RECEIVED

NOV 18 2015

CITY OF TONKA BAY

CITY OF TONKA BAY
4901 Manitou Road
Tonka Bay MN 55331
952-474-7994
www.cityoftonkabay.net

CONDITIONAL USE PERMIT APPLICATION

Specifically for Lowest Floor (Mechanical Area) @ 930.3

Application fee: $150.00
The application fee is used to cover publication costs, County recording fees, postage and other supplies.

Escrow fee: $1,150.00
The escrow fee is charged to cover staff expenses, engineering, planning and attorney expenses (as billed) which may be incurred because of your application. All staff time is billed at the regular employee rate plus 30% for overhead costs, which includes benefits, buildings, lights, heat, etc.

Any remaining funds, after expenses, are returned to the applicant. Expenses incurred over $1100 will be billed to the applicant.

APPLICATION DATE November 4, 2015

SITE ADDRESS (or legal description) 160 Sunrise Ave Tonka Bay 55331
PID NUMBER 2711723240058

NAME OF PROPERTY OWNER(S) Robert Steele

MAILING ADDRESS 160 Sunrise Ave (Street Address) Tonka Bay (City) MN (State) 55331 (Zip)

PHONE 312-330-8110 E-mail address bay2bay22@gmail.com
bsteele@nidera-us.com

NAME OF APPLICANT(S) (if different from above) 4 Square Builders Inc.

MAILING ADDRESS 2718 9th St E (Street Address) Glencoe (City) MN (State) 55336 (Zip)

PHONE 320-864-6183 E-mail address 4square@embarqmail.com

Initial where indicated that you have read and understand the requirement(s).

RSJ **A. All property owners must sign as co-applicants.**

RSJ **B. The property corners and proposed construction must be flagged/staked at the time of the application and maintained until the council makes a determination.**

RSJ **C. Survey Requirements:**

INITIAL SURVEY

Every application for building permit (excluding interior remodels, re-roofs, re-siding and general maintenance) and land use request shall be accompanied by a certified survey at a scale and in the following quantities:

Building Permits:

- Three sets of a current registered land survey
- Three sets building plans

Land Use Requests (Pre-application, Variance, Conditional Use Permit):

- Eleven copies of a current registered land survey showing existing use (11 x 17)
- Eleven copies of a registered land survey showing proposed use (11 x 17)
- Eleven sets of building plans (11 x 17)

Surveys should include but not be limited to:

- Existing and proposed structures to include accessory structures and air conditioning units
- Building setbacks (front, rear, side, and lake including average setback)
- Existing average ground level at the corners of the proposed structure. This also needs to be calculated out on the survey notes.
- Lowest floor elevation.
- Current and proposed elevations for garage floor, basement floor and foundation top.
- Wetlands and ordinary high water mark elevations.
- Lot lines.
- Lot area above the ordinary high water mark
- All adjacent structures within 100 feet of property (show the setback from ordinary high water mark).
- Drainage plan (one-foot contours).
- Hardcover calculations.
- Easements (road, utility and private).
- Floor area ratio.

FOUNDATION SURVEY

As-built foundation survey required prior to completing a foundation inspection (unless waived in accordance with the City's survey exemption policy) and shall include:

- Shall certify final setbacks of the structure being built
- Shall certify elevations at which the new structure exists.
- Failure to provide the foundation survey is in direct violation of this ordinance
- Expenditures incurred beyond the construction of the foundation will not be considered in determining the actions required to bring the building back into conformance if not built to approved plans.

AS-BUILT SURVEY

Required upon completion of new construction work (unless waived in accordance with the City's survey exemption policy) and shall include the following:

- Shall certify the final topography of the site.
- Shall verify the drainage patterns existing upon completion of work
- Shall include the distance from average ground level to the highest roof peak.
- Shall include any additional information needed by the city to ensure compliance with code.

The city reserves the right to withhold the certificate of occupancy for dwelling units until final grading addresses all problems that may be detrimental to adjacent properties.

D. The applicant or representative thereof shall appear before the City Council to answer questions concerning the proposed conditional use permit. See attached public hearing information sheet.

Submit with Application:

1. Eleven (11) to scale copies and Eleven (11) reduced (8-1/2" x 11" or 11" x 17") copies of a certified survey of the property. The survey shall include all information necessary to enforce applicable zoning regulations. Such information may include but is not limited to:
   - Location and Floor Area of existing and proposed structures
   - Lot Lines
   - Parcel size in acres and square feet
   - Building setbacks (closest point of building to each property line)
   - Low floor elevations of existing and proposed structures
   - Water features (lakeshore, wetlands, etc.)
   - Existing and proposed topography – including ground elevations at corners of existing and proposed structures.
   - General location of vegetation
   - Location of structures on adjacent lots
   - Easements
   - Existing and proposed impervious surface calculations.
   - Location of public and private sewer lines or wells.
2. Hardcover calculation – current and proposed
3. Floor area ratio – current and proposed
4. Shoreland impact plan (see following page)
5. Landscape plan and grading and drainage plan (current and proposed)
6. Payment

Additional Information

1. The request shall be considered as being officially submitted and the application timeline commences when all the information requirements are in compliance.
2. The request for conditional use permits shall be placed on the agenda of the first City Council meeting occurring at least thirty (30) days from the date of official submission unless waived by the Zoning Administrator. Upon receipt of a completed application, the Zoning Administrator shall set a public hearing for a regular meeting of the City Council. The City Council shall conduct the hearing.
3. Notice of said hearing shall be published in the official newspaper at least ten (10) days prior to the hearing and written notification of said hearing shall be mailed at least ten (10) days prior to all property owners within three hundred fifty (350) feet of the boundary of the property in question.
4. For properties within the Shoreland, Floodway or Flood Fringe Overly District, the City will submit to the Commissioner of Natural Resources a copy of the application for proposed conditional use permits so that the Commissioner will receive at least ten (10) days notice of the hearing.
5. A variance of the Ordinance shall be by four-fifths (4/5) vote of the entire City Council.
6. If approved, the conditional use permit shall become null and void twelve (12) months after the date of approval, unless the property owner or applicant has substantially started the construction of any building, structure, addition or alteration, or use requested as part of the permit.
7. Prior to approving an application for a conditional use permit, the City will verify ownership and that there are no delinquent property taxes, special assessments, interest, or City utility fees due upon the parcel of land to which the permit application relates.

1070.16 SHORELAND IMPACT PLAN/CONDITIONAL USE PERMIT

Subd. 1. **Shoreland Impact Plan.** Except for situations listed below, landowners or developers desiring to develop land or construct any dwelling or any other artificial obstruction on land located within the Shoreland District within the City of Tonka Bay shall first submit a conditional use permit application as regulated by Section 1003 of the Zoning Ordinance and a plan of development, hereinafter referred to as "Shoreland Impact Plan", which shall set forth proposed provisions for sediment control, water management, maintenance of landscaped features, and any additional matters intended to set forth proposed changes requested by the applicant and affirmatively disclose what, if any, change will be made in the natural conditions of the earth, including loss of change of earth ground cover, destruction of trees, grade courses and marshes. The plan shall minimize tree removal, ground cover change, loss of natural vegetation, and grade changes as much as possible, and shall affirmatively provide for the relocation or replanting of as many trees as possible which are proposed to be removed. The purpose of the Shoreland Impact Plan shall be to eliminate potential pollution, erosion and siltation.

Subd. 2. **Feasibility.** Where strict conformity with provisions of this section is not possible, the requirements specified herein may be exceeded subject to a conditional use permit and shoreland impact plan set forth in this section and with approval by the Minnehaha Creek Watershed District and the City Engineer where applicable.

Subd. 3. **Conditions.** All conditional use permits for consideration under this section shall be subject to the following conditions:

a. The projects shall be analyzed to determine the impact of impervious surfaces, storm water runoff, floodplain, and water quality implications. Only those projects shall be allowed where the adverse impacts have been mitigated through approved means to the extent possible.
b. Storm water treatment measures including, but not limited to, sediment basis (debris basins), de-silting basins or silt traps, installation of debris guards, and microsilt basins on storm water inlets, oil skimming devices, etc. shall be required subject to the review of the City Engineer and Minnehaha Creek Watershed District on projects where applicable.
c. Projects shall be analyzed by the City in terms of provisions for maintenance and enhancement of landscape features, change in the natural condition of the soil, removal of trees, grade courses and marshes. The land shall also minimize tree removal, ground cover change, loss of natural vegetation, and grade changes as much as possible. It shall further provide for the relocation or replanting as many trees as possible which are proposed to be removed.
d. Projects shall be analyzed by the City in terms of the appearance of the structure when viewed from the lake's surface. Building materials, and color shall be analyzed to determine which facade and roof materials minimize the appearance and blend the structure into the shoreland and vegetation.
e. Lot coverage on a project basis shall be restricted to the provisions for maximum impervious surface coverage as provided for in this Ordinance.
f. Residential densities on a project basis shall not be allowed to exceed the maximum allowed density of the base zoning districts for which the project was proposed.
g. All projects shall be in conformance with the Shoreland Management Plan, Comprehensive Plan, and Zoning and Subdivision Ordinances of the City of Tonka Bay.
h. All projects shall be subject to review by the Minnehaha Creek Watershed District and the City Engineer.

Signature of Applicant

Signature of Property Owner

Signature of Applicant

Signature of Property Owner

This Section Completed by Staff			
FEE	**FOR**	**DATE PAID**	**STAFF INITIALS**
$ 150.00	Application Fee	n/a	
$1,150.00	Escrow Fee*		

CITY OF TONKA BAY
4901 Manitou Road
Tonka Bay MN 55331
952-474-7994
www.cityoftonkabay.net

CONSTRUCTION PROJECT REQUIREMENTS

The following conditions shall be met throughout the building project. **It will be the responsibility of the project manager, building superintendent and/or property owner to inform all parties involved of the following requirements:**

1. Construction hours are as follows (with no exceptions):
   Monday through Friday 7:00 a.m. – 8:00 p.m.
   Saturday and Sunday 10:00 a.m. – 5:00 p.m.

2. Parking shall be restricted to one side of the street. If the street width is such that parking on one side still restricts traffic, contact City Hall at (952) 474-7994 for alternate parking sites.

3. Dumpsters, building materials, rock, etc. shall be located on the building site. All other locations involving placement of these materials within City right-of-way requires prior approval from the Public Works Superintendent (952) 474-2947.

4. Adequate toilet facilities must be on site. See City Code Section 300.04 for standards.

5. The city street shall be cleared at the end of each workday or sooner if so needed. If the street is not cleaned within a 24-hour period, the City will authorize Public Works to clean the street. All related costs will be billed to the property owner.

6. Any excavation within the city right-of-way requires a street excavation permit.

7. Load Restrictions: Woodpecker Ridge Road has a 4-ton per axle weight restriction at all times. Contact the Public Work Superintendent at 952-474-2947 to discuss your options if you are working on Woodpecker Ridge Road or Willow Woods Drive.

8. Seasonal Load Restrictions: Load limits for all streets in Tonka Bay are 4-ton per axle weight once posted. The City of Tonka Bay follows the Mn/DOT's schedule for posting and removal of load restriction limits. Tonka Bay does not issue overweight permits during this period. It is the responsibility of the contractor to monitor the load restriction limits as posted by Mn/DOT. The Mn/DOT load restriction 24-hour telephone hotline is 1-800-723-6543 or (651) 406-4701 in the Minneapolis/St. Paul Metro area.

If you have any questions regarding these requirements, please contact Robin Bowman at (952) 474-2947.

