with any tree or shrub. **During construction operations, each contractor or builder shall erect suitable protective barriers around public trees and shrubs which could be injured during construction, and shall obtain the City Forester's approval of the adequacy of such barriers before construction is commenced. No person shall fasten any sign, rope, wire or other material to or around or through any public tree or shrub without first obtaining permission from the City Forester. No person shall remove any guard, stake or other device or material intended for the protection of a public tree or shrub, or close or obstruct any open space about the base of a public tree or shrub designed to permit access of air, water, and fertilizer. No person shall attach any sign, poster, notice or other object on any tree, or fasten any guy wire, cable, rope, nails, screws or other device to any tree; except that the City may tie temporary no parking signs to trees when necessary in conjunction with street improvement work or parades.**

(2) Protection During Excavations. All trees on any terrace/median or other public owned property near any excavation or construction of any building structure or street work shall be sufficiently guarded and protected by those responsible for such work as to prevent any injury to said trees. No person shall excavate any ditches, tunnels or trenches, or install pavement within a radius of ten (10) feet from any public tree without a permit from the City Forester. During construction operations, each contractor or builder shall erect suitable protective barriers around public trees and shrubs which could be injured during construction, and shall obtain the City Forester's approval of the adequacy of such barriers before construction is commenced.

20.09 VIOLATIONS. Any person who shall violate any provision of this ordinance shall be subject to a penalty as prescribed by s. 30.04 of this Code, and shall have the costs of abatement or correction assessed as an additional penalty.



New Construction Inside-Wiring Requirements from TDS

Building a home is an investment. TDS is also making an investment in your new community. We are building a Fiber to the Home network in select communities across our national serving area. What does this mean for homeowners? It means they'll have access to ultra high-speed Internet and more. Now, they can work at home, participate Internet gaming or online auctions faster than cable modems and utilize complex entertainment video configurations. In the future, Fiber technology allows you to have a "smart home" with home security capabilities, smart appliances and much more.

Homeowners: Taking a few extra steps now to place the proper wiring inside the walls of your new home will save you costly installations in the future and give you the ability to adapt quickly to new technologies. Future-ready your home by following TDS Telecom's inside wire recommendations during your construction. Talk with your builder and electrician; tell them you want a technology-ready home. Yes, it will cost a little more, but the long term benefits certainly outweigh a modest expense today.

Builders:

Ask your clients what's important to them. Homes of today need to be ready to handle the technology consumer's demand tomorrow. And your customers are not going to want to rewire and drill holes in their new walls after they are enjoying their beautiful new home. So talk with them now, you'll have a highly satisfied customer, higher resell values and a reputation as a smart builder.

How will TDS address homes in our Fiber Subdivisions?

TDS will address the home in essentially the same way as before. We need to replace the type of interface box we use on the side of the home. Since complex electronics are needed to break apart the Fiber signal back into voice, high speed Internet and Video, this box also needs power and an Uninterruptible Power Source (UPS). Both of these devices are provided for, owned by and maintained by TDS Telecom. We will now have the ability to monitor all the way to the box on the side of the home, often knowing about problems before the

customer.

[picture of ONT and UPS and how we would like the wiring to look –on the outside of the home]

Wiring Recommendations for Electricians and Home Builders.

Although we will be using a different termination box on the outside of the home, TDS Telecom will be terminating and presenting our services as usual. Below are a set of recommendations:

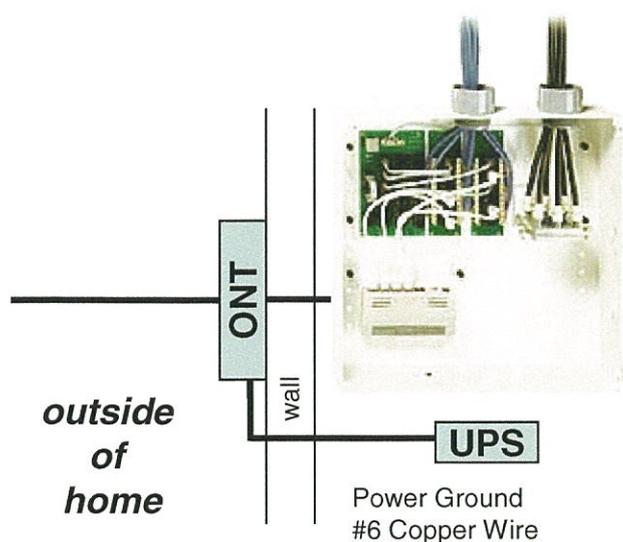
Demarcation Point –Inside the Home

TDS will place our demarcation point near the power service entrance. Inside the home on the other side the wall from the demarcation point, we need:

- GFI Electrical Outlet – power for the UPS
- Alternatively, hardwire UPS –based on local codes
- An additional piece of plywood for mounting
- Conduit through wall –minimum 1 1/8" I.D. recommended
- Conduit from attic to basement –required for any future wiring needs.

Central Distribution Point

Ideally, the Central Distribution Point is located on the other side of the wall from the Demarcation Point. It can be some other place inside the home, but that is a second choice. The Central Distribution Point should look like the following: We are suggesting using something similar to the Leviton Integrated Network Structured Media Center (pictured below) available at most Home Depot® stores or www.twacom.com.



In each room

Recommended Configuration-the recommended solution is to run **2 CAT5e and 2 RG6 to each room in the home**. This configuration will give the customer the greatest flexibility for future services. *See wiring / service matrix below.*

Alternative Configuration –for an alternative wiring solution for fewer rooms take **2 CAT5e and 2 RG6's to homeowner specified "media rooms"**, likely the great room or family den. These rooms will serve as the hubs for home entertainment, holding the main digital set top boxes, networked personal video recorders (TIVO®) and other devices. Other rooms in the home can be wired with 1 CAT5e and 1 RG6. *See wiring / service matrix on next page.*

Not Recommended Configuration -we do not suggest running just **one CAT5e and RG6 to each room**. This configuration will limit what the homeowner can select for entertainment and communication devices as well as create costly home wiring jobs in the future.

