IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF PENNSYLVANIA

VOICES FOR INDEPENDENCE (VFI), : Civil Action No.: 06-78 Erie

MICHAEL L. EAKIN; JAY SHUFFSTALL;

CAROLYN A CREHAN; KATHY A. HERTZOG;

PAUL PECUNAS; SANDRA FULLER; MARY : HON: SEAN J. MCLAUGHLIN

ANN PARSNIK; PAT WEAVER; FELICIA
BONGIORNO; MELVIN BORREO; STEPHEN
CLARK; JILL HRINDA-PATTEN; MARY D.
KRUG; and B. LYNNE VESTAL; on behalf of

themselves and all others similarly situated,

Plaintiffs

vs.

COMMONWEALTH OF PENNSYLVANIA : DEPARTMENT OF TRANSPORTATION; :

ALLEN D. BIEHLER, P.E., in his official capacity

as Secretary of Transportation of the
Commonwealth of Pennsylvania, CITY OF ERIE,
PENNSYLVANIA and CITY OF MEADVILLE,

PENNSYLVANIA, : Defendants :

SETTLEMENT AGREEMENT
CITY OF ERIE AND PENNDOT

Background

An affiliated plaintiff, Barrier Busters, filed an action against the City of Erie, Pennsylvania in this Honorable Court on June 27, 2002 at number 02-203 Erie, the "Erie Case." The Erie Case was partially resolved by four consent decrees. Plaintiffs filed an action against the City of Meadville, Pennsylvania in this Honorable Court on November 10, 2004 at number 04-328 Erie, the "Meadville Case." The Meadville Case was partially resolved by two consent decrees. Neither the Erie Case nor the Meadville Case resolved the responsibility of the Commonwealth, of Erie and of Meadville for creating and maintaining curb ramps across or along state highways which pass through the Cities of Erie and Meadville.

Plaintiffs filed an action against the Commonwealth of Pennsylvania (PennDOT) at number 06-78 Erie, the "PennDOT Case," seeking to impose responsibility upon PennDOT for creating and maintaining curb ramps along state highways that pass through the cities of Erie and Meadville. Plaintiffs joined the Cities of Erie and Meadville as defendants in the PennDOT suit by a pleading filed on September 7, 2006.

PennDOT is not able to enter into any consent decree in any legal matter without express prior authority of the legislature of the Commonwealth of Pennsylvania. However, PennDOT may be made subject to settlement agreements without express authority of the legislature of the Commonwealth of Pennsylvania. The parties desire to resolve the issues arising in the PennDOT case in an expeditious and economical manner that addresses the interests of the Plaintiffs and the concerns of all other parties. The parties do not desire to permit the legal limitations upon the ability of PennDOT to participate in a consent decree to delay their resolution of the pending dispute. Therefore, this Court, by Settlement Agreement, resolves certain issues in the PennDOT lawsuit as follows.

1. Partial Summary Judgment Motions. It is acknowledged that PennDOT reserves the right to file a Motion for Partial Summary Judgment on the legal question of whether claims involving streets, curb ramps and sidewalks altered, installed, replaced or repaired more than two years prior to the commencement of this action that fail to comply with the standards set forth in ADAAG are barred by any statute of limitations.

2. Future Resurfacing and Alteration of Streets and Sidewalks.

(a) Streets and Highways.

The City of Erie shall ensure in year 2007 and thereafter [during the effective term of this Settlement Agreement] that whenever Erie alters or resurfaces any City of Erie streets or portions of city streets that intersect with state highways and that are adjacent to sidewalks, Erie shall ensure that curb ramps are installed at pedestrian crossings that cross city streets on such altered or resurfaced city streets. PennDOT shall ensure in year 2007 and thereafter [during the effective term of this Settlement Agreement] that whenever PennDOT alters any PennDOT state highways or portions of state highways that are adjacent to sidewalks located within the City of Erie, that curb ramps are installed at pedestrian crossings that cross state highways on such altered or resurfaced state highways. Each such project shall comply with all Americans with Disability Act requirements, including 28 C.F.R. §35.151(b), (c), (e)(1) and (e)(2) and 28 C.F.R. Part 36, App. A, the ADAAG. If future changes to applicable law are formally adopted by the appropriate regulating agency, the new standards are to be incorporated in this Settlement Agreement for the curb ramps to be installed or reconstructed after the effective date of such changes.

