



Oregon

Kate Brown, Governor

Department of Consumer and Business Services

Building Codes Division

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Building Codes Structures Board

Regular meeting agenda

Wednesday, November 2, 2016, at 9:30 a.m.

Conference Room A

Board meetings are broadcast live via the Internet at

<http://www.oregon.gov/bcd>

Click on "View live meetings"

I. Board business

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the [August 3, 2016](#), board meeting draft minutes
- E. Date of the next regularly scheduled meeting: February 8, 2017

II. Public comment

*This time is available for individuals wanting to address the board on **non-agenda items only**. The board will not take action on non-agenda items raised under public comment at this meeting. Testimony on agenda items will be heard when the item is called. (See "*Issues to remember when addressing the board*" at the end of this agenda.)*

III. Reports

Program update

IV. Communications - None

V. Appeals - None

VI. Unfinished business

[Board review](#) of proposed rules related to code changes requiring the installation of Emergency Responder Radio Coverage systems

VII. New business - None

VIII. Announcements - None

IX. Adjournment

Issues to remember when addressing the board:

- All public participation is subject to the discretion of the Board Chair for order of testimony, length and relevance.
- Speakers are generally limited to five minutes.
- Please register on the attendance registration form and on the public testimony registration form, listing the appropriate agenda item.
- The Board Chair will call you to the front testimony table.
- Please state your name and the organization you represent (if any).
- Always address your comments through the Chair.
- If written material is included, please provide 20 three-hole-punched copies of all information to the boards coordinator prior to the start of the meeting and, when possible, [staff](#) respectfully requests an electronic copy of materials 24 hours prior to the meeting.

Interpreter services or auxiliary aids for persons with disabilities are available upon advance request. Persons making presentations including the use of video, DVD, PowerPoint, or overhead projection equipment are asked to contact boards coordinator 24 hours prior to the meeting. For assistance, please contact [Debi Barnes-Woods](#) at 503-378-6787.

Please do not park vehicles with "E" plates in "customer only" spaces.

Note: For information regarding re-appointments or board vacancies, please visit the [Governor's website](#).

**Building Codes Structures Board
meeting draft minutes
August 3, 2016**

- Members present:** Dan Carlson, building official
Stephen Forster, fire protection agency representative
Bill Kisselburgh, building trade representative
Gregory Nelson, energy supplier
Eric Sandoval, architect
Thomas Sjostrom, owner/manager of commercial office building
- Members absent:** Rene Gonzalez, three-plus stories general contractor
Ted Wenk, disabilities commission representative
Vacancy - Heavy industry construction contractor
- Staff present:** Brett Salmon, manager, Policy and Technical Services
Richard Rogers, chief building official, Policy and Technical Services
Rex Turner, structural program chief, Policy and Technical Services
Mark Heizer, P.E., policy analyst, Policy and Technical Services
Tony Rocco, senior code specialist, Policy and Technical Services
Todd Smith, policy analyst, Policy and Technical Services
Debi Barnes-Woods, boards administrator, Policy and Technical Services
- Guests Present:** Michael Trabue, assistant chief deputy, State Fire Marshal
Jeff Bond, Bend Fire Department
John Patterson, Oregon Fire Marshals Association
Nate Takara, Portland Fire & Rescue
Jim Hanson, Portland Fire & Rescue
Eric Bressman, Ankrom, Noisan, Architects

I. Board business

A. Call to order

Rex Turner, structural program chief, called the Building Codes Structures Board meeting of August 3, 2016, to order at 9:34 a.m. The meeting was held at Building Codes Division in Conference Room A, 1535 Edgewater Street NW, Salem, Oregon.

B. Roll call

Rene Gonzalez and Ted Wenk were both absent excused. Bill Kisselburg and Gregory Nelson were connected by teleconference.

This board has one vacancy for the following position: A contractor specializing in construction for heavy industry.

C. Approval of the corrected meeting agenda and order of business

Corrections were made to Item VII. ERRC Checklist after the agenda was posted.

The agenda, corrections to Item VII. ERRC Checklist, and order of business were **RULED** approved by unanimous consent.

