



# COUNTY OF KENOSHA

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Raymond G. Arbet, Director  
Department of Public Works and Development Services

19600 75<sup>th</sup> Street, Suite 122-1  
Bristol, Wisconsin 53104  
(262) 857-1870  
Fax: (262) 857-1885

**Public Works/Facilities Committee Meeting Agenda**  
**Monday, February 8, 2016 - 6:30 P.M.**  
**Kenosha County Center, 19600 75<sup>th</sup> Street, Conference Room B**  
**Bristol, WI 53104**

**I. Meeting Commencement**

1. Call to Order
2. Roll Call
3. Approval of Minutes from previous meeting
4. Chairman/Committee Members/Supervisor/YIG Comments
5. Citizen Comments

**II. Division Reports/Updates/Requested Actions**

1. **Parks Division – Matthew Collins/Jonathan Rudie**
  - a. Division Report
2. **Golf Division – Dan Drier**
  - a. Review and approve the 2016 golf rates
  - b. Division Report
3. **Facilities Division Operations – Mike Schrandt:**
  - a. Focus on Energy Update
  - b. Letter to Finance Committee: Repurpose funds from Pre-Trial Security Project to Pre-Trial Water Heater Project
  - c. Division Report
4. **Facilities Division Projects – Frank Martinelli:**
  - a. KCC Highway Garage Roof Replacement Project
  - b. Fire Alarm System Replacement Project
  - c. PSB Generator Replacement
5. **Highways Division – Gary Sipsma**
  - a. Consideration of a Resolution to Approve the Jurisdictional Transfer Agreement of a Segment of Springbrook Court from Kenosha County to the Village of Pleasant Prairie
  - b. Division Report
6. **Public Works Department - Ray Arbet**
  - a. Brookside Project
  - b. Summary and Report of Structural Condition of the Pre-Trial Facility
  - c. Department Report

**III. Other matters as may appropriately be brought before the Committee**

**IV. Adjournment**

Note: There may be a quorum of other Committees of the County Board present due to overlaps of Committee assignments.



# COUNTY OF KENOSHA

Department of Public Works & Development Services  
Raymond G. Arbet, Director

Matthew J. Collins  
Assistant Director, Division of Parks  
19600 75<sup>th</sup> Street, Suite 122-1  
Bristol, Wisconsin 53104  
Office: (262) 857-1850  
Fax: (262) 857-1885

## Public Works/Facilities Committee Parks Division Status Report for February 2016

- Current Project list,
  - Emerald Ash Bore Tree Removal. *Contractor has mobilized and is projected to be completing the ash tree removal at Petrifying Springs Park on Wednesday 2/10/16. The Parks closed Pets during the logging project for safety purposes. Fox River Park and Brighton Dale Golf Course will follow and each park will be closed during the project when contractors report to the parks. See attached weekly reports.*
  - Silver Lake, Bristol Woods, and Old Settlers Park completed by County Park staff.
  
- Kemper Storm Damage, Parks Division *Extensive storm damage occurred on Monday 12/28/15 along the eastern shoreline. Insurance will not cover the seawall or bike path damage from the storm. Park management met with Baird marine specialists on short and long term solutions to the Kemper.*
  
- Petrifying Springs Park Veteran's Memorial, *Congressman Paul Ryan's office replied back to the Parks request to receive assistance to expedite the process of receiving the cannon. Congressman Ryan noted that the local legion will have to complete formal paperwork on a past shipment of ceremonial rifles for their legion. After the legion complies, they can assist with the ordering of the Cannon.*
  
- Building Demolition, *Somers Fire Department had a training session on 1/26/16 and are still planning the controlled burn in mid-February.*
  
- Kenosha County FootGolf, *Currently looking into the feasibility to introduce FootGolf into Kenosha County.*



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# COUNTY OF KENOSHA

Department of Public Works & Development Services

Daniel Drier, General Manager  
Golf Operations  
19600 75<sup>th</sup> Street, Suite 122-1  
Bristol, Wisconsin 53104  
(262) 857-1865  
Fax: (262) 857-1885

## Public Works / Facilities Committee Golf Division Status Report for February 2016

I am finalizing the 2016 business plan. It has month by month initiatives of activities. It will give us a road map to continue on our successful path. The proposed 2016 peak season and pass holder rates remained unchanged since 2010 and are included in your meeting packet.