When Erie alters or resurfaces an Erie street which intersects with a PennDOT street, but the alteration or resurfacing of the Erie street terminates within the block immediately preceding the PennDOT intersection, without reaching the PennDOT intersection, Erie will nevertheless also repair, or install, the curb ramps crossing Erie's street at the PennDOT intersection except where this partial alteration or resurfacing does not extend into this block beyond a reasonable distance from the intersection which immediately precedes the PennDOT intersection. Erie represents that such partial alteration or resurfacing would only be performed to resurface those limited areas which

are subject to excessive wear at intersections. Erie agrees and covenants that it will not engage in any partial alteration or resurfacing of such blocks for the purpose, intent or design of avoiding or delaying the performance of its obligations to repair or install curb ramps at the PennDOT intersections.

(b) Sidewalks.

In the year 2007 and thereafter, if Erie or PennDOT constructs or alters any sidewalk within the City of Erie, all such work shall comply with all Americans with Disability Act requirements, including 28 C.F.R. § 35.151(b),(c),(e)(1) and (e)(2). and 28 C.F.R. Part 36, App. A, the ADAAG.

(c) Cross Triggering between Defendants.

- i. Except as otherwise contained within this Settlement Agreement, it is agreed between the parties that at intersecting or adjacent roadways, alterations or resurfacing by one entity shall not trigger an obligation in the other entity.
- ii. When either PennDOT or the City of Erie is altering or resurfacing a street, curb ramp or sidewalk and substantially encroaches on the intersecting street of the other entity and triggers duties under the ADA, the obligation to ensure affected ramps are ADA compliant falls on the encroaching entity. The other entity shall reimburse the encroaching entity for the cost of any required ramp construction. When separate ramps crossing the other entity's streets are installed, the other entity shall reimburse 100 percent of the cost of the separate ramps; when diagonal ramps serving both entities' streets are installed, the other entity shall reimburse 50 percent of the cost of the diagonal ramps.

- iii. The encroaching entity shall seek reimbursement from the non-encroaching entity for the actual costs and expenses for ramp and curb construction items. The non-encroaching entity shall provide any cooperation or mutual support reasonably required by sound engineering practices. Any dispute arising between the encroaching entity and non-encroaching entity under this section shall be resolved by the procedures set forth in paragraph 14.
- iv. PennDOT shall assist the City of Erie in obtaining a loan through the Pennsylvania Infrastructure Bank (PIB) or any other available State financing program to cover the costs and expenses of curb ramps or any portions thereof attributed to the City of Erie and for which PennDOT seeks reimbursement; this will be a low interest loan with the maximum lawful repayment term for each curb ramp construction project.
- 3. **Diagonal ramps.** Within the City of Erie, at some intersections of city streets and state highways, diagonal ramps serving both the city street and the state highway exist.
 - a. Non-compliant diagonal ramps, triggered by PennDOT after March 28, 2004 or by Erie after January 26, 1992, may be replaced by 2 ramps with both PennDOT and Erie each paying and doing work on their part as part of current projects for 2007, 2008 or 2009 season.
 - b. If non-compliant diagonal ramps, triggered by PennDOT after March 28, 2004 or by Erie after January 26, 1992, can not be replaced with 2 ramps due to space or other engineering concerns, then the triggering entity will install the required ramp as part of current projects for 2007, 2008 or 2009

season but may seek reimbursement for half the cost of the required ramp from the other entity.

c. Any diagonal ramps that are triggered as noted above will be added to either Schedule "A" by PennDOT or Schedule "C" by the City of Erie depending on which entity triggered the requirement.