Consumer Demand for Technology is Increasing

The most important reason TDS is building fiber networks in our communities is consumer demand. Today's consumers want choices and are high consumptive users of entertainment. From the Computer to the TV, today's consumers are tech savvy. A simple phone line request of the past, now has with it demands of high speed internet, fax lines and multiple calling services. Homes need to be future ready. A solid wiring infrastructure today is a simple step to take to make sure homes are ready for what technology brings.

Whole house High Speed Internet –Customers are requesting high speed internet in multiple rooms, kitchens, bedrooms, living rooms and home offices every room needs to be ready. Wireless has made great strides in this area, but networking over CAT5e still is the most reliable and secure method available.

Whole house video – Consumers are networking televisions and sharing content. Some dual tuner DISH and DIRECT TV receivers are requiring multiple RG6 runs for picture in picture, the ability to watch one show and record another or to decode the satellite signal for more than 1 TV (requiring fewer set top boxes). The average customer has 2.5 TV's per household connected to Cable TV or Satellite service.

Home Networking for a Home Office –Home offices are in high demand, but being away from the office means you need even more connections. Sharing printers, files and Internet access and needing to maintain connections for the phone and fax lines at the same time requires multiple CAT5e connections into the home office area. Plus, with the suggested wiring configuration,

moving a home office is as easy as unplugging from one room and moving to the next. Or you can network the room specifically for this function and wire it as needed.

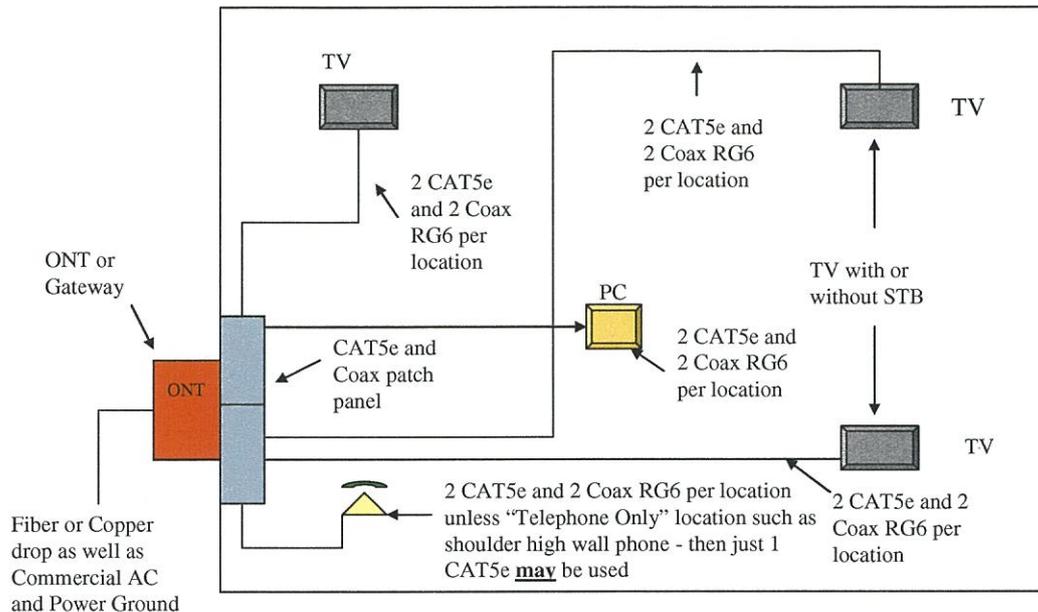
Family and Home Monitoring –Family security is a new and growing need for many families. Keeping an eye in side your home to view from work or other locations using the Internet or from a TV in the den requires a wiring infrastructure to support it.

Wiring / Service matrix

The below matrix outlines the wiring requirements for individual and combination packages. The recommended solution will support any of these combinations.

	RG6 1	RG6 2	CAT5 1	CAT5 2
Phone Service				
1 phone line				
2 phone lines				
High Speed Internet				
Cable Modem				
Home Networking				
DSL				
Video Service				
Standard Cable TV				
Digital Cable TV				
1 Tuner DBS (CAT5 for PPV)				
2 Tuner DBS				
2 Tuner DBS with Network PVR				
Likely Combinations				
Phone and Cable TV				
Phone and Cable Modem				
Phone and DSL				
Phone and 1 Tuner DBS and DSL				
Phone and 2 Tuner DBS and DSL				
Phone, 2 Tuner DBS with Network PVR				
Phone, Digital Cable with Network PVR, DSL				

Recommended Solution –in detail



HSD (High Speed Data) and SDV (Switched Dig. Video) wiring

- Use CAT5e wiring
- Transports 100 Mbs up to 300'
- Average STB (Set Top Box) will require no more than 18 to 20 Mbs/location (passing current HDTV compression)
- Compression is only going to improve (Mpeg2 to Mpeg 4/WM9)
- CAT5e is sufficient for future applications for the foreseeable future.

Coax Wiring

- Use standard RG6 capable of passing 3Gig tests
- This will allow the passing of HDTV
- Recommended that 2 RG-6 cables be run to each location in case pass thru from one STB is needed to feed another TV in a non STB location
- Radius of wire bends needs to be approximately 45 deg so as to not cause RF traps

Basic Telephone Wiring

- New multiplex cable now uses 2 CAT5e and 2 RG-6 wires under the same sheath and so a separate CAT3 would not be needed. Could use if preferred.