- We are working on getting ready for the Chicago Golf Show February 26th – 28th and the Milwaukee Golf Show March 11th – 13th. This should again bring good recognition to the golf courses which should come with increased bookings.
- Our work with Golf Channel Solutions, a golf specific advertising company went well last year. We improved our golf specific websites. This helped increase our online booking as well as our overall presence on the web. We have email capture and e-mail blast capabilities through Golf Channel Solutions to over 19,000 people in our current database.
- We are working on rebooking all of our past outings and finding new outings for 2016. Petrifying Springs GC is full for afternoon leagues. We should have over 400 league players again, the most we have been able to accommodate again since 2009. Brighton Dale is booking up nicely too, our Wednesday Men's Club was a huge success in 2015.
- We are having a productive off season booking group events, restocking the golf shop, tuning up equipment, freshening up the clubhouses and getting ready for 2016.
- Projects either in process or on tap to start are:
  - **Ash Tree Removal Project** - weather dependent, started Monday January 11<sup>th</sup>.
  - **Brighton Dale Deep Well Project** - We have had the entire pipe removed and the pump was found at 530 feet deep. We had the casing video recording and found a good deal of corrosion there. Next we will be creating bid specs and going out for a RFP to scrub the casing and replace the internal workings of the well.
  - **Brighton Dale Blue Spruce Irrigation** - We have gathered the needed information, created the bid specs and went out to bid for the irrigation. We opened the bids on January 21<sup>st</sup> and Midwest Irrigation won the bid. We are looking to have the whole project done by June 1<sup>st</sup> 2016.

**Kenosha County  
Administrative Proposal Form**

**1. Proposal Overview**

Division: Golf Department: Public Works

Proposal Summary (attach explanation and required documents):

Review and approve the 2016 Golf Rates.

Dept./Division Head Signature:  Date: 2-1-16

**2. Department Head Review**

Comments:

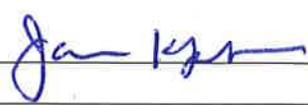
Recommendation: Approval  Non-Approval

Department Head Signature:  Date: 2-1-16

**3. Finance Division Review**

Comments:

Recommendation: Approval  Non-Approval

Finance Signature:  Date: 2-1-16

**4. County Executive Review**

Comments:

Action: Approval  Non-Approval

Executive Signature:  Date: 2-1-16

<b>2016 Kenosha County Golf Rates April 30<sup>th</sup> – Oct 2<sup>nd</sup></b>	<b>Brighton Dale</b>		<b>Petrifying Springs</b>	
<b>*****Walking*****</b>	<b>18 Holes</b>	<b>9 Holes</b>	<b>18</b>	<b>9 Holes</b>
Monday through Friday	\$26	\$16	\$24	\$14
Early Bird Weekdays Tee off before 8 AM no holidays	\$20	\$12	\$20	\$12
Weekends & Holidays	\$33	\$18	\$32	\$17
Weekend & Holiday Afternoon Special	\$25	\$17	\$25	\$17
Twilight-After 2 PM Everyday	\$20	\$15	\$20	\$14
Super Twilight 5:30 PM Mon–Thurs After 4 PM Fri-Sun	\$15	\$10	\$15	\$10
Weekday Replay Round	\$18	\$10	\$18	\$10
Weekend Replay Round	\$20	\$15	\$20	\$15
Juniors/Seniors Mon-Fri before 3:30 Sat Sun Holi after 1P	\$19	\$11	\$19	\$11
<b>*****Golf with Riding Golf Car*****</b>	<b>18 Holes</b>	<b>9 Holes</b>	<b>18</b>	<b>9 Holes</b>
Monday through Friday	\$42	\$25	\$40	\$23
Early Bird Weekdays Tee off before 8 AM no holidays	\$35	\$20	\$35	\$20
Weekends & Holidays	\$49	\$27	\$48	\$26
Weekend & Holiday Afternoon Special	\$40	\$25	\$40	\$25
Twilight Everyday after 2 PM Everyday	\$35	\$24	\$35	\$23
Super Twilight 5:30 PM Mon-Thurs. After 4 PM Fri-Sun	\$25	\$18	\$25	\$18
Weekday Replay Round	\$25	\$17	\$25	\$17
Weekend Replay Round	\$30	\$22	\$30	\$22
Juniors/Seniors Mon-Fri before 3:30 Sat Sun Holi after 1P	\$33	\$19	\$33	\$19
*Seniors are defined as people who are or will be 55 or older in 2016				
*Juniors are defined as people who are 17 and younger.				
All players must be 7 years old or older to be on the golf course.				
<b>GROUP/OUTING GOLF - Planning a group outing has never been easier.</b>				
Call Doug Shulski, Head Golf Professional at 262-818-5085				

<b>Rental Clubs</b>	<b>18 Holes</b>	<b>9 Holes</b>
Full VIP Set	\$30	\$15
Starter Set	\$15	\$7.50

**Gift Cards:** It is always a special occasion when you give a Kenosha County golf gift card Gift cards are available at the golf shop counters, the Department of Public Works or online at [www.kenoshacountygolf.com](http://www.kenoshacountygolf.com)

**Rain Check Policy:** The rain check will come in the form of a prorated credit slip depending on how many holes have been played. Rain checks will be issued if course is closed and no refunds will be made under any circumstances.