4. Identification of Curb Ramps Adjacent to State Highways in the City of Erie, Pennsylvania Triggered by PennDOT.

- a. Within 120 days after the execution of this Settlement Agreement, PennDOT will provide a listing to be known as Schedule A, which will contain a listing of all intersections on which curb ramps crossing state highways that were altered or resurfaced in the City of Erie by PennDOT and for all curb ramps and sidewalks actually constructed in the City of Erie by PennDOT since March 28, 2004. Within 180 days after the execution of this Settlement Agreement, PennDOT will supplement Schedule A to include measurements¹ for the curb ramps listed therein along with a proposal on which curb ramps PennDOT plans to retrofit if determined to be non-compliant or defective under the ADA. Neither Plaintiffs nor Erie waives any rights to challenge the accuracy or other content of these schedules except as noted below in paragraph 17.
- b. Within 180 days after the execution of this Settlement Agreement, PennDOT will provide a listing to be known as Schedule B, which will contain a listing of all points along state highways on which curb ramps for pedestrian crossings should have been installed but were not installed for state highways altered or resurfaced in the City of Erie by PennDOT

Measurements as used in this Settlement Agreement shall set forth with particularity the technical measurements of each curb ramp or sidewalk as set forth under the ADAAG regulations. At a minimum, these measurements will include the slope, cross-slope, side flares, level landings and any lips.

since January 26, 1992. Neither Plaintiffs nor Erie waives any rights to challenge the accuracy or other content of this schedule except as noted below in paragraph 17.

- 5. Identification of Curb Ramps Adjacent to State Highways in the City of Erie, Pennsylvania Triggered by the City of Erie.
 - a. Within 120 days after the execution of this Settlement Agreement, Erie will provide a listing to be known as Schedule C, which will contain a listing with measurements of all intersections on which curb ramps crossing city streets that intersect with state highways were altered or resurfaced by the City of Erie since January 26, 1992 along with a proposal on which curb ramps Erie plans to retrofit if determined to be non-compliant or defective under the ADA. Neither Plaintiffs nor PennDOT waives any rights to challenge the accuracy or other contents of this attachment except as noted below in paragraph 17.
 - b. Within 120 days after the execution of this Settlement Agreement, Erie will provide a listing to be known as Schedule D, which will contain a listing with measurements of all intersections on which curb ramps crossing city streets that intersect with state highways should have been installed but were not installed for city streets altered or resurfaced by the City of Erie since January 26, 1992. Neither Plaintiffs nor PennDOT waives any rights to challenge the accuracy or other contents of this attachment except as noted below in paragraph 17.

6. Commitment of PennDOT.

- a. Unless due to factors beyond PennDOT's control, at its own cost and expense, PennDOT shall cause all curb ramps crossing state highways or otherwise identified and proposed in Schedules "A" and "B" to be installed, repaired or retrofitted in accord with the standards set forth under the ADA during the 2007, 2008 or 2009 construction season.
- b. PennDOT at its own cost and expense shall ensure that all curb ramps installed as part of a PennDOT new construction project or reconstruction project involving curb construction since March 28, 2004, are repaired or retrofitted in accord with the standards set forth under the ADA; the curb ramps installed by PennDOT as part of the Bayfront Parkway in the City of Erie (from Lincoln Avenue to E. 12th Street) and the Bayfront Connector in the City of Erie (from E. 12th Street to Bird Drive) and 38th Street in the City of Erie (from State Street to Peach Street) shall be repaired or retrofitted in accord with the standards set forth under the ADA during the 2007 construction season. The curb ramps installed by PennDOT on Peach Street from 38th Street to Chestnut shall be repaired or retrofitted during the 2008 or 2009 construction season.
- c. PennDOT at its own cost and expense shall ensure that all sidewalks constructed as part of the Bayfront Connector project, the 38th Street project and on Peach Street from 38th Street to Chestnut Street shall be repaired if the sidewalk has a cross-slope measurement of greater than 4%.

7. Commitment of the City of Erie. The City of Erie at its own cost and expense shall cause all curb ramps crossing city streets at the intersections identified and proposed in Schedules "C" and "D" to be installed, repaired or retrofitted in accord with paragraph 8 below.

8. City of Erie Retrofitting Schedule.

- a. Under the Consent Decrees entered in the Erie Case, at its own cost and expense, Erie is obligated to retrofit a specific percentage of the non-compliant curb ramps during each of the six years for the completion deadline of 2010. Those non-compliant curb ramps do not include the non-compliant curb ramps to be retrofitted under this Agreement with PennDOT. Plaintiffs agree that the deadline for the completion of Erie's retrofitting obligations under the Erie Case consent decrees shall be modified and that work shall be combined with Erie's obligations under this Agreement so that by the end of the year 2016:
 - (i) all curb ramps required to be retrofitted under the Erie Case consent decrees must be fully remediated; and
 - (ii) at all intersections of Erie streets and state highways, all curb ramps which cross those Erie streets which were altered or resurfaced by Erie since January 26, 1992 must be fully remediated; and
 - (iii) all curb ramps which cross Erie streets at intersections of Erie streets and those state highways which were resurfaced or altered by PennDOT since March 28, 2004 must be fully remediated.
- b. Erie and Plaintiffs shall agree on a specific schedule for the retrofitting to be performed under (a) above such that each year an approximately equal

number of ramps shall be remediated until the completion of all work by 2016.