Date: November 4, 2015 Signature: 

CITY OF TONKA BAY
4901 Manitou Road
Tonka Bay MN 55331
Phone: 952-474-7994
www.cityoftonkabay.net

HARDCOVER CALCULATION WORKSHEET

EXISTING AND PROPOSED HARDCOVER

Existing

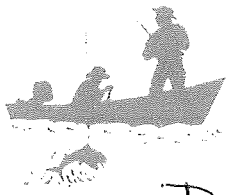
ADDRESS: 160 Sunrise Ave Tonka Bay MN 55331

A. HOUSE		X		=	805	S.F.
		X		=		S.F.
		X		=		S.F.
		X		=		S.F.
		X		=		S.F.
B. GARAGE		X		=		S.F.
		X		=		S.F.
C. DRIVEWAY		X		=	628	S.F.
		X		=		S.F.
D. SIDEWALK		X		=	78	S.F.
		X		=		S.F.
E. PATIO/DECK		X		= (F)	55	S.F.
		X		= (R)	34	S.F.
F. OTHER		X		=	50	S.F.
Walls & Borders		X		=		S.F.

TOTAL HARDCOVER	1650	S.F.
(divided by) TOTAL LOT SIZE	4600	S.F.
(equals) HARDCOVER PERCENTAGE	35.87	%

APPROVED: _____ **DATE:** _____

COMMENTS: _____



Proposed

CITY OF TONKA BAY
4901 Manitou Road
Tonka Bay MN 55331
Phone: 952-474-7994
www.cityoftonkabay.net

HARDCOVER CALCULATION WORKSHEET

EXISTING AND PROPOSED HARDCOVER

ADDRESS: 160 Sunrise Ave Tonka Bay MN 55331

A. HOUSE		X	Add → =	+539		S.F.
		X				S.F.
		X				S.F.
		X				S.F.
		X				S.F.
B. GARAGE		X				S.F.
		X				S.F.
C. DRIVEWAY		X	Add → =	+393		S.F.
		X	Remove → =	-628		S.F.
D. SIDEWALK		X				S.F.
		X				S.F.
E. PATIO/DECK		X	Add → =	+100		S.F.
		X	Remove → =	-55		S.F.
F. OTHER (exist concrete)		X	Remove → =	-74		S.F.
(walls & Borders)		X	Remove → =	-32		S.F.

*(Net gain = 243 Ft²)

TOTAL HARDCOVER	1893	S.F.
(divided by) TOTAL LOT SIZE	4600	S.F.
(equals) HARDCOVER PERCENTAGE	41.15%	%

APPROVED: _____ **DATE:** _____

COMMENTS: _____

CITY OF TONKA BAY
4901 Manitou Road
Tonka Bay MN 55331
Phone: 952-474-7994
Website: www.cityoftonkabay.net

FLOOR AREA RATIO

Divide the square footage of all livable space (garage and all floors except basement) by the square footage of the lot.

The result is a percentage.

The percentage should not exceed 30%.

(EXIST F.A.R)
38.7%

(Proposed F.A.R)
55.6%

For more information, refer to the sections of the zoning ordinance for the particular zoning district:

Section 1017.07, Subd. 1—R-1A Single Family Residential
Section 1018.07, Subd. 1—R-1B Single Family Residential
Section 1019.07, Subd. 1—R-2A, Two Family/Townhouse District

MINNEHAHA CREEK WATERSHED DISTRICT

QUALITY OF WATER QUALITY OF LIFE

The Minnehaha Creek Watershed District is committed to a leadership role in protecting, improving and managing the surface waters and affiliated groundwater resources within the District, including their relationships to the ecosystems of which they are an integral part. We achieve our mission through regulation, capital projects, education, cooperative endeavors, and other programs based on sound science, innovative thinking, an informed and engaged constituency, and the cost effective use of public funds.

Pursuant to Minnesota Statutes Chapter 103D, and on the basis of statements and information contained in the permit application, correspondence, plans, maps, and all other supporting data submitted by the applicant, and made a part hereof by reference, PERMISSION IS HEREBY GRANTED to the applicant named below for use and development of land in the Minnehaha Creek Watershed District.

Issued to: Robert Steele Permit No: 15-601

Location: 160 Sunrise Ave, Tonka Bay

Purpose: Erosion Control, Single Family Home

Date of Issuance: 11/9/2015 Date of Expiration: 11/9/2016

By Order of the Board of Managers

Tom Dietrich
District Technician

This permit is not transferable without District approval, and is valid to the date of expiration. No activity is authorized beyond the expiration date. If the permittee requires more time to complete the project, an application for renewal of the permit must be received by the District at least 30 days before expiration.

The applicant is responsible for compliance with all District Rules and for the action of their representatives, contractors, and employees.

Conditions: Project to be completed as described in plans submitted to the MCWD office on October 26, 2015 according to the provisions of this permit.

- Properly install and maintain all required erosion control measures until the disturbed areas are re-stabilized
- Notify MCWD in writing upon completing installation of perimeter and sedimentation controls
- When the site is re-stabilized and the MCWD staff has performed a final inspection, all silt fences must be removed

(Statement concerning fees for inspections, violations, etc... on following page)

Inspection/Analysis/Monitoring Fees

The Minnehaha Creek Watershed District is committed to a leadership role in protecting, improving and managing the surface waters and affiliated groundwater resources within the District, including their relationships to the ecosystems of which they are an integral part. We achieve our mission through regulation, capital projects, education, cooperative endeavors, and other programs based on sound science, innovative thinking, an informed and engaged constituency, and the cost effective use of public funds.

A site inspection and monitoring by District staff will be performed where the activity involves:

- a commercial/industrial/multi-family residential development
- a single family residential development greater than 5 acres or of any size if within the Minnehaha Creek subwatershed
- any alteration of a floodplain or wetland
- dredging within the beds, banks or shores of any protected water or wetland
- a violation
- any project which in the judgment of the District staff should be inspected due to project location, scope, or construction techniques

In these cases, the applicant shall pay to the District a fee equal to the actual costs of field inspection of the work, including investigation of the area affected by the work, analysis of the work, and any subsequent monitoring of the work, which in the case of a violation shall be at least $35.

Standard Fee Schedule

District professional staff	$ 65.51*
District interns	$ 40.35*
District clerical staff	$ 46.69*
Consulting Senior Engineer	$ contracted rate
Consulting Engineer/Technician	$ contracted rate
District Counsel	$ contracted rate
Application fee	$ 10.00
Copy costs	$ .25 + actual staff time
Color copy costs	$ 1.00 + actual staff time

* Hourly

MINNEHAHA CREEK WATERSHED DISTRICT
BOARD OF MANAGERS

REVISIONS
PURSUANT TO MINNESOTA STATUTES §103D.341

Adopted May 26, 2011
Effective June 1, 2011

ENFORCEMENT RULE

1. INVESTIGATION OF NONCOMPLIANCE. District staff may enter and inspect a property in the watershed to determine whether a violation of one or more District rules, a permit or an order exists or whether land-disturbing activities have been undertaken in violation of District permitting requirements.

2. ADMINISTRATIVE COMPLIANCE ORDER. Upon finding a probable violation and failure of the property owner to apply or permittee to take necessary corrective steps, the District may immediately issue a compliance order. A District compliance order may require a property owner to apply for an after-the-fact permit and/or effect corrective or restorative actions. A District compliance order may require that land-disturbing activities on the property cease.

(a) The Board of Managers has delegated authority to issue compliance orders to District staff.

3. BOARD HEARING. A compliance order issued by the District will include notice of or be followed by a notice to the property owner and/or permittee of a hearing before the Board of Managers. After notice and hearing, the Board of Managers may determine that the noncompliance or violation has been corrected and rescind the compliance order. If the Board of Managers determines that the noncompliance or violation has not been corrected, it may extend the compliance order or issue a new order finding a party in violation of a District compliance order, rule, permit or other order and directing the party to take action to correct or mitigate the effects of the violation or restore the site.

4. DISTRICT COURT ACTION. The Board of Managers may seek judicial enforcement of an order and recovery of associated legal costs and fees, as provided by Minnesota Statutes chapter 103D, through a civil or criminal action pursuant to Minnesota Statutes section 103D.545 and 103D.551.

5. LIABILITY FOR ENFORCEMENT COSTS. The permittee or owner of a property that is the subject of District enforcement efforts will be liable for associated costs incurred by the District, including but not limited to the costs of inspection and monitoring of compliance, engineering and other technical analysis, legal fees and costs, and administrative expenses.

WATER RESOURCE PERMIT APPLICATION FORM

Use this form to notify/apply to the Minnehaha Creek Watershed District (MCWD) of a proposed project or work which may fall within their jurisdiction. Fill out this form completely and submit with your site plan, maps, etc. to the MCWD at:
15320 Minnetonka Blvd. Minnetonka, MN 55345.
Keep a copy for your records.

YOU MUST OBTAIN ALL REQUIRED AUTHORIZATIONS BEFORE BEGINNING WORK.

1. Name of each property owner: Robert Steele
Mailing Address: 160 Sunrise Ave. City: Tonka Bay State: MN Zip: 55331
Email Address: _____ Phone: _____ Fax: _____

2. Property Owner Representative Information (not required) (licensed contractor, architect, engineer, etc…)
Business Name: 4 Square Builders Inc. Representative Name: Preston Fox
Business Address: 2718 9th St. East City: Glencoe State: MN Zip: 55336
Email Address: 4square@embarqmail.com Phone: 320-864-6183 Fax: _____

3. Project Address: 160 Sunrise Ave. City: Tonka Bay
State: MN Zip: 55331 Qtr Section(s): _____ Section(s): _____ Township(s): _____ Range(s): _____
Lot: 039 Block: _____ Subdivision: _____ PID: 27-117-23-24-0058

4. Size of project parcel (square feet or acres): 4600 Square feet
Area of disturbance (square feet): 708 ft² 41.7 out (21.7) Volume of excavation/fill (cubic yards): 20 fill back
Area of existing impervious surface: 1650 ft² (35.87%) Area of proposed impervious surface: 1893 ft² (41.15%)
Length of shoreline affected (feet): None Waterbody (& bay if applicable): Echo Bay, Gideon Bay

5. Type of permit being applied for (Check all that apply):
- ☒ EROSION CONTROL
- ☐ FLOODPLAIN ALTERATION
- ☐ WETLAND PROTECTION
- ☐ DREDGING
- ☐ SHORELINE/STREAMBANK STABILIZATION
- ☐ WATERBODY CROSSINGS/STRUCTURES
- ☐ STORMWATER MANAGEMENT
- ☐ APPROPRIATIONS
- ☐ ILLICIT DISCHARGE

6. Project purpose (Check all that apply):
- ☒ SINGLE FAMILY HOME (Remodel)
- ☐ ROAD CONSTRUCTION
- ☐ UTILITIES
- ☐ DREDGING
- ☐ SHORELINE/STREAMBANK STABILIZATION
- ☐ MULTI FAMILY RESIDENTIAL (apartments)
- ☐ COMMERCIAL or INSTITUTIONAL
- ☐ SUBDIVISIONS (include number of lots)
- ☐ LANDSCAPING (pools, berms, etc.)
- ☐ OTHER (DESCRIBE):

7. NPDES/SDS General Stormwater Permit Number (if applicable): _____

8. Waterbody receiving runoff from site: Minnetonka Lake

9. Project Timeline: Start Date: Nov. 20, 2015 Completion Date: June 1, 2016

Permits have been applied for: City ___ ☒ County ___ ☐ MN Pollution Control Agency ___ ☐ DNR ___ ☐ COE ___ ☐
Permits have been received: City ___ ☐ County ___ ☐ MN Pollution Control Agency ___ ☐ DNR ___ ☐ COE ___ ☐

By signing below, I hereby request a permit to authorize the activities described herein. I certify that I am familiar with MCWD Rules and that the proposed activity will be conducted in compliance with these Rules. I am familiar with the information contained in this application and, to the best of my knowledge and belief, all information is true, complete and accurate. I understand that proceeding with work before all required authorizations are obtained may be subject to federal, state and/or local administrative, civil and/or criminal penalties.