**Dress Code:** Kenosha County Courses are soft spike courses. Soft Spikes are available at the golf shop should players arrive without proper footwear. Golf wear including appropriate shirts and nice slacks or shorts. Denim is acceptable.

**Yearly Golf Passes:** Kenosha County Golf offers many different golf passes. Ask the Golf Staff Professionals about the different packages for 2016.

For more information or a tee time, please contact the Golf Shops.  
Brighton Dale Links or Petrifying Springs 262-697-Golf (4653)  
Or visit our websites at [www.kenoshacountygolf.com](http://www.kenoshacountygolf.com)

# Kenosha County 2016 Golf Pass Rates

If you love to play championship-caliber golf, but do not like to pay those types of greens fees, our yearly golf passes will make your dreams come true. As a Kenosha County Golf Pass holder, you are entitled to unlimited golf based on availability at both Brighton Dale Links and Petrifying Springs. The Golf Courses are soft spike only facilities. Yearly golf passes are not refundable or transferable.

## **Gold Golf Pass including Golf Car \$1,495 per person**

This Pass is truly "unlimited" in that it includes unlimited golf with shared golf car, 2 week advance tee times and range balls for the Pass holder only. Split Payment option \$780 down \$745 by June 19th 2016. (31)

## **Silver Walking Golf Pass \$995 per person**

This Pass includes unlimited golf 2 week advance tee times, and range balls for the Pass holder only. Split Payment option \$530 down \$495 by June 19th 2016. (30)

## **Couple Yearly golf passes \$1,695 per Married Couple for Silver Pass or \$2,495 for Gold Pass**

Silver Split Payment option \$880 down \$845 by June 19<sup>th</sup> 2016, Gold Split Payment option \$1280 down \$1,245 by June 19th '2016. (S51) (G51)

## **SPECIAL BONUS!**

Silver and Gold Golf Pass holders paid in full receive a special bonus as our way of saying thank you. You will be entitled to **four complimentary golf passes** equal to your pass type at Brighton Dale Links valid weekends and holidays after 1PM and all day Monday through Friday throughout the season.

**Adult Season** walking (no restrictions) \$595; Play Permit fee of \$5.00 required. Split Payment option \$330 down \$295 by June 19th 2016. (21)

**\*Senior Pass** Walking \$325 Play Permit fee of \$5.00 required. (Anyone 55 years of age or older). Split Payment option \$195 down \$160 by June 19th 2016. (23)

**\*College Student** 12 credits with valid School ID Season walking \$195; Play Permit fee of \$5.00 required. Split Payment option \$125 down \$100 by June 19th 2016. (9)

**\*Junior Pass** Walking \$95 Play Permit fee of \$5.00 required. (Anyone 17 years of age or younger). Split Payment option \$75 down \$50 by June 19th 2016. (7)

**\*(Senior, College Student and Junior passes valid Mon-Fri till 3:30PM not valid for afternoon league play; Sat/Sun/Holidays after 1:00 PM)\***

**Golf Cart Pass** \$600 this pass includes shared golf car with any season pass. This pass can also be purchased if you would like to ride alone every time you play. The cart pass is valid when your season pass is valid. Split Payment option \$330 down \$300 by June 19th 2016. (38)

## **All Golf Yearly golf passes also include the following benefits:**

**Golf Guest Rates:** \$20 Walking, \$29 with shared cart for 18 Monday through Friday (except Holidays).

\$30 Walking, \$39.00 with shared cart for 18 Saturday, Sunday and Holidays.

**You must check-in and play with guest to receive these rates.**

**Golf Cars-** 10% OFF your full rate golf car fees

**Golf Shop-** 15% OFF on in stock Golf Shop Merchandise over \$5 (excludes sale merchandise).

**Food & Beverage-** 10% OFF Food and Beverages in the Clubhouse Only.

*For more information, please contact Brighton Dale Links or Pets Golf Shop at 262-697-GOLF (4653)*