D. Approval of the February 24, 2016, draft board meeting minutes

The February 24, 2016, draft meeting minutes were RULED final by unanimous consent.

E. Date of the next regularly scheduled meeting: November 2, 2016.

II. Public comment

John Patterson, representing Oregon Fire Chiefs Association (OFCA) and Oregon Fire Marshals Association (OFMA), spoke under public comment about the new business item. After Richard Rogers, chief building official, Building Codes Division, asked that all comments related to the new business item be held for that item, Mr. Patterson's discussion was moved with related comments under Item VII.

(Items A and B were combined)

III. Reports

A. Building Codes Division report

B. Program update

Rex Turner, structural program chief, Policy and Technical Services, updated the board on a 45-day notice the division posted to receive code amendments to the 2017 Oregon Residential Specialty Code (ORSC) on August 1, 2016. Chief Turner said the deadline for submitting code amendments is September 14, 2016. The proposed effective date of the 2017 ORSC is October 1, 2017.

IV. Communications - None

V. Appeals - None

VI. Unfinished business – None

VII. New business

Board review and provide a recommendation to the division on code changes requiring the installation of Emergency Responder Radio Coverage systems

Chief Turner introduced the item reminding the board of the discussion that occurred during the February 24, 2016, board meeting. After hearing testimony from the fire industry and contractors at that meeting, the division requested that the Oregon Office of State Fire Marshal work with stakeholders to develop an applicant checklist. The checklist will be provided at the time of permit submittal to assure consistency by providing a recommendation from the local fire official with site-specific information and detailed technical specifications for emergency responder radio coverage (ERRC) systems at the time of construction.

The ERRC Checklist provided was the product of the Oregon Office of State Fire Marshal with the corrections made and reposted in the board packet.

Chief Turner asked that the board approve the amendments, as recommended by the division, to be sent to public hearing with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Nate Takara, Fire Marshal, Portland Fire & Rescue, said Portland Fire & Rescue were in agreement with the proposed language except for one sentence in Section 510.5.5 "Survivability." He said that the Portland Fire & Rescue would like clarification of the intent of the requirement in the last sentence in subsection 2 "Protection of system backbone pathways within a single floor level is not required." He suggested that a clearer definition may fix the confusion.

Tony Rocco, senior code specialist, Building Codes Division, said that the language is intended to apply to a horizontal run that is only serving one level.

Chief Turner said it was understood by the division that the Office of State Fire Marshal was to put out an interpretation that would further clarify the language.

Member Stephen Forster said he was in favor of moving this forward, but said the language needed further clarification. He said an interpretation addressing survivability was needed.

John Patterson (OFMA) said that the association was in general agreement with the division on the check list, but he said that the proposed changes to Section 510.5 of the Oregon Fire Code should follow the amendment process established by Oregon Revised Statute stating that the Office of State Fire Marshal may amend the Oregon Fire Code. He said that the statute does not list any other state agency or agency board as having authority to amend the fire code.

Chief Turner said that the division's assistant attorney general representative has taken the position that this language is a new construction standard, and therefore it is within the authority of the Building Codes Division.

Michael Trabue, assistant chief deputy, OFMA, said there is a process in place under OAR 837-040-0015 in which the fire code committee meets monthly in an open process where the division may submit proposed language for approval and then bring it to the board.

Motion by Eric Sandoval to approve the division recommended changes and send to public hearing with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

(Board took a break at 9:34 a.m. and reconvened at 10:43 a.m. The motion made prior to the break was repeated by Eric Sandoval with no changes.)

Stephen Forster said that a definition was not needed in the survivability section of the code amendment because there is sufficient scoping in the specific requirement.

Chief Turner, acting chair, called for a vote on the motion.

Before the vote took place, Stephen Forster asked for a modification to approve with the recommendation that the Administrator look into the question over which agency has authority to change the fire code.

Brett Salmon, manager, Policy and Technical Services, said the question of authority between state agencies is an item that would need to be publically noticed and discussed separate from the item listed on the agenda for this meeting.