X _____
Signature of Each Property Owner Robert Steele

Date 10/23/2015

Erosion Control Supplemental Information

Final Stabilization will be provided with (seed, sod, etc): Sod

and 6 inches of topsoil will be added/replaced prior to final stabilization.

Concrete Washout: Location of concrete washout

X Off site __ Indicated on site plans __ Other (description): __ Contained on truck:

Vegetation: Protective fencing will be installed as necessary so as to exclude all fill and equipment from the drip line or critical root zone, whichever is greater, of all vegetation to be retained.

X Yes __ Not Applicable __Other (description):

Inspections: An erosion control inspection plan is required for all projects. The inspection requirements are as follows:

1) *The individual identified as being responsible for implementing the erosion control plan must routinely inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.*
2) *All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the erosion control plan and made available at the District's request within 24 hours. Records of each inspection and maintenance activity shall include:*
   - i. *Date and time of inspections;*
   - ii. *Name of person conducting inspections;*
   - iii. *Findings of inspections, including recommendations for corrective actions;*
   - iv. *Corrective actions taken (including dates, times and party completing maintenance activities); and*
   - v. *Date and amount of all rainfall events greater than 0.5 inches in 24 hours.*

Provide the following information for the primary individual responsible for implementing the erosion control plan:

Name Preston Fox

Organization 4 Square Builders, Inc.

Phone 320-864-6183 Alternate Phone 320-583-8712

Email 4square@embarqmail.com

I certify that I am familiar with the requirements of the MCWD Erosion Control Rule and that the proposed activity will be conducted in compliance with this rule.

Signature of Applicant or Authorized Agent

10/21/15
Date

Application Checklist for Erosion Control Permit

To meet the permit application requirements of the Minnehaha Creek Watershed District's (MCWD) Erosion Control Rule, please refer to the following checklist and submit the required materials. This checklist is intended primarily as a guide for smaller projects such as single family homes. Additional materials may be required. See the complete Erosion Control Rule text for more details.

- A $10.00 application fee payable to MCWD. Checks, Visa or Mastercard accepted.
- A completed Water Resource Permit Application Form with signatures (scanned or faxed signatures are acceptable).
- A site plan (11"x17" in size or smaller) that shows the following (see example):
  - X Site property lines.
  - X Existing and proposed elevation contours sufficient to show drainage on and adjacent to the site.
  - X The site location in relation to surrounding roads, steep slopes, significant geographic features, buildings and other structures.
  - X Identification and location of all water features and facilities on-site and within 1000 feet of the area to be disturbed including any lake, stream or wetland; any natural or artificial water diversion or detention area; any surface or subsurface drainage facility or stormwater conveyance; and any storm sewer catch basin within 100 feet and down-gradient of the area to be disturbed.
  - X Identification of all receiving waterbodies and/or stormwater conveyance systems to which the site discharges.
  - X Location of trees and vegetation to be retained (with required protective fencing noted).
  - X Existing 100 year flood elevation, if applicable.
  - NA X Location of proposed grading or other land-disturbing activity and location of stockpiles. OFFSITE - HAUL AWAY
  - X Quantities of soil or earth material to be removed, or stored on site, and area of land to be disturbed.
  - X Location of on-site concrete washout area (if applicable – Impervious liner must be used and indicated on the site plan). Conc washout taken back to plant conc
- Locations of proposed runoff control, erosion prevention, sediment control and temporary and permanent soil stabilization measures, including:
  - X Perimeter control along all roads and trails (SILT FENCE)
  - X Perimeter control at the bottom of all slopes leading off site or toward water resources.
  - NA X Perimeter control and/or cover around/on all large stockpiles. (None onsite)
  - X Crushed rock or existing paved construction entrance.

NOTE:

- All erosion and sediment control measures must be in place before any land disturbing activity begins.
- Silt fence must be trenched in six inches and installed correctly (see figure).
- A permanent stabilization plan that states the following (can be written on site plan):
- Addition of at least 6" of topsoil to all disturbed areas.
- Method for establishing permanent vegetative cover (on the supplemental form).

Please Note:

- Financial assurance is required for projects disturbing more than one acre.
- MCWD must be notified prior to any site dewatering.
- The permittee may be required to implement additional sediment/erosion control measures upon request from MCWD staff if at any time after the permit is issued, it is considered necessary for compliance with the Erosion Control Rule.

drafting@4squarebuilders.com

From: DMANDT@MINNEHAHACREEK.ORG
Sent: Monday, October 26, 2015 9:54 AM
To: drafting@4squarebuilders.com
Subject: Order Confirmation

MINNEHAHA CREEK WATERSHED DISTRI
15320 MINNETONKA BLVD
MINNETONKA, MN 55345
952-471-0590

Order Results

Profile Name: MINNEHAHA CREEK WATERSHED DIST
Transaction ID: 261015B38-F2FABC5D-397D-4CF0-B69C-5DC82F1313D9
Date/Time: 10/26/2015 09:54:23 AM
Transaction Type: SALE
Approval Message: APPROVAL
Approval Code: 02718G

Order Section

Card Number : 42**********2852
Amount : $10.00USD
Department : Permitting
Project Address : 160 Sunrise Ave Tonka Bay

Billing Address

First Name : Preston A
Last name : Fox
Email Address : drafting@4squarebuilders.com

GRONBERG & ASSOCIATES, INC.
SURVEYING, ENGINEERING AND LAND PLANNING
445 N. WILLOW DRIVE
LONG LAKE, MINNESOTA 55356

952-473-4141
FAX: 952-473-4435

ROBERT STEELE

RAIN GARDEN CALCULATIONS

October 22, 2015

EAST RAIN GARDEN

Existing hardcover running to rain garden = 714 SF

1" runoff over 714 SF = 60 C.F. required

Rain garden volume

ELEV(FT)	AREA(SF)		VOL(CF)
932.5	175		
		>	66
932.0	90		

WEST RAIN GARDENS

Existing & proposed hardcover running to both west rain gardens = 1179 SF

1" runoff over 1179 SF = 98 C.F. of volume required

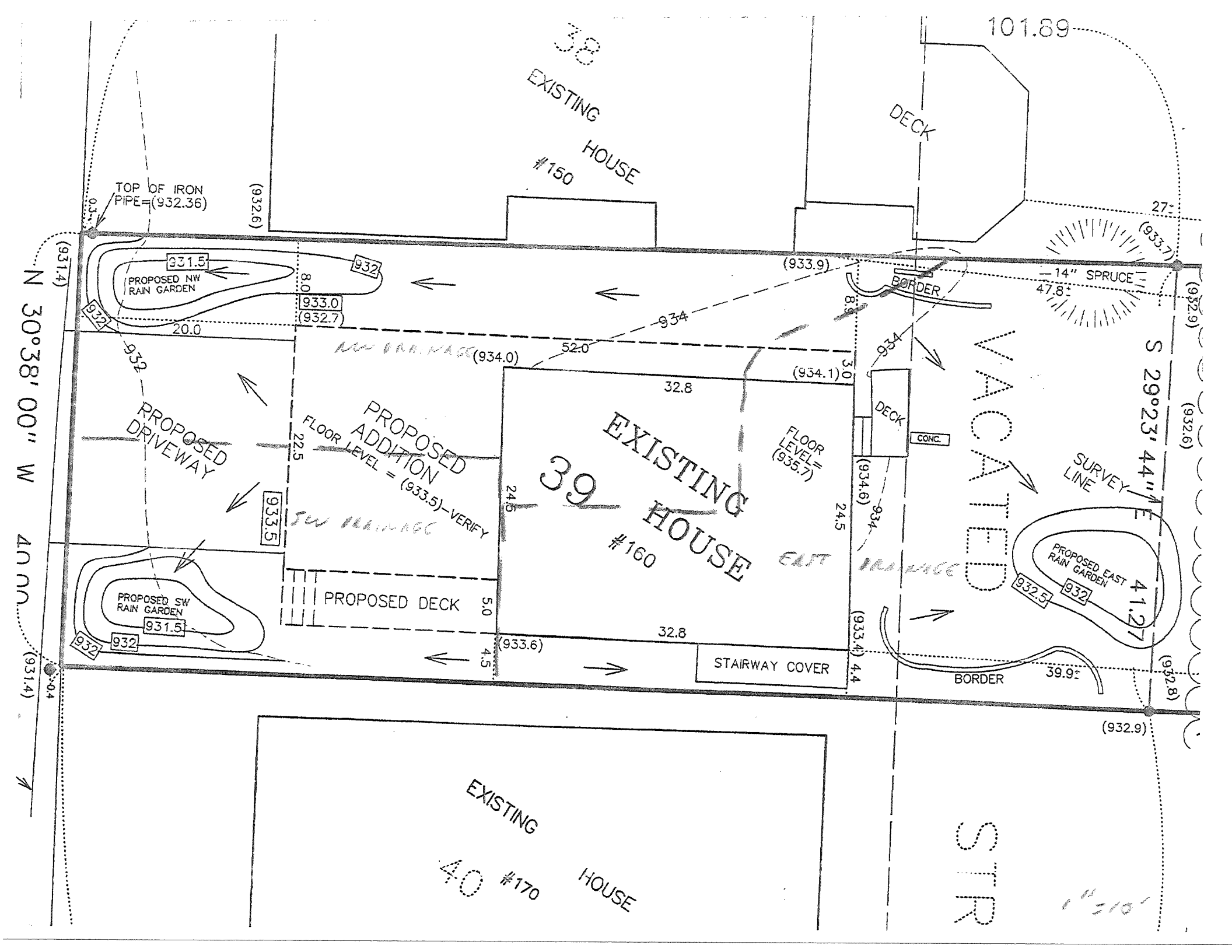
NW rain garden

ELEV(FT)	AREA(SF)	VOL(CF)
932.0	140	
		> 50
931.5	90	

SW rain garden

ELEV(FT)	AREA(SF)	VOL(CF)
932.0	130	
		> 49
931.5	65	

Total = 99 CF


38
EXISTING HOUSE
#150
101.89
DECK
TOP OF IRON PIPE=(932.36)
(932.6)
(931.4)
931.5
PROPOSED NW RAIN GARDEN
932
8.0
933.0
(932.7)
20.0
934
(933.9)
BORDER
8.3
14" SPRUCE
47.8±
27±
(933.7)
(932.9)
N 30°38' 00" W 40.00
S 29°23' 44" E 41.27
(934.0)
52.0
(934.1)
3.0
32.8
PROPOSED DRIVEWAY
PROPOSED ADDITION
FLOOR LEVEL = (933.5)-VERIFY
22.5
933.5
EXISTING 39 HOUSE
#160
FLOOR LEVEL= (935.7)
DECK
CONC.
24.5
(934.6)
SURVEY LINE
VACATED
PROPOSED EAST RAIN GARDEN
932.5
PROPOSED SW RAIN GARDEN
931.5
PROPOSED DECK
5.0
4.5
(933.6)
32.8
(933.4)
4.4
STAIRWAY COVER
BORDER
39.9±
(932.8)
(932.9)
(931.4)
0.4
EXISTING 40 #170 HOUSE
STR