- c. Erie and Plaintiffs acknowledge that the extension of compliance to the year 2016 is in recognition of the additional ramps to be constructed on Erie streets in PennDOT rights-of-way, as well as the City's current extreme fiscal distress; which was not anticipated when its 2004 Consent Decree was executed, and which has presently eliminated the possibility of bond issue funding for the completion of its curb ramps contemplated under that decree. The City pledges that it will continue to seek all reasonable sources of direct funding for curb ramp construction consistent with its financial status, including grants which may be available; and further covenants that, in the event it regains the ability to seek a fiscally sound bond issue for public works projects during the term of this Agreement, it must include a specific designation of funds sufficient to accelerate significantly the completion of its obligations under this Agreement.
- 9. Curb Ramps and Bidding Requirements. The City of Erie and PennDOT shall ensure that all bids and contracts for such work as identified above shall include reference to the specific requirements of the Americans with Disability Act set out above. Both the City of Erie and PennDOT shall have the right to review bid documents and shall mutually agree on PSE (Plans, Specifications and Estimates) packages relative to curb cuts; however, any comments must be received within 15 days of receipt of the of the proposal. Unless due to factors beyond PennDOT or the City of Erie's control, the City of Erie and PennDOT shall each ensure that all indicated curb ramps are installed during the same construction season as the alterations or resurfacing are completed, unless a specific alteration or resurfacing project is not completed until after August 1st of that construction season, in

which case all indicated curb ramps for that project must be scheduled/contracted for installation at the beginning of the following construction season. The City of Erie and PennDOT also shall ensure that curb ramps complying with these requirements shall be installed at all crosswalks with sidewalks whenever an intersection is altered or resurfaced by the City of Erie or whenever an intersection is altered or resurfaced by PennDOT during year 2007 and thereafter [during the effective term of this Settlement Agreement].

- 10. Annual Report. On or before January 31 of each year during which this Settlement is in effect, Erie and PennDOT shall each send a written report, including measurements, to Plaintiffs' Counsel, each other, and to the Court, listing each sidewalk portion, curb ramp, street section, and/or intersection altered or resurfaced by either Erie or PennDOT, in Erie, during the previous year, and listing each sidewalk altered, constructed or resurfaced during the previous year, and stating where new curb ramps have been installed as a part of these projects by each respective party.
- 11. **Detectable Warnings**. On all curb ramps installed in the year 2007 and thereafter, any otherwise applicable detectable warning requirements shall be modified to only require full width warning for two feet of running ramp length.
- 12. Potential Exceptions Pursuant to 28 C.F.R. Part 36, App. A § 4.1.6(j). The parties agree that the ADAAG at 28 C.F.R. Part 36, App. A § 4.1.6 and 4.1.1.5(a); 4.1.6(3); and 28 C.F.R. § 35.151(c), to the extent applicable, shall be the standard to judge the validity of any defendant assertions that construction or alterations can not or are not required to meet in full the construction and design standards set out in the paragraphs above.