The motion remained as originally stated and a roll call vote was taken:

Yea: Carlson, Forster, Kisselburgh, Nelson, Sandoval

Nay: Sjostrom

Motion carried

VIII. Announcements - None

IX. Adjournment

Mr. Turner adjourned the meeting at 10:55 a.m.

Respectfully submitted by Debi Barnes-Woods, boards administrator/coordinator.

**Agenda
Item
VI.**

State of Oregon

Board memo

Building Codes Division

November 2, 2016

To: Building Codes Structures Board

From: Richard S. Rogers
Chief Building Official

Subject: Emergency Responder Radio Coverage Provisions

Action requested:

Enclosed is a draft temporary rule related to the requirements for Emergency Responder Radio Coverage. The division is seeking board input on the draft temporary rule before filing on November 3, 2016. The temporary rule, once filed, goes into effect immediately. In addition to a temporary rule, the division may proceed to permanent rulemaking if the board prefers this route and provides such an approval with an appropriate finding listed in the options below.

Background:

When the division agreed to require ERRC in the 2014 Building Code, state and local fire personnel committed to resolve the confusion embedded in the national model code language. In fact, some in the fire service suggested the division defer adoption of the requirements while technical and market issues related to equipment were resolved. The division ultimately agreed to move forward with adoption based on unwritten assurances that the fire service would work out the various issues. Subsequently, the division received several contractor complaints about inconsistent application of the standards and it became clear that the concerns had not been addressed. The division decided to suspend the ERRC code requirements until the issue could be resolved.

The issue was revisited at a somewhat contentious, but thorough discussion during the February 24, 2016, Building Codes Structures Board (board) meeting. Testimony at the board meeting revisited some of the technical issues with the standards and also suggested inconsistent application of the requirement. Part of the discussion was about local fire officials requiring changes even after local building officials had approved the project. Based on the discussion and testimony at the February board meeting, the division requested the fire service develop a pre-construction form to identify the local requirements each fire service would place on the contractor prior to construction. The division indicated that as soon as the fire service provided a

completed pre-construction form that had the support of the fire service, the division would re-adopt the standards. It was the division's belief that this effort would only take a few weeks to complete. The fire service held several meetings and in May provided the division with a draft document. The division attempted to verify that the proposal was complete and had the support of the fire service.

Absent written confirmation of support for the current proposal, the division determined that the proposal should go back to the board in order to confirm broader support for the draft checklist through the board and public rulemaking process.

On August 3, 2016, the board recommended the division proceed with re-adoption of the standards, including the checklist. However, at the board meeting the fire service raised an unrelated issue regarding authority to place the rule in the Oregon Fire Code. The division understands that OSFM subsequently sought DOJ advice on these questions. The division felt it was appropriate to also gain legal advice on the appropriate and legal approach to adoption of building code standards. The division was advised to discontinue any practice which resulted in new construction requirements being located outside of the state building code. All such requirements were to be numbered, referenced, printed, and adopted only under division authority – this clearly includes the ERRC rules.

Based on DOJ advice, the division has reformatted and renumbered the new construction requirements relating to ERRC for inclusion in the OSSC. We also updated the form and reviewed both the form and rule with OSFM since the August 2016 board meeting. These items are attached for the board's review and recommendation.

Code Change Summary (see attached):

- Revised OSSC section 915.1 capturing exceptions to providing radio coverage.
- New OSSC section 915.1.1 detailing the scope of the requirements.
- New OSSC section 915.2 specifying requirements for completing OSSC Form 915 and exception providing alternate timing for deferred submittals.
- New OSSC section 915.3 detailing construction requirements for “survivability” of the ERRC system.
- Revised OSSC section 403.4.5 addressing High-Rise buildings.
- Revised OSSC section 907.2.13.2 relating to Fire Department communication systems.
- Adoption of a new form; “OSSC 915 – Emergency Responder Radio Coverage Checklist.”

Action:

- Board review and provide input on proposed temporary rule related to code changes requiring the installation of Emergency Responder Radio Coverage and select an option below.