GRONBERG & ASSOCIATES, INC.
SURVEYING, ENGINEERING AND LAND PLANNING
445 N. WILLOW DRIVE
LONG LAKE, MINNESOTA 55356

952-473-4141
FAX: 952-473-4435

ROBERT STEELE

RAIN GARDEN CALCULATIONS

October 22, 2015

EAST RAIN GARDEN

Existing hardcover running to rain garden = 714 SF

1" runoff over 714 SF = 60 C.F. required

Rain garden volume

ELEV(FT)	AREA(SF)		VOL(CF)
932.5	175		
		>	66
932.0	90		

WEST RAIN GARDENS

Existing & proposed hardcover running to both west rain gardens = 1179 SF

1" runoff over 1179 SF = 98 C.F. of volume required

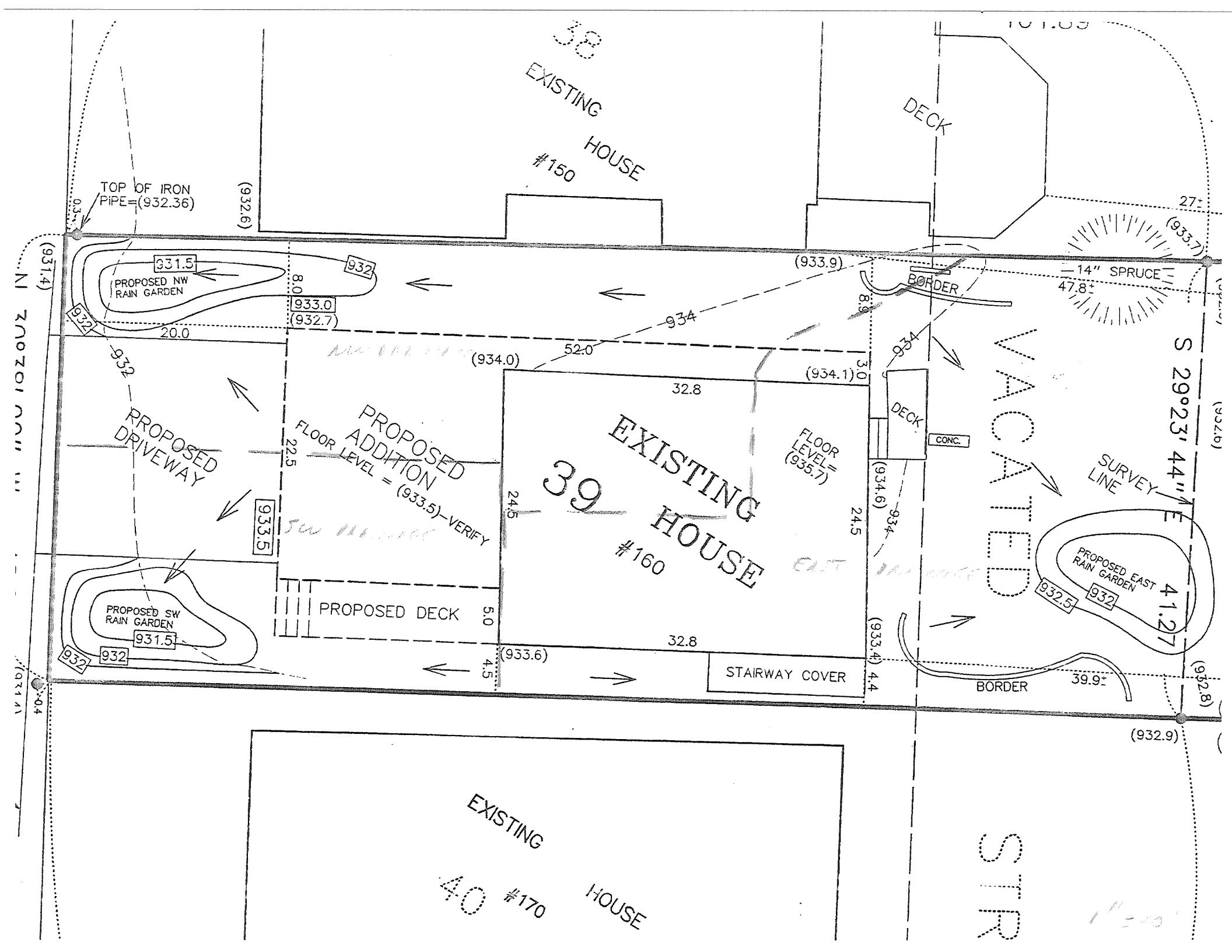
NW rain garden

ELEV(FT)	AREA(SF)	VOL(CF)
932.0	140	
		> 50
931.5	90	

SW rain garden

ELEV(FT)	AREA(SF)	VOL(CF)
932.0	130	
		> 49
931.5	65	

Total = 99 CF


38
EXISTING
HOUSE
#150
DECK
TOP OF IRON
PIPE=(932.36)
(932.6)
(931.4)
931.5
PROPOSED NW
RAIN GARDEN
932
8.0
933.0
(932.7)
20.0
932
(933.9)
BORDER
14" SPRUCE
47.8±
27±
(933.7)
934
52.0
(934.0)
(934.1)
3.0
32.8
PROPOSED
DRIVEWAY
PROPOSED
ADDITION
FLOOR LEVEL = (933.5)-VERIFY
22.5
EXISTING
39
HOUSE
#160
FLOOR
LEVEL=
(935.7)
DECK
CONC.
24.5
24.5
(934.6)
933.5
PROPOSED SW
RAIN GARDEN
931.5
932
932
PROPOSED DECK
5.0
32.8
(933.6)
4.5
STAIRWAY COVER
(933.4)
4.4
BORDER
39.9±
(932.8)
(932.9)
VACATED
SURVEY
LINE
S 29°23' 44" E
41.27
PROPOSED EAST
RAIN GARDEN
932.5
932
N 29°23' 44" W
EXISTING
40
#170
HOUSE
STR

Remodel of 160 Sunrise Avenue, Tonka Bay, Minnesota; Robert Steele-"Narrative"

a. "The projects shall be analyzed to determine the impact of impervious surfaces, storm water runoff, floodplain, and water quality implications. Only those projects shall be allowed where the adverse impacts have been mitigated through approved means to the extent possible."

In regards to this remodel, and in addressing each item below from here on out the "drawings" shall refer to the updated survey provided by Gronberg & Associates.

The remaining impervious surfaces will be slightly sloped in a way for the storm water to drain away from the structure and into the depression gardens shown on either side of the existing driveway and also on the front or lake side of the property. Use of rain gutters and down spouts in conjunction with drain tile will also direct storm water away towards the slope of the depression gardens.

b. "Storm water treatment measures including, but not limited to, sediment basis (debris basins), desilting basins or silt traps, installation of debris guards, and microsilt basins on storm water inlets, oil skimming devices, etc. shall be required subject to the review of the City Engineer and Minnehaha Creek Watershed District on projects where applicable."

As shown on the "drawings," silt fencing will be utilized on all four sides of the property, excluding the existing driveway which will consist of rock to eliminate the movement of soil onto the roadway. The existing driveway will be used as the construction entrance. By adding in the depression gardens on both the front and rear sides of the property, any storm water that incurs will drain away from the house but not into the roadway or the lake, but rather into the garden depressions to be absorbed by the vegetation that will be planted within.

c. "Projects shall be analyzed by the City in terms of provisions for maintenance and enhancement of landscape features, change in the natural condition of the soil, removal of trees, grade courses and marshes. The la shall also minimize tree removal, ground cover change, loss of natural vegetation, and grade changes as much as possible. It shall further provide for the relocation or replanting as many trees as possible which are proposed to be removed."

With regards to this remodel, there shall be minimal changes made to the grade and slope of the property except those involving the storm water to flow into the depression gardens. Drain tile shall be installed around the new concrete footings to eliminate any water from penetrating into the home. There are to be no removal of any existing trees within the property, and any tree located on the property will have a protective fence surrounding it equal to 1 foot per 1 inch of width on that tree measured at breast height, or 4 foot 6 inches from grade.

d. "Projects shall be analyzed by the City in terms of the appearance of the structure when viewed from the lake's surface. Building materials, and color shall be analyzed to determine which façade and roof materials minimize the appearance and blend the structure into the Shoreland and vegetation."

Building materials used for this remodel will remain as close to natural surrounding materials as possible. Wood grain siding will be used for the siding. All soffit, fascia, and trims will be painted white. Roofing will be a neutral colored shingles.

Remodel of 160 Sunrise Avenue, Tonka Bay, Minnesota; Robert Steele-"Narrative": Waterproofing of existing foundation walls to be slightly raised higher than current floor level

To whom it may concern:

We are requesting a conditional use permit to slightly raise the current lowest floor, currently at 929.8, to be at 930.3 for the remodel of 160 Sunrise Avenue in Tonka Bay. We will first be spraying waterproofing on the exterior of all existing and new concrete walls as well as installing a waterproofing product called "Platon Drainage System" that will attached to the exterior of the existing concrete walls and also laid on top of existing floor to help prevent any moisture from entering the new crawl space and help keep the hydrostatic pressure from penetrating the concrete walls. Next we will add 4" drain tile on top of the current lowest level and 4" of rock/granular fill before pouring a new concrete slab on top of that which will create the new crawl space floor. The drain tile will direct the water into a new sump pump and direct any storm water into the depression areas that are created. In addition to the drain tile, we will spray waterproofing on all existing and new concrete foundation walls from the top of the footing up and over the top of the concrete walls under the "Platon Drainage System." Attached you will find the details of this product. We will also be putting all of the mechanical components such as the water heater, the furnace, the water softener, etc. up on a platform to increase protection from any water that may penetrate the crawl space.

I spoke with Kevin Matik who is the building inspector from the Metro West Inspection Services, Inc. and described our above stated measures of waterproofing and he said this should meet or exceed any issues with flooding and prevent any water infiltration into the proposed lowest floor.

Sincerely,

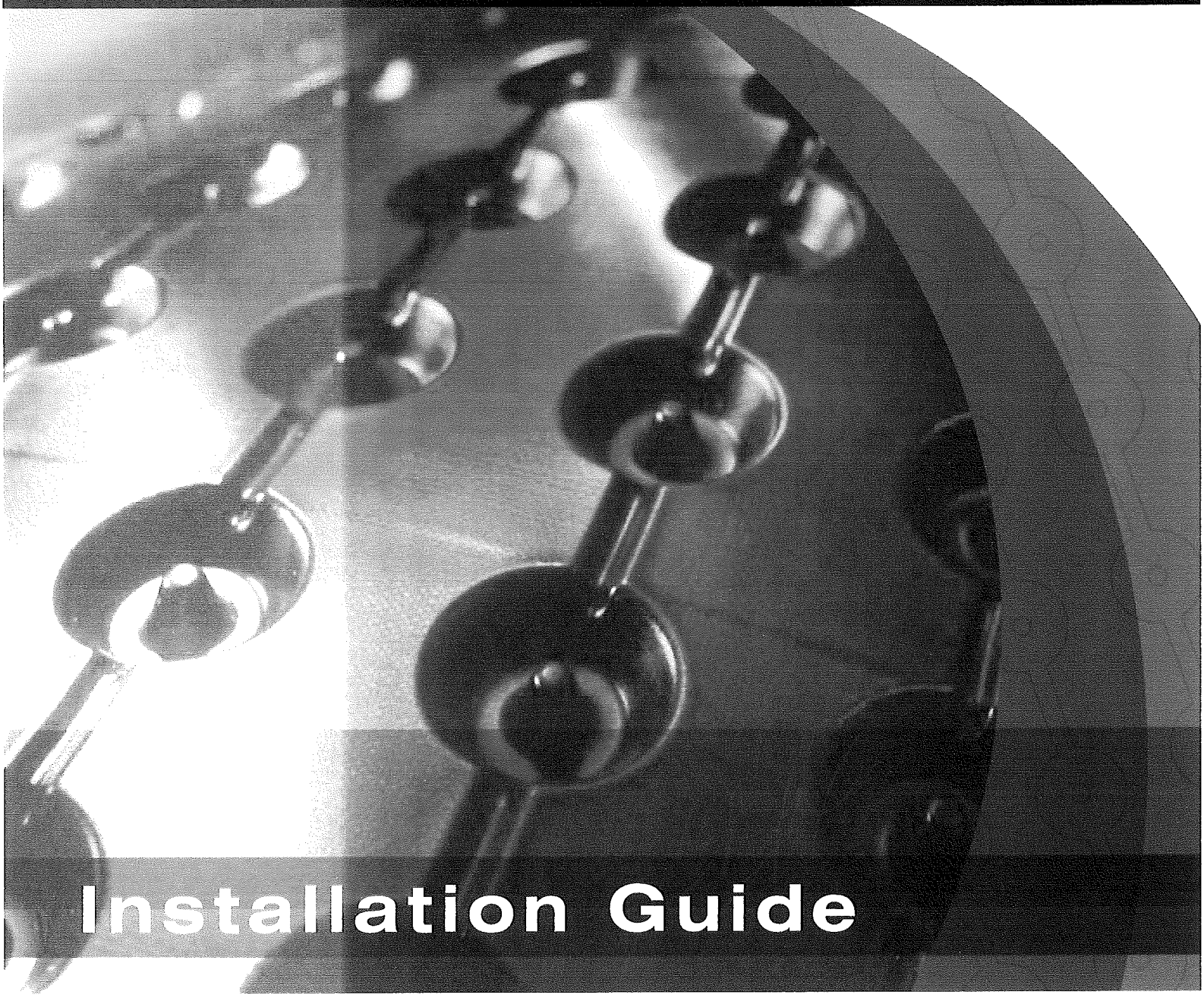
Preston A. Fox
Owner 4 Square Builders, Inc.
2718 9th Street East
Glencoe, MN 55336
(320)864.6183
4square@embarqmail.com

CertainTeed

platon®

KEEP IT DRY.