- 13. Notification by the City of Erie and PennDOT. Any time during the term of this Settlement Agreement that either Erie or PennDOT believes that site conditions at any particular intersection scheduled for improvement prohibits or makes unnecessary construction or alteration in full compliance with each of the standards set out above (or in the event of any other matter requiring notice under this settlement agreement), that party, within fifteen (15) days of discovery of the matter, shall inform Plaintiffs' Counsel in writing. This writing shall list which engineer(s) have reviewed the intersection, the location of the intersection, and a statement of which standard(s) can not be met, why not, and how much of a deviation from the standard(s) is contemplated. Unless due to factors beyond Erie or PennDOT's control, this writing should also include a sketch of any proposed deviant curb ramp, with the proposed final measurements for each direct slope, cross-slope, and lip. If plaintiffs do not object in writing to the notice within 15 days from the postmark of the written notification, Erie or PennDOT may presume that the deviation is acceptable to the plaintiffs and may begin construction of that particular curb ramp. The goal is that any disputed corner or curb ramp is to be built during the current construction year unless due to factors beyond PennDOT or Erie's control. Thus, it is important that plaintiffs be notified of a potential problem promptly and that plaintiffs respond promptly. In the event of an emergency situation where delay could result in unnecessary cost or expense or loss of resources, nothing in this paragraph shall prevent any party from immediately contacting the other and attempting to resolve the issue as soon as practicable under the circumstances. Unresolved disputes shall be resolved by the procedures set forth in paragraph 14.
- 14. *Unresolved Disputes*. In the event that any party objects to any actions or proposed actions of the City of Erie and/or PennDOT, the interested parties will attempt to resolve the dispute informally. If the dispute can not be resolved during a 15 day period from the communication of any objection to a party, the

interested parties may approach the Court to resolve the dispute according to the terms of this agreement.

- 15. *Use of Third Party.* Nothing in this Agreement shall preclude any party from making a timely request for resolution of a dispute by a mutually agreed upon third party.
 - a. If such a resolution is sought, the requesting party must notify the other parties within the 15 day period from the communication of any objection.
 - b. The parties will then have 15 days to agree upon the third party; if an agreement cannot be reached, then the underlying dispute shall be resolved by the procedures set forth in paragraph 14 without any further delay.
 - c. If resolution of a dispute is sought under this paragraph, the parties agree to be bound by the decision made by the mutually agreed upon third party.
- 16. Listing of Projects Pursuant to Paragraphs 4 and 5. The listings required by Paragraphs 4 and 5 will be attached to this Settlement Agreement and submitted to the Court, the other defendants and Plaintiffs' Counsel within the time periods required in paragraphs 4 and 5.
- 17. Legal Determination of Statute of Limitations. If the Court ultimately holds that there is no meritorious statute of limitations defense or that non-compliant ramps constitute a continuing violation, PennDOT agrees to provide a new schedule for proposed work, Schedule "E," which would extend the scope of Schedule "A'"

back to January 26, 1992, with the condition that the listing in Schedule "E" and PennDOT's retrofit obligation will include only curb ramps crossing state highways, within 180 days of the date the Court's ruling on the referenced matter is no longer subject to a valid and on-going appeal. Erie also agrees to provide a new schedule, Schedule "F," which would extend the scope of Schedule "C" back to January 26, 1992, with the condition that the listing in Schedule "F: and Erie's retrofit obligation will include only curb ramps crossing city streets that intersect with state highways, within 90 days of the date the Court's ruling on the referenced matter is no longer subject to a valid and on-going appeal. Both Erie and PennDOT would add to their respective schedules diagonal ramps pursuant to paragraph 3. The schedules required by this Paragraph will be attached to this Settlement Agreement and submitted to the Court, the other defendants and Plaintiffs' Counsel.

18. Procedure for Objections to Proposed Work:

a. If the Plaintiffs object to the proposed work in Schedules "A", "B", "C", and "D", the Plaintiffs must notify the defendants, in writing, within 90 days of the filing of Schedules "A", "B", "C" and "D" and must include the specific objection. Either Erie or PennDOT will then have 60 days to amend its schedules. If Plaintiffs object to the amended schedules or if no resolution is obtained, the unresolved disputes shall be resolved by the procedures set forth in paragraph 14. If Plaintiffs do not object within 30 days, the proposed work is deemed accepted. Plaintiffs shall have no further right to challenge the proposed work in conformity with the schedules. Plaintiffs do not waive the right to assert future claims to the extent it shall be determined that any information in these schedules is materially incorrect or incomplete.