Select an option:

- Board approves and recommends code changes requiring compliance with Section 915 for Emergency Responder Radio Coverage be sent to public hearing with the findings that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Board declines code changes for Emergency Responder Radio Coverage systems be sent to public hearing at this time.

**OSSC Amendment
November 2, 2016**

918-460-0015

Amendments to the Oregon Structural Specialty Code

(1) The **Oregon Structural Specialty Code** is amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **Oregon Structural Specialty Code** are placed in this rule, showing the section reference, a descriptive caption, and a short description of the amendment.

(2) Effective April 1, 2015 the **Oregon Structural Specialty Code** is amended according to the following:

(a) Amend Chapter 2 Definitions to include definitions related to solar photovoltaic installations;

(b) Amend Section 1008.1.10 Panic and Fire Exit Hardware by changing the ampere threshold to 800 to align with the **Oregon Electrical Specialty Code**. Clarifies that the **Oregon Electrical Specialty Code** determines what constitutes a “work space”;

(c) Amend Table 1016.2 Exit Access Travel Distance by adding “Note” (d) specifying exit travel distance;

(d) Amend Section 1018.1 Corridors by adding “Exception” (6) relating to fire-resistance rating;

(e) Amend Sections 1107.5.1 Group I-1 and 1107.6.4 Group R-4 by adding an “Exception” allowing folding seats to be omitted and shower controls to be located on the side wall;

(f) Amend Section 2902.2 Separate Facilities by amending “Exception” (2), and adding “Exception” (3); and

(g) Adopt Section 3111 Solar Photovoltaic Panels/Modules.

(3) Effective February 1, 2016, the **Oregon Structural Specialty Code**, Sections 907.2.11 and 908.7, for low frequency single- and multiple-station smoke alarms and carbon monoxide alarms is amended. NFPA 72 Section 29.3.8 and NFPA 720 Section 9.4.2.2 are not adopted.

(4) Effective November 3, 2016, for new construction standards related to emergency responder radio coverage, Oregon Structural Specialty Code Sections 403.4.5, 907.2.13.2, 915.1, 915.1.1, 915.2, and 915.3 are adopted and amended, and form OSSC 915 is adopted.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 447.231, 455.030, 455.110 & 455.496

Stats. Implemented: ORS 455.110

Hist.: BCA 18-1993, f. 8-24-93, cert. ef. 8-29-93; BCA 28-1993, f. 10-22-93, cert. ef. 1-1-94; BCD 6-1994, f. 2-25-94, cert. ef. 5-1-94; BCD 22-1994, f. 9-28-94, cert. ef. 1-1-95; BCD 31-1994(Temp), f. & cert. ef. 12-23-94; BCD 32-1994, f. & cert. ef. 12-30-94; BCD 2-1995, f. & cert. ef. 2-9-95; BCD 5-1995, f. & cert. ef. 3-15-95; BCD 2-1996, f. 2-2-96, cert. ef. 4-1-96; BCD 6-1996, f. 3-29-96, cert. ef. 4-1-96; BCD 12-1997, f. 9-10-97, cert. ef. 10-1-97; BCD 19-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 24-1998(Temp), f. & cert. ef. 12-1-98 thru 5-29-99; Temporary Rule repealed by BCD 3-1999, f. 3-12-99, cert. ef. 4-1-99; BCD 5-1999, f. 6-17-99, cert. ef. 10-1-99; BCD 12-1999(Temp), f. 9-23-99, cert. ef. 11-1-99 thru 4-28-00; BCD 2-2000 f.