Air Gap Waterproofing Membrane



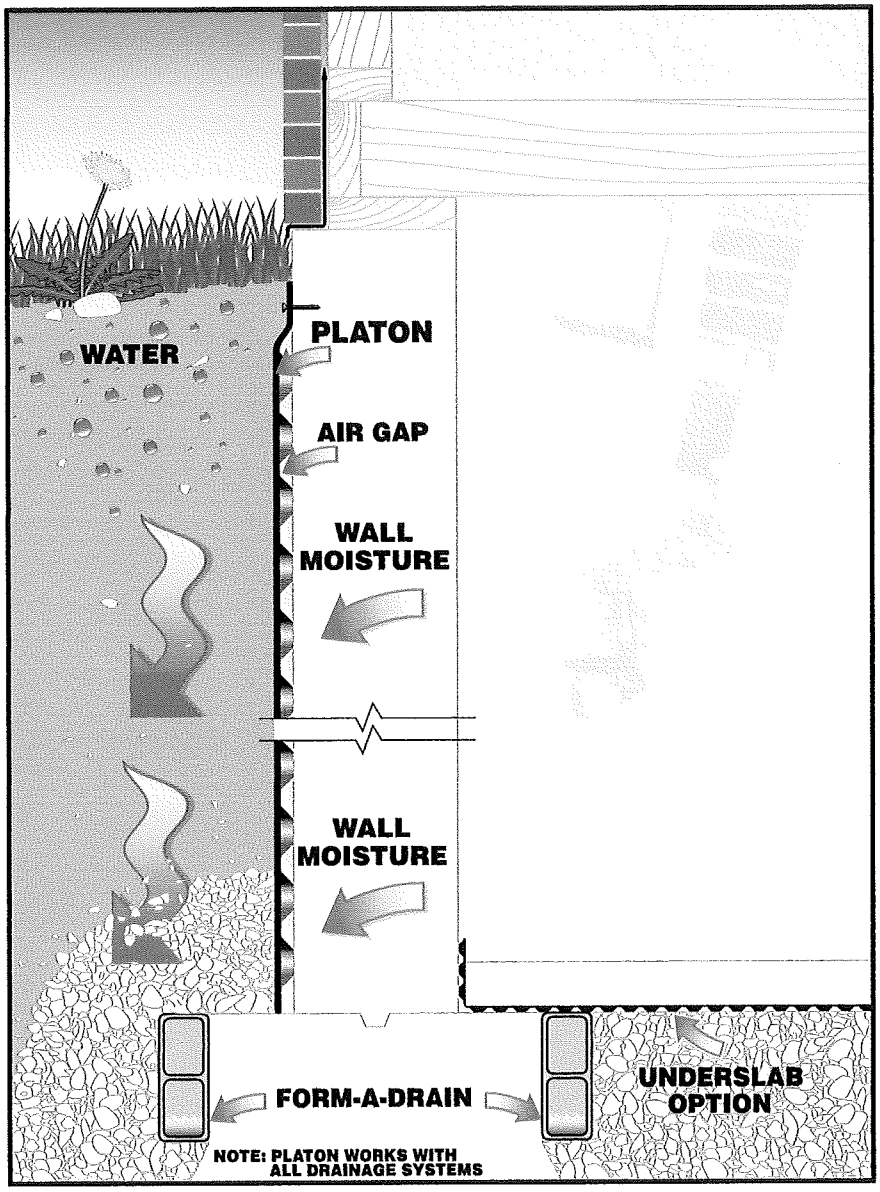
Installation Guide

CertainTeed
SAINT-GOBAIN

platon®

KEEP IT DRY.

www.certainteed.com



Introduction

Platon is a uniquely dimpled, 24-mil high density polyethylene membrane, performance proven since 1991 to prevent basement leakage problems.

Platon features:

- Double leakage protection *(Holds wet soil away from the wall and provides drainage)*
- Allows the wall to dry
- Easily bridges 1/4" cracks
- Keeps working even if the wall cracks or shifts
- Works on any type of foundation, old or new, regardless of wall condition
- Installs in any kind of weather
- Double Dimple design provides a smooth, low drag, soil side surface.
- Easily installed with concrete nails (use screws on ICF foundations)
- No other wall treatment is required
- Excellent protection board for other types of waterproofing *(Triple leakage protection)*
- 30 Year Manufacturers Limited Product Leakage Warranty *(Foundation use)*

Environmentally Responsible:

- High recycled content (92%)
- Chemically Inert – No by-products contaminate soil or air
- All manufacturing waste is recycled

It is imperative, as with all waterproofing systems, that foundation drainage, like Form-A-Drain® or traditional drain tile is in place and functioning properly to ensure that water and moisture drained by Platon can be removed.

PLATON FOUNDATION PROTECTOR – DON'T BUILD WITHOUT IT

platon®
KEEP IT DRY.

Material Requirements

Platon Membrane – One roll for every 62 lineal feet of foundation *(allows for joint overlap)*
Roll Height = Finished grade to top of footing *(If wall height exceeds available roll height overlap 2 sections by 6")*

Platon Speedclips – 65 per roll of membrane OR
Platon Speedstrips – 16 per roll of membrane

Notes:
Speedclips secure the membrane and press the smooth tab tight to the wall - caulking required.
Speedstrips secure the membrane and provide a continuous seal along the top of the membrane – no caulking required.

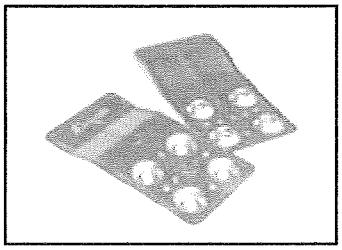
Platon Molding – 6'6" lengths - Typically 5 strips per job *(Molding seals open edges of the membrane)*
Molding can also be used to provide a continuous seal along the top of the membrane when using Speedclips – eliminates need for caulking - 10 strips per roll of membrane.

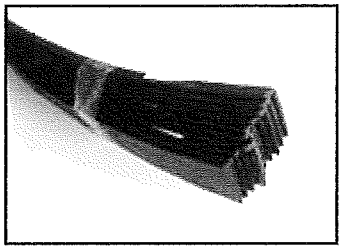
Caulking
(Not required with Speedclip/Molding or Speedstrip installations)
Minimum 2 tubes per roll
For concrete foundations, use asphalt based roof mastic or butyl rubber caulking (silicone, latex or polyurethane caulks do not stick to polyethylene)
For ICF's use foam panel adhesive

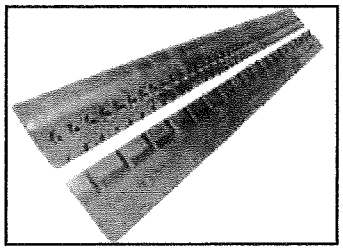
Fasteners

For concrete, use 1-1/4" concrete nails. *(For production work consider a gas-activated concrete nailer)*
For ICF foundations, use 1-5/8" drywall or corrosion resistant deck screws
(For production work consider a collated screw gun)

Notes:
Green concrete can be hand nailed
Block and cured concrete is power nailed
Use screws for ICF foundations

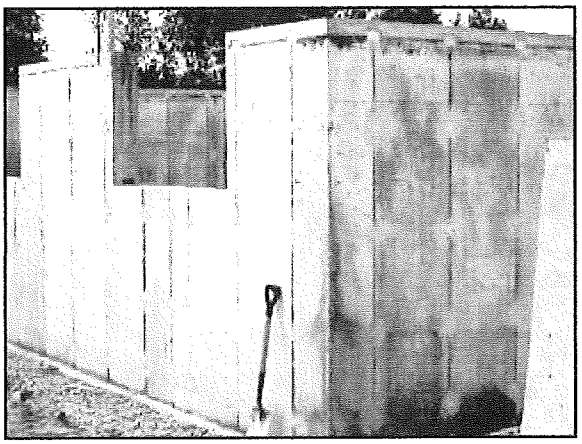

Speedclips


Platon Molding


Speedstrips

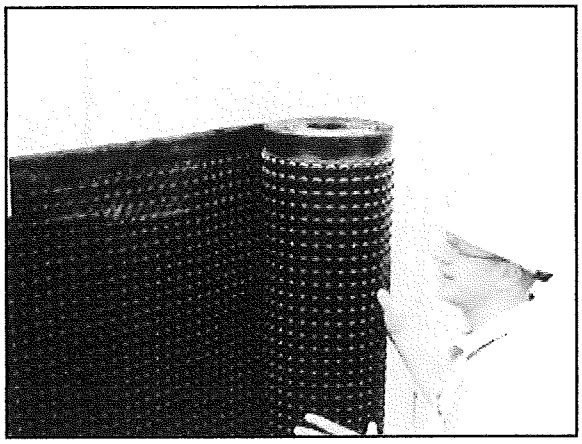
platon®
KEEP IT DRY.

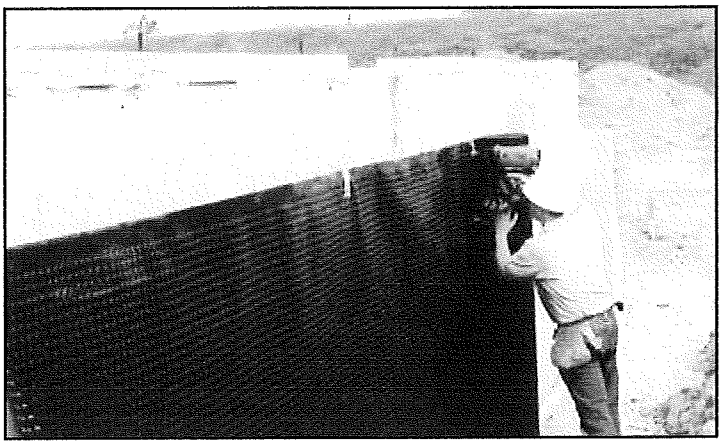
Installation

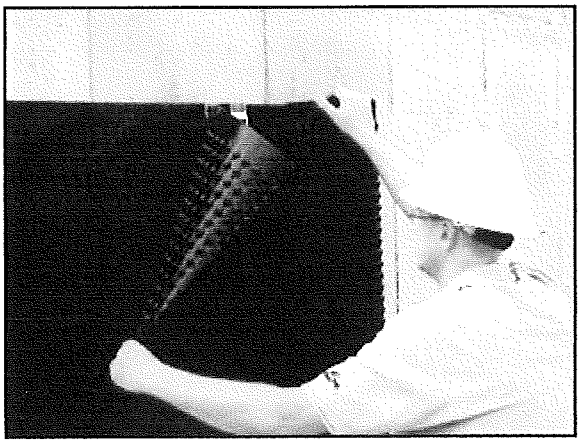


Foundation Preparation

- Break off form ties and sharp points
- Clear stone and debris from footing
- Patch round tie rod holes (no need to patch flat form tie breaks used with most aluminum wall forming systems)
- Parge or dampproof the lowest course of block foundations
- Determine finished grade and mark with a chalk line
- When using Speedclips, caulking is used between the smooth tab and wall to prevent dirt from getting behind the membrane and clogging the air gap. Either run a bead of caulk 1" below the chalk line before installing the Platon OR, after Platon is installed, caulk along the top of the Platon to seal any open gaps.
- When using Speedstrips or Speedclips and Platon Molding, caulking is not required.