- b. Once Defendants file Schedules "E" and "F", if required, the parties will attempt to negotiate which, if any, of the curb ramps will be repaired by Defendants and the time table for doing so. If the parties are unable to agree after reasonable efforts, the parties agree to approach the court for resolution of the dispute.
- 19. Nonwaiver of Defenses. Except as provided herein, neither Plaintiffs, Erie nor PennDOT waive any defenses or rights they may have to any presently stated or future claims as the result of negotiating and executing this Settlement Agreement or as the result of any actions taken pursuant hereto. The participation of Plaintiffs, Erie or PennDOT in this agreement in general and the provision of the listings required in this Settlement Agreement shall not be a waiver of any claims or defenses as to any claims of the parties or any other entity concerning any listed intersections, curb ramps and sidewalks. Plaintiffs do not waive the right to assert future claims to the extent it shall be determined that any specifications in this listing are materially incorrect or incomplete.
- 20. Commitments of Erie and PennDOT Several and Limited. The commitments of the City of Erie and PennDOT in this Settlement Agreement are and shall at all times be construed to be several and not joint or joint and several. Neither Erie nor PennDOT shall have any liability or responsibility of any nature for any failure of the other to comply with the terms of this Settlement Agreement or any law, rule, regulation, policy or other matter. This Settlement Agreement shall only affect the intersections identified herein and the commitments and understandings of the Plaintiffs and the City of Erie concerning all other matters shall continue to be governed solely by the terms of the consent decrees entered in the Erie Case.

- 21. **Retention of Jurisdiction.** The Court shall retain jurisdiction concerning the interpretation of and compliance with this Settlement Agreement.
- 22. Procedure Required for City Action. The parties acknowledge that the City of Erie can only be bound by legislative acts of the City Council taken at a properly called public meeting. The parties further acknowledge that the negotiation of this agreement by any elected or appointed officials of the City of Erie has been done solely for the convenience of all parties in developing a document for review and possible action by City Council. The City of Erie shall not be bound or in any way prejudiced by the action of any elected or appointed official in the negotiation, review, commenting upon or preparation of a draft of this Agreement for review and possible action by its City Council.

So Agreed:

VOICES FOR INDEPENDENCE, MICHAEL L. EAKIN; JAY SHUFFSTALL; CAROLYN A CREHAN; KATHY A. HERTZOG; PAUL PECUNAS; SANDRA FULLER; MARY ANN PARSNIK; PAT WEAVER; FELICIA BONGIORNO; MELVIN BORREO; STEPHEN CLARK; JILL HRINDA-PATTEN; MARY D. KRUG; and B. LYNNE VESTAL; on behalf of themselves and all others similarly situated,

Date: 4-19-07

/s/ Craig A. Markham

Craig A. Markham (38531) ELDERKIN, MARTIN, KELLY & MESSINA Jones School Square 150 East Eighth Street Erie, PA 16501 (814) 456-4000 (814) 454-7411 fax Attorneys for All Plaintiffs

So Agreed:

VOICES FOR INDEPENDENCE, MICHAEL L. EAKIN; JAY SHUFFSTALL; CAROLYN A CREHAN; KATHY A. HERTZOG; PAUL PECUNAS; SANDRA FULLER; MARY ANN PARSNIK; PAT WEAVER; FELICIA BONGIORNO; MELVIN BORREO; STEPHEN CLARK; JILL HRINDA-PATTEN; MARY D. KRUG; and B. LYNNE VESTAL; on behalf of themselves and all others similarly situated,

Date: 4-19-07

/s/ J. Mark Finnegan

J. Mark Finnegan (40261)
Denise M. Heberle (42453)
HEBERLE & FINNEGAN, PLLC.
2580 Craig Road
Ann Arbor, MI 48103
(734) 302-3233
(734) 302-3234 fax
Attorneys for All Plaintiffs

Date: 16, 2007

So Agreed:

COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF TRANSPORTATION:

Scott A. Bradley, Esq. Litigation Section

Office of Attorney General 6th Fl Manor Complex 564 Forbes Avenue Pittsburgh, PA 15219

(412) 565-3586 Attorneys for PennDOT

PAGE 17 OF 21 PAGES

Date: April 12, 6007

So Agreed:

CITY OF ERIE, PENNSYLVANIA

Gerald J. Villella, Esq.

OFFICE OF ERIE CITY SOLICITOR

626 State Street, Room 505

Erie, Pa. 16501

(814) 870-1235

Attorneys for the City of Erie, Pennsylvania

PAGE 20 OF 21 PAGES

SO ORDERED:		
	JUDGE MCLAUGHLIN	

UNITED STATES DISTRICT COURT

Cascase06:06-00-00000788495JMD Obouccuernetrit233 FFilterd 0044/199/200707PagFea 2/16 2/1f 2/1