1-14-00, cert. ef. 4-1-00; BCD 20-2000, f. 9-15-00, cert. ef. 10-1-00; BCD 8-2001, f. 7-17-01, cert. ef. 10-1-01; BCD 18-2001, f. 12-21-01, cert. ef. 1-1-02; BCD 14-2003, f. 8-13-03, cert. ef. 10-1-03; BCD 18-2003(Temp) f. & cert. ef. 11-14-03 thru 5-11-04; BCD 5-2004, f. & cert. ef. 4-1-04; BCD 16-2004, f. 9-24-04, cert. ef. 10-1-04; BCD 21-2004, f. & cert. ef. 10-1-04; BCD 9-2005(Temp), f. & cert. ef. 4-7-05 thru 9-30-05; BCD 14-2005, f. & cert. ef. 7-5-05; BCD 18-2005(Temp), f. & cert. ef. 7-12-05 thru 9-30-05; BCD 22-2005, f. 9-29-05, cert. ef. 10-1-05; BCD 23-2005, f. 9-29-05, cert. ef. 10-1-05; BCD 1-2006, f. & cert. ef. 2-1-06; BCD 9-2006, f. 6-30-2006, cert. ef. 7-1-06; BCD 1-2007, f. 2-15-07, cert. ef. 4-1-07; BCD 9-2008 (Temp), f. & cert. ef. 6-25-08 thru 12-22-08; BCD 20-2008, f. 9-30-08, cert. ef. 10-1-08; BCD 4-2010, f. 5-14-10, cert. ef. 7-1-10; BCD 1-2011, f. 2-15-11, cert. ef. 4-1-11; BCD 14-2011, f. & cert. ef. 5-13-11; BCD 30-2011, f. & cert. ef. 11-1-11; BCD 32-2011, f. 12-30-11, cert. ef. 1-1-12; BCD 1-2012, f. 1-31-12, cert. ef. 2-1-12; BCD 8-2012, f. 8-31-12, cert. ef. 9-1-12; BCD 7-2014, f. 6-20-14, cert. ef. 7-1-14; BCD 3-2015, f. 3-24-15, cert. ef. 4-1-15; BCD 2-2016, f. 1-28-16, cert. ef. 2-1-16

DRAFT

Emergency Responder Radio Coverage Oregon Structural Specialty Code

Proposed Code Changes

Text denotation:

Underline denotes new text,
~~strikethrough~~ denotes deletion

SECTION 915 EMERGENCY RESPONDER RADIO COVERAGE

915.1 General. When required by ~~the fire code official~~ **this section**, emergency responder radio coverage shall be provided in new buildings in accordance with Section 510 of the Fire Code.

Exceptions:

- 1. Where recommended by the fire official and approved by the building official, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an approved radio coverage system.**
- 2. Where recommended by the fire official and approved by the building official, an approved radio coverage system is not required where building configuration will allow for transmission of ambient radio signal strength into the building and allows for transmission to an outdoor receiver.**

915.1.1 Scope. **Emergency responder radio coverage must be provided in the following buildings and locations:**

- 1. Any building with one or more basement or below-grade building levels.**
- 2. Any underground building.**
- 3. Any building more than five stories in height.**
- 4. Any building 50,000 square feet in size or larger.**
- 5. Any building regulated as a high-rise under Section 403.1.**

915.2 Form OSSC 915. **A completed Form OSSC 915 shall be submitted to the building official at the time of initial permit application.**

Exception: Where portions of the construction documents demonstrating compliance with Section 915 are being deferred in accordance with section 107.3.4.2, only sections I and II of Form OSSC 915 are required to be completed and submitted to the building official at the time of initial permit application.

OSSC Form 915 is available at the following link: www.oregon.gov/bcd/Pages/forms.aspx

915.3 Survivability. The following construction components shall be required as specified for the installation of emergency responder radio coverage systems:

1. **All signal booster components shall be protected in NEMA 4-Type waterproof cabinets.**
 2. **All system backbone pathways between signal boosters, donor antennae and secondary power supplies and between head end and remote units for fiber based systems shall be protected by a shaft enclosure in accordance with Section 713. Protection of system backbone pathways within a single floor level is not required.**
 3. **Primary cable riser pathways between floors shall be protected in shaft enclosures constructed in accordance with Section 713.4 or an approved equivalent. Connections between riser and feeder cables shall occur within the shaft enclosure. Protection of a primary cable riser pathway within a single floor level is not required.**
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SECTION 403 HIGH-RISE BUILDINGS

403.4.5 Emergency responder radio coverage. Emergency responder radio coverage shall be provided in accordance with Section ~~510 of the Fire Code~~ **915 unless otherwise exempted by this code.**