NOTE: Overlap vertical joints by 20" *(if water enters the seam it will flow to the footing before it reaches the wall)*

Begin Installation

- Unroll Platon, working from left to right, dimples toward the wall. Smooth tab at the top follows the chalk line. Where full height attached garage foundation meets house, extend Platon 12" onto garage foundation. (Also see Jump Walls - Page 7)
- Nail one Speedclip to act as a pivot, unroll a 10' length of Platon, pull the smooth tab tight, tack with another Speedclip and continue until the foundation is wrapped.
- Fold and crease Platon at corners to get the best fit

Notes

- *Platon membrane must extend from finished grade (chalk line) to the top of the footing. Platon can be sawn to height while rolled up.*
- *Standing the roll on the footing when unrolling Platon is easiest.*
- *Excess membrane (if any) may be folded out and cut even with the footing edge. Crease the Platon sharply at the footing/wall corner and lay flat on the footing to prevent pull-down.*
- *Where finished grade slopes (e.g. walkout basements) install tapered sections first.*

Continue installation

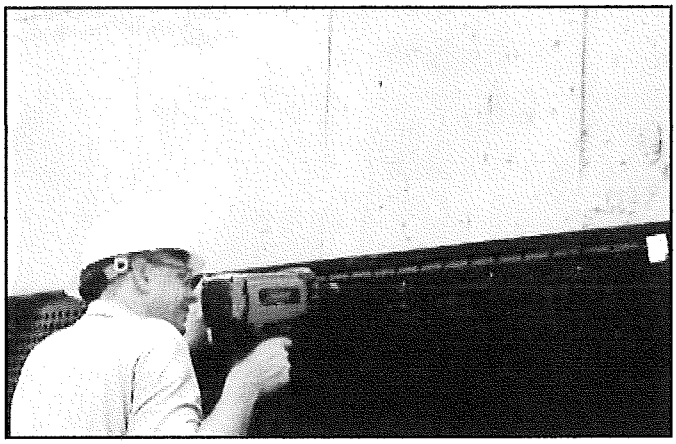
After the Platon is "tacked up"

- Secure with Speedclips 12" OC (8" between clips). Speedclips mesh the top 2 rows of dimples and the offset presses the smooth tab to the wall.

OR

Install Speedstrips

- Speedstrips mesh the top row and a half of dimples and press the smooth tab to the wall.
- Nail through the small holes in the "Fastening Area" beginning at the middle of the Speedstrip and working toward each end.
- There will be a 1/4" gap between Speedstrips.
- On ICF's, screw through the "Fastening Area" into the ICF webs (fastening points marked by the ICF manufacturer) 6" or 8" centers.

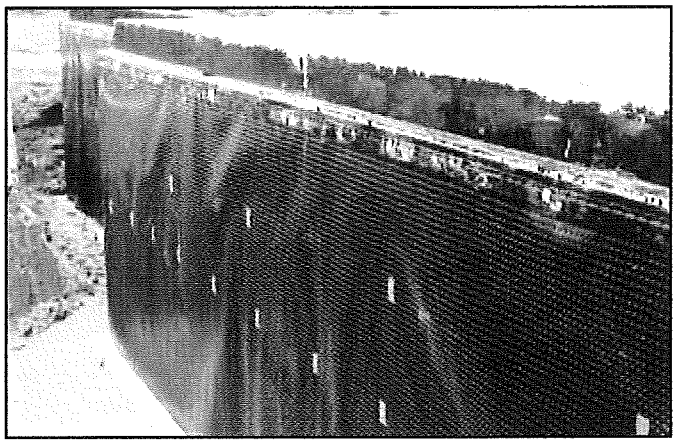


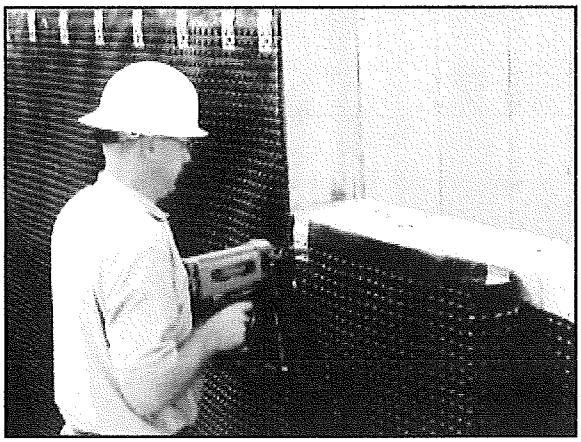
Heavy Clay Soil

(Roll heights greater than 6'9")

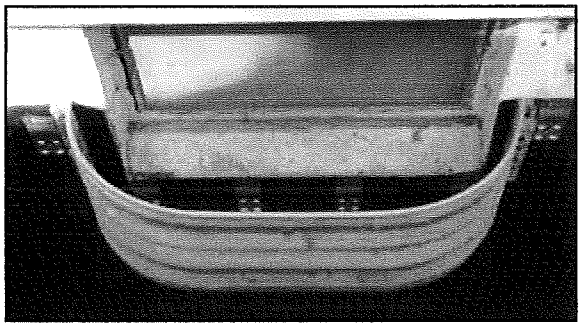
- Install a second row of Speedclips 24" OC half way up the wall.
- Backfill carefully in 3 or more lifts

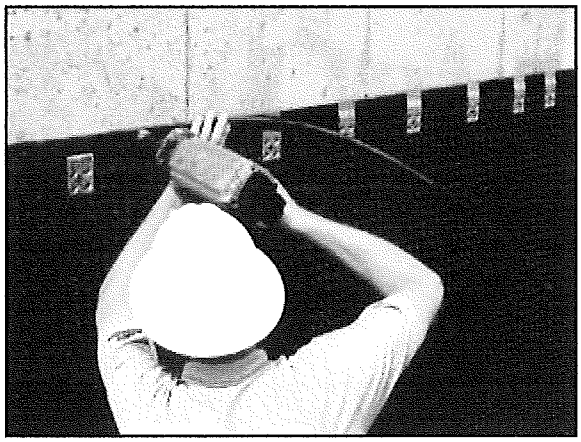
Tip – When installing 10' Platon "tack" the roll 6' up from the footer using Speedclips 24" OC, then use a ladder to reach and finish the top with Speedclips or Speedstrips





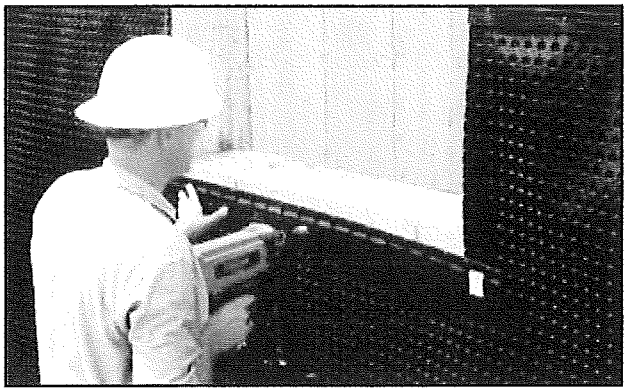
- If using Speedclips, use the cut out piece to seal the lower edge (mesh the dimples – secure with Speedclips)





Windows

- Cut Platon membrane flush with the sides and 3" lower than the bottom of the opening
- If using Speedstrips, mesh and fasten a Speedstrip to seal the lower cut opening



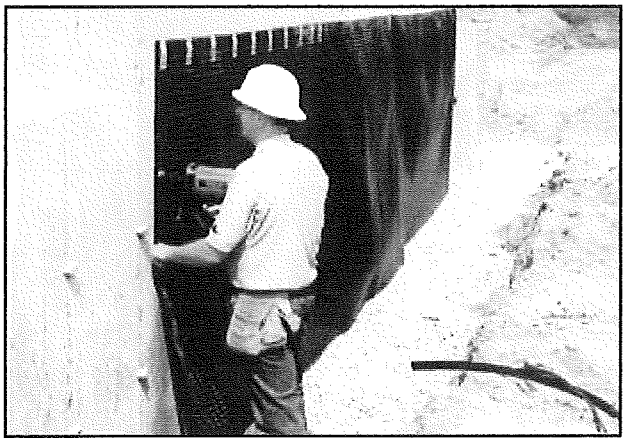
Window Wells

- Platon is sandwiched between the window-well and the foundation. Trim exposed Platon inside the window-well along the sides

Platon Molding

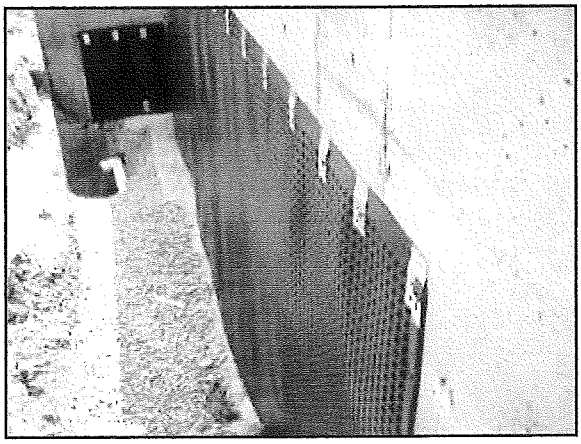
- L shaped strip 6'6" long
- Used to seal open air-gap areas of Platon where dirt could enter and clog the air gap *(e.g. Beginning and end points of installation)*

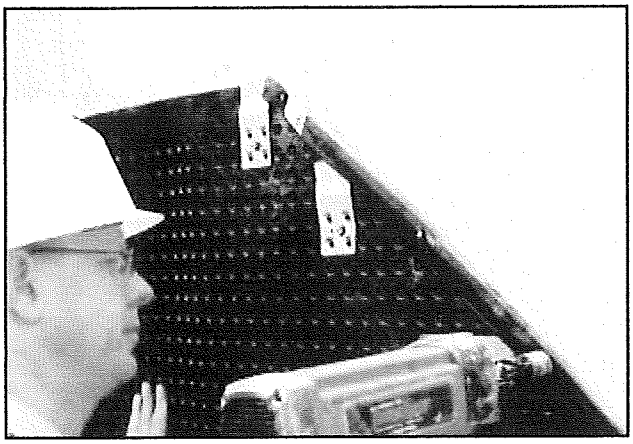
  Also used to provide a continuous seal along the top of the membrane when using Speedclips – no caulking required



Gradual Change in Grade

- Measure grade change chalk line length, add 20" for joint overlap and cut that length of Platon membrane
- Follow the chalk line with the smooth tab and fasten with Speedclips or Speedstrips
- Cut surplus membrane at the wall/footing junction
- Surplus membrane without a smooth tab can be used if the top gap is sealed with Speedstrips or Speedclips and molding. The factory cut edge should follow the grade chalk line so Speedstrips will mesh