SECTION 907 FIRE ALARM AND DETECTION SYSTEMS

907.2.13.2 Fire department communication system. Where a wired communication system is **recommended by the fire official and approved by the building official** ~~approved in lieu~~ of an emergency responder radio coverage system in accordance with Section ~~510 of the Fire Code~~ **915**, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication ~~device~~ **equipment** shall be provided at each floor level within the enclosed exit stairway. **Approval of a wired communication system must be documented on Form OSSC 915 in accordance with Section 915.**

State of Oregon
Form OSSC 915

Emergency Responder Radio Coverage (ERRC) Checklist

For use to determine compliance with 2014 OSSC 403.4.5 and 915.

This checklist shall be provided to the local Building Code Official at time of building permit application where a proposed new building meets any one of the following criteria established by the state building code:

1. Any building with one or more basement or below-grade building levels (OSSC 915).
2. Any underground building (OSSC 915).
3. Any building more than five stories in height (OSSC 915).
4. Any building 50,000 square feet in size or larger (OSSC 915).
5. Any building regulated as a high-rise under OSSC 403.1 (OSSC 403.4.5).

Part I Project Information (to be completed by permit applicant or representative)

Applicant or Representative Name: _____

Phone Number: _____

Project Name: _____

Address/Location: _____ **Construction Type:** _____

Building Height: _____ **Building Square Footage:** _____

Number of Floors Below Grade: _____ **Number of Floors Above Grade:** _____

Acknowledgement: I understand, unless exempted by the building official, this project is required to comply with emergency responder radio coverage requirements, and that a building permit cannot be issued without this form being properly completed.

Applicant or representative signature _____ **Date** _____

Part II Deferred Submittal (signed by local fire official, permit applicant and building official)

By signature below, the designated parties acknowledge that ERRC compliance documentation for this project is being deferred (see OSSC 107.3.4.2). Parts III through VII of this form must be completed as necessary to demonstrate compliance and submitted to the building official in conjunction with the deferred submittal.

Local Fire Official / Title / Jurisdiction / Date	Applicant/Representative / Date	Building Official / Date
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Part III Fire Official Recommendation (to be completed by the Fire Code Official)

Does the local fire official recommend an Emergency Responder Radio Coverage system?

- Yes** If yes, complete Part IV Technical Criteria.
- No** If no, indicate the reason below and return this form to the Building Official for approval.
 - Wired communication system is being installed.
 - Building configuration will allow for transmission of ambient radio signal strength into the building and allows for transmission to an outdoor receiver.
 - Other (specify): _____

Local Fire Official / Title / Jurisdiction	Signature	Date
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Part IV Technical Criteria (to be completed by the local fire official)

Note: The following technical criteria are provided to aid in design where equipment is necessary to achieve compliance. This information is required as a condition of building permit issuance, but it is not adopted or made part of the state building code.

Technologies Used / Frequencies / Channels Required:

FCC License Holder for Emergency Radio frequency:

Contact Person / Phone Number:

Location and Technical Specifications of Agency Antennas Available at:

FCC Frequency Holder Special Requirements for Equipment:

Repeater type(s):

Minimum distance to closest repeater:

Effective radiated power of donor site:

Specific standards for maximum spurious oscillation levels:

Any other specific criteria:

Anticipated frequency changes if known:

Specific testing requirements:

Legal agreement required with FCC license holder? Yes No

Plan and specification submittal required? Yes No

Part V System Design (to be completed by the applicant and FCC license holder)

Systems must comply with all applicable state building codes, local fire service requirements, Section 510 of the fire code, FCC rules, and all conditions of FCC license holder use agreements.

System Type: DAS with signal booster Other: _____

Signal Booster Make / Model: _____

Donor Antenna Type: _____

Proposed Frequency Range or Number of Channels: _____

Part VI FCC License Holder Verification

License Holder / Title / Jurisdiction

Signature

Date

Part VII Building Official Decision

Exempt: This project does not require an Emergency Responder Radio Coverage System.

Required: System to be installed in conformance with this form.

Building Official Name

Signature

Date