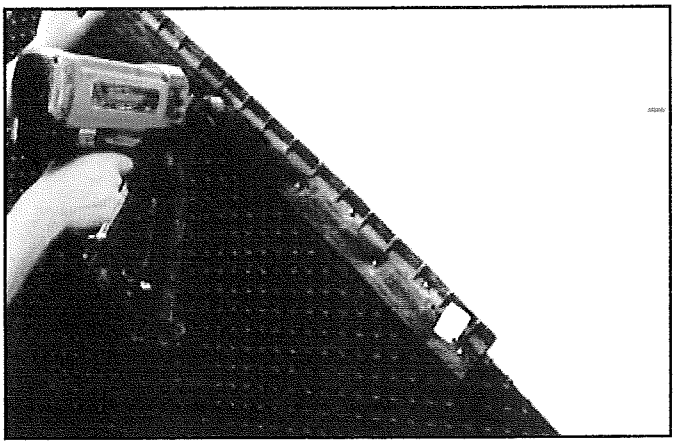


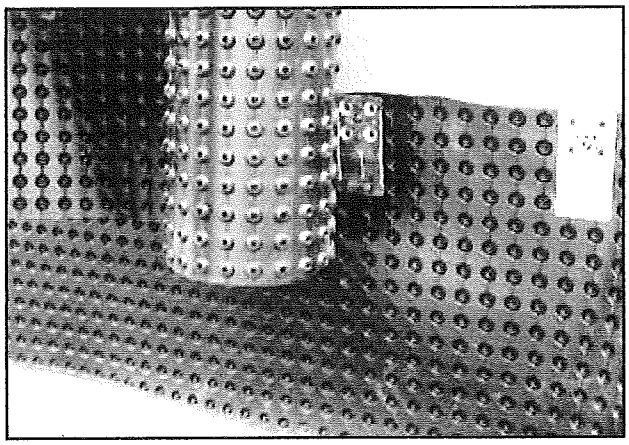
- Use Speedstrips – nail both the fastening area and the top edge of the Speedstrip using a "W" pattern – enough dimples will engage to hold the Platon in place

Steep Change in Grade

- Cut membrane to proposed finished grade
- Fasten with Speedclips and use molding to seal the cut edge

OR





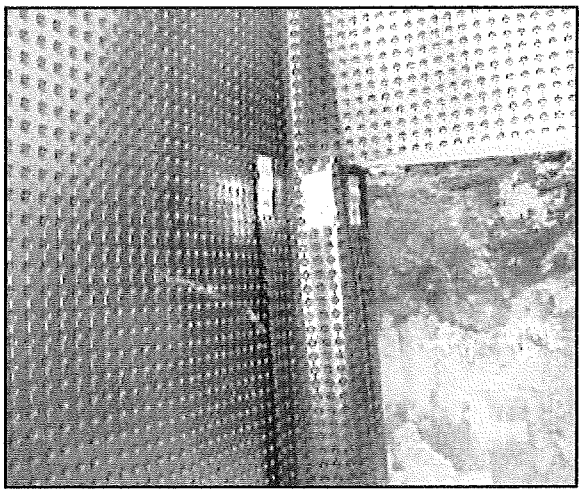
Tall Walls

- Platon is overlapped horizontally when the distance from the footing to finished grade exceeds the roll height
- Cut a section of Platon into predetermined widths (trim off the smooth tab) and install along the bottom using Speedclips
- The full height roll (with a smooth tab) is then installed to overlap the strip by at least 6"
- Alternatively, the full height roll can be installed first using Speedclips (trim off the smooth tab). Then install the strip - Speedclips and molding or Speedstrips must be used to cover the air gap along the top of the strip

Jump Walls

E.g., a 4' frost wall joins an 8' basement foundation

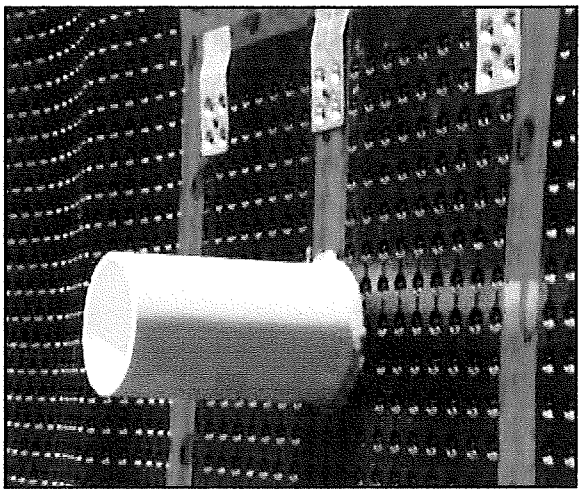
- Extend Platon 24" along the frost wall as shown
- Cut Platon horizontally, flush with the bottom of the frost wall
- Secure the top section to the frost wall and the lower section to the basement wall
- Repeat the procedure on the other side of the frost wall, overlapping the Platon below the frost wall
- Cap vertical open gaps on the frost wall with Platon Molding
- Caulk gap at the frost wall/foundation wall junction



Pipe Projections

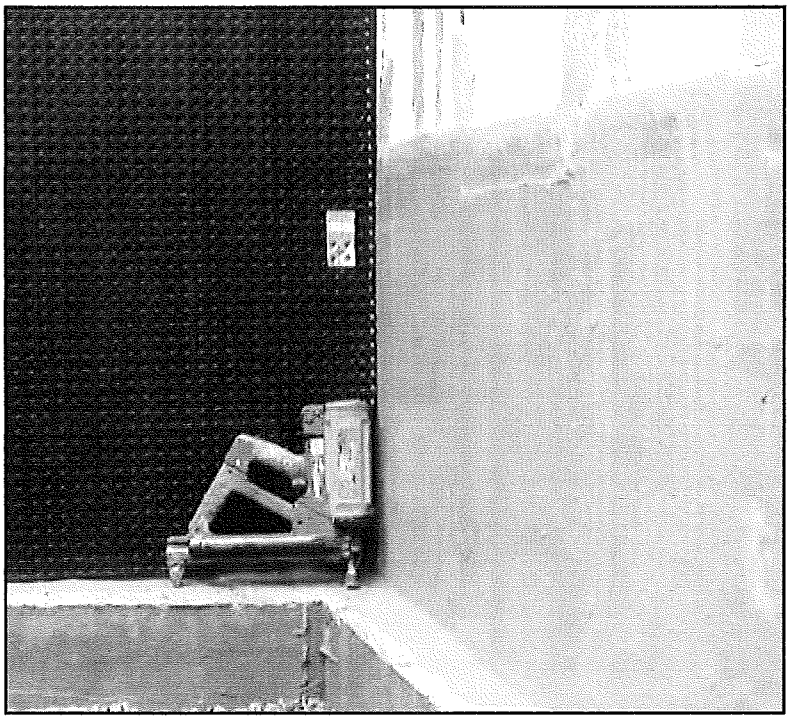
(Pipe must be sealed to foundation with hydraulic cement)

- Split Platon membrane vertically from the pipe to either top or bottom
- Cut Platon snug around the pipe
- Apply a 24" wide patch over the split
- Mesh the dimples – Speedclip the top, tape sides, caulk Platon at pipe



Tear Repair

- Caulk around the tear
- Cut a piece of Platon 12" larger than the tear to be repaired
- Place over the tear, meshing the dimples, Speedclip top, tape edges



Flood Boot

A flood boot must be installed prior to installing Platon membrane if:

1. A high water table is encountered
2. Footing drain is unable to take away water drained by Platon
3. Footing drain is placed on top of the footing
4. Floor slab is poured level with, rather than on top of the footing
5. Foundation is concrete block (parge or dampproof the 1st course of block to prevent "wicking")

- Flood Boot may be a "peel and stick" membrane or rubberised asphalt waterproofing covering the footing and wall to a point one foot higher than the anticipated water table

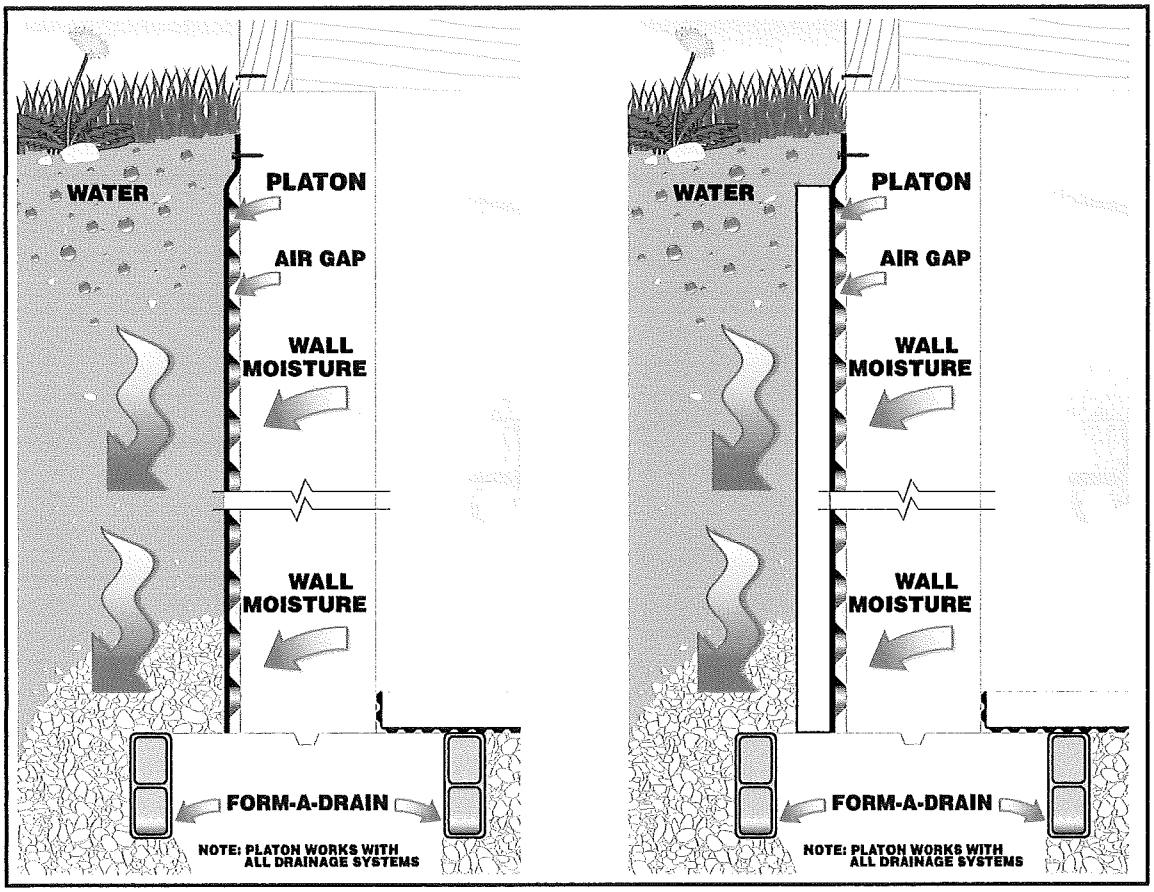
Follow product manufacturers instructions

Insulation

- Best practice - EPS foam is typically installed OVER Platon
- Use vertical insulation panels - stand on the footing
- Platon and the air gap do not detract from the R value of the insulation.

If installing Platon over foam, use Speedstrips and concrete nails long enough to penetrate 1" into the concrete

Note: Platon can be installed directly over concrete walls with conventional means where the ThermaEZE™ or T-Roc™ insulation system is used on interior walls.



Footing Drainage

- A working footing drain, like Form-A-Drain or traditional drain tile, is imperative with all foundation waterproofing systems
- Follow local building codes in your area

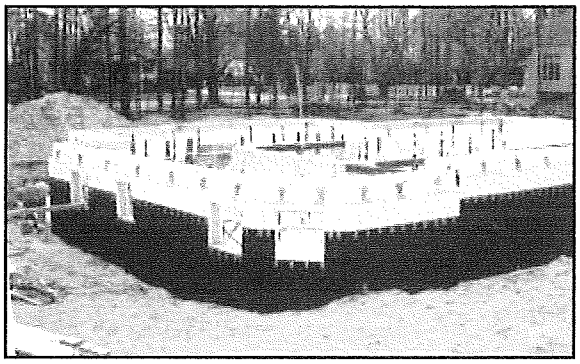
Backfilling

- Clean stone must be placed over the footing drain and up the wall as per local building code
- Do not permit machinery, large rocks or frozen clumps to impact the Platon
- Backfill carefully using 2 or 3 lifts of backfill
- Compacting each lift will reduce excessive settling later

platon®
KEEP IT DRY.

Platon is IDEAL on Insulated Concrete Forms

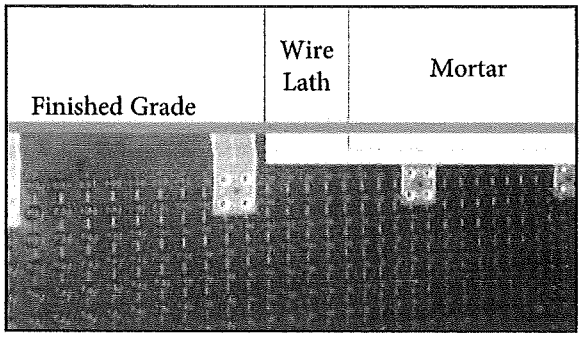
- Performance proven since 1994 with zero Platon related leaks reported
- "Stand alone" system
- Easily installed over oxidised, wet or dirty block
- Bridges 1/4" gaps
- No temperature or weather restrictions



Follow instructions for concrete foundations

- Caulk must be foam compatible *e.g. foam panel adhesive*
- Screw into the ICF web or fastening point instead of using concrete nails
- Speedclips - use the fastening hole that best lines up with the ICF web
- Speedstrips can be screwed into each web anywhere in the "Fastening Area"

(Tip – A collated screw gun speeds installation)



To transition from Platon to exposed foam:

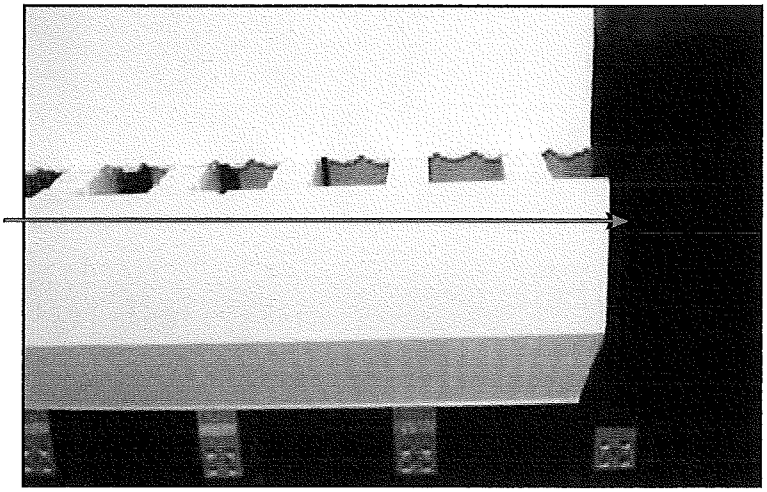
- Apply galvanized metal lath - screw into the ICF webs
- Lath covers exposed foam and extends 2" or more over the Platon
- Parge lath with mortar mix typically used on foundations

Dirt can not get behind the Platon so caulk is not required

Brick ledges on ICF foundations usually protrude from the foundation.

- Fasten Platon to the vertical wall below the brick ledge protrusion
- Apply a "peel and stick" waterproofing membrane to cover the protrusion and horizontal brick ledge, extending both up the wall behind the brick and over the top of the Platon

Follow "peel and stick" manufacturers instructions for surface preparation and temperature restrictions



It is nearly impossible to find a leak in an ICF foundation without destroying the foam – do it right the first time with Platon

platon®
KEEP IT DRY.

PLATON SUBFLOOR SYSTEM

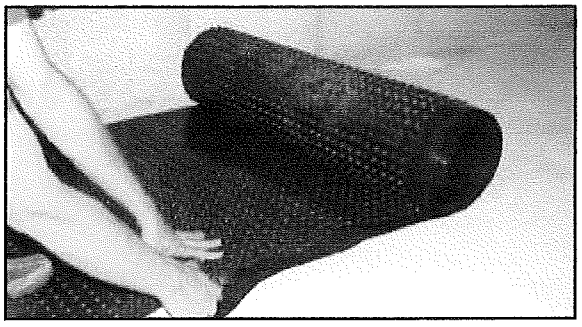
Lifts the floor off damp, cold concrete and allows the concrete to breathe

SEAMLESS HDPE barrier protects floor coverings from slab moisture for a floor that is comfortable, healthy, warm and dry.

Its like having an "above grade" floor !

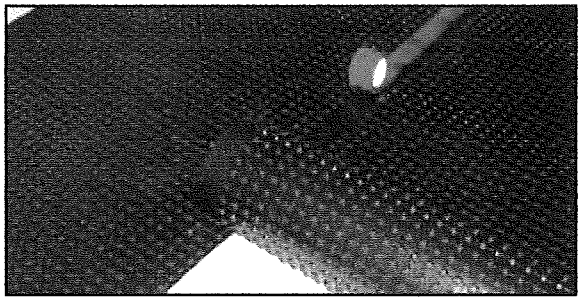
Step 1

- Remove existing floor coverings
- Level low areas if required
- Clear organic debris



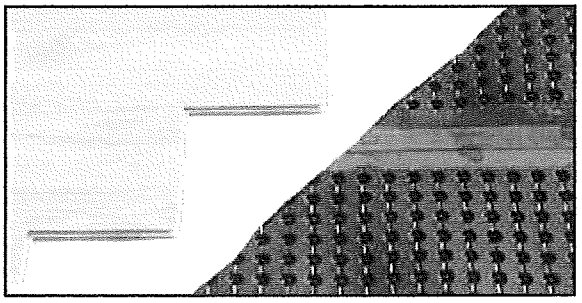
Step 2

- Unroll first strip of Platon DIMPLES DOWN
- Cut to length
- Cut off smooth tab



Step 3

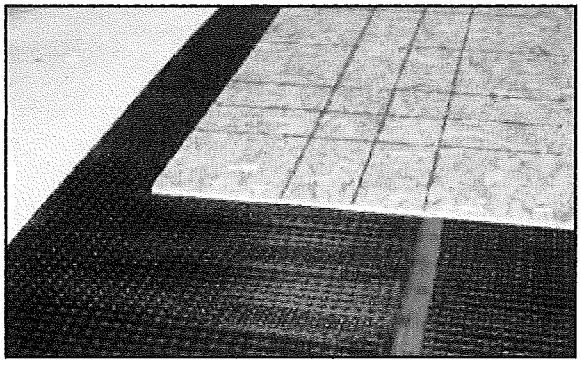
- Install second strip of Platon
- Smooth tab overlaps 2 rows of dimples on adjacent strip.
- Tape seam with "housewrap" tape



Step 4 - A

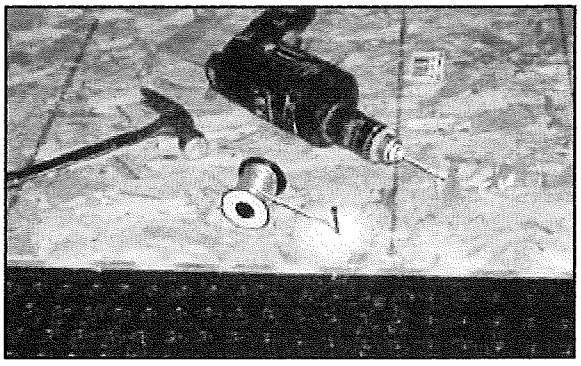
- Laminate underpad and flooring is installed directly over Platon
- Outperforms "dampproof" underpad

Follow Laminate manufacturers instructions



Step 4 - B

- Other floor coverings require a "load spreading sheet"or subfloor (Minimum 7/16" OSB)
- Fit and lay the subfloor panels on the Platon
- Fasten to the concrete around room perimeter
- Also fasten where there is vertical movement



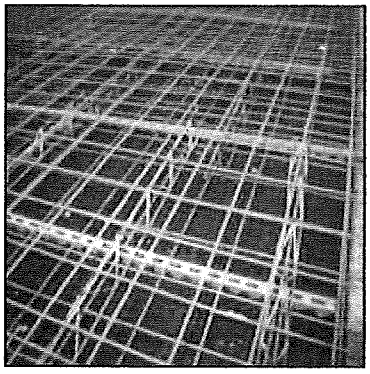
Notes

- Fasten with concrete screws or masonry nails
- Non load bearing walls may be framed on the subfloor
- Install your choice of floor covering following manufacturers "above grade" instructions

platon®

KEEP IT DRY.

Permanent Underslab Dampproofing



Platon, a tough, dimpled, 24 mil High-Density Polyethylene membrane, is impervious to both moisture and the high alkaline environment presented by concrete. With Platon as the dampproofing membrane, ground moisture is sealed off, giving total protection against damp damage and complete freedom of choice in floor coverings.

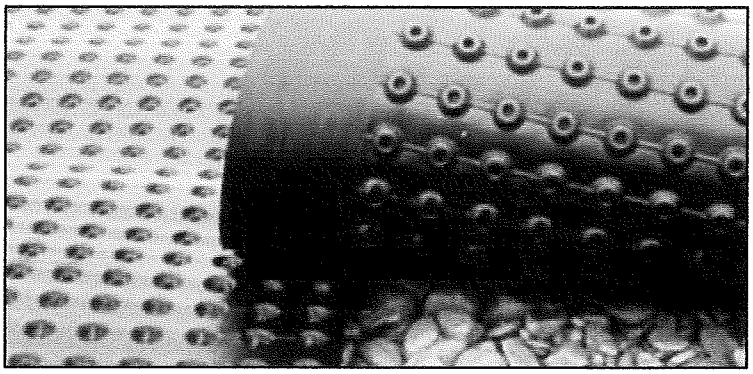
Commonly used builders polyethylene is easily damaged during concrete placement and has relatively low water vapor resistance. In the high alkaline environment created by concrete and moisture, non-stabilized builders' polyethylene becomes brittle and soon ceases to perform as dampproofing

Installation

Platon membrane is installed with the dimples down

Joints are sealed with butyl rubber "Roof and Gutter" caulk. Housewrap tape can be used to hold joints together until the floor is poured

At walls, the edge of Platon membrane can be turned up so it is higher than the proposed floor thickness. It can be trimmed flush with the floor later if desired



Reinforcing mesh and concrete are placed over the Platon membrane using standard placement procedures

For radiantly heated floors, EPS foam is placed OVER the Platon membrane before the floor is poured

The membrane is tough enough to walk on without puncturing it, but plank walkways should be used if transporting concrete over the membrane

buildingresponsibly™

ASK ABOUT ALL OF OUR OTHER CERTAINTEED® PRODUCTS AND SYSTEMS:

ROOFING • SIDING • TRIM • DECKING • RAILING • FENCE • FOUNDATIONS
GYPSUM • CEILINGS • INSULATION • PIPE

www.certainteed.com http://blog.certainteed.com

CertainTeed Corporation
P.O. Box 860
Valley Forge, PA 19482

Professional: 800-233-8990
Consumer: 800-782-8777

SAINT-GOBAIN