Energy Team Project Status List

01/04/2016

Priority	Status	Owner or Contractor	Type - Electrical /HVAC	Funding Available	Projected Start Date	Projected Completion Date	Annual Savings	Project Cost Estimate	Potential Incentives	Grant and/or Incentives Received	Payback
B	Approved	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$121	\$300	\$15		2.4
A	Prebid	O	Electrical	Y - 2015 Capital (En Red)	July 6, 2015	Dec 31, 2015	\$9,242	\$26,000	\$4,800		2.3
A	Ongoing	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$397	\$654	\$0		1.6
A	Prebid	O	Electrical	Y - 2015 Capital (En Red)	July 6, 2015	Dec 31, 2015	\$13,538	\$25,000	\$1,060		1.8
A	Prebid	O	Electrical	N - Budget for 2016	Jan 1, 2016	Dec 31, 2015	\$8,436	\$61,000	TBD		7.2
A	Ongoing	C	HVAC	Y - 2015 Capital	Feb. 1, 2016	March 1, 2016	\$11,995	\$24,449	\$5,923		1.5
A	Ongoing	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$447	\$736	\$0		1.6
A	Ongoing	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$705	\$1,530	\$0		2.2
A	Ongoing	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$636	\$1,046	\$0		1.6
A	Ongoing	O	Electrical	Y - 2015 Ops Budget	July 6, 2015	Dec 31, 2015	\$566	\$932	\$0		1.6
A	Prebid	O	Electrical	Y - 2015 Capital	July 6, 2015	Dec 31, 2015	TBD	\$38,000	TBD		TBD

Totals \$46,083 \$179,647 \$11,798

A	Complete	O	Electrical		04/08/2015	05/04/2015	\$96	\$875	\$350		5.5
A	Complete	C	HVAC		04/24/2015	06/24/2015	\$404	\$1,340	\$0		3.3
A	Complete	O	HVAC		04/02/2015	04/17/2015	\$139	\$200	\$32		1.2
B	Complete	C	HVAC	Y - 2015 Capital (Co-W HVAC)	July 6, 2015	12/10/2015	\$2,500	\$23,000	\$2,000		8.4
A	Complete	C	HVAC		04/24/2015	06/24/2015	\$404	\$1,340	\$0		3.3
A	Complete	O	Electrical	Y - 2015 Capital	01/01/2015	05/22/2015	TBD	TBD	TBD	yes	2 - 3 Yrs
A	Complete	O	Electrical	Y - 2015 Capital	09/01/2015	09/17/2015	TBD	TBD	TBD	yes	2 - 3 Yrs
A	Complete	O	Electrical	Y - 2015 Capital	09/01/2015	09/17/2015	TBD	TBD	TBD	yes	2 - 3 Yrs
A	Complete	O	Electrical	Y - 2015 Capital	09/01/2015	09/17/2015	TBD	TBD	TBD	yes	2 - 3 Yrs
A	Complete	C	HVAC	Y - 2015 Capitol	Nov. 1, 2015	Jan. 29, 2016	TBD	\$58,742	\$1,500		TBD
A	Complete	C	HVAC	Y - 2015 Capitol	Dec. 9, 2015	Jan. 29, 2016	TBD	\$51,800	TBD		TBD

Kenosha County  
Administrative Proposal Form

**1. Proposal Overview**

Division: Facilities Department: Public Works

Proposal Summary (attach explanation and required documents):

Carryover and repurpose funds remaining from 2015 Pre-Trial padded cell project to fund the replacement of three Pre-Trial hot water heaters.

Dept./Division Head Signature: M. Schaudt Date: 2/3/16

**2. Department Head Review**

Comments:

Recommendation: Approval  Non-Approval

Department Head Signature: RAT Date: 2-8-16

**3. Finance Division Review**

Comments:

Recommendation: Approval  Non-Approval

Finance Signature: Jouratler JMB Date: 2/8/16

**4. County Executive Review**

Comments:

Action: Approval  Non-Approval

Executive Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# COUNTY OF KENOSHA

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Mike Schrandt  
Department of Public Works  
19600 75<sup>th</sup> Street, Suite 122-1  
Bristol, Wisconsin 53104  
(262) 857-1869  
Fax: (262) 857-1885

DATE: February 8, 2016  
TO: Finance Committee  
FROM: Mike Schrandt – Manager of Facilities  
SUBJECT: Repurpose Facilities Capital Funds – Pre-Trial Water Heaters

The 2015 Capital Budget included a total of \$65,000 to replace the padding in two security cells at the Kenosha County Pre-Trial building. This project was completed in 2015 at a cost of \$32,200, which was \$32,800 under budget.

Currently there are three hot water heaters serving the Pre-Trial building. These water heaters were originally installed nineteen years ago. In December 2015, one of these water heaters broke down and the cost to repair is almost as much as the cost of replacement. The other two water heaters are currently operational but may soon need replacement as they are the same age as the broken unit. Facilities feels that it makes economic sense to replace all three units now and has obtained a contractor estimate of \$23,000 to complete this project.

Facilities requests that the unspent funds from the Pre-Trial padded cell project be carried over from 2015 to 2016 and be repurposed to cover the cost of replacing the three Pre-Trial hot water heaters

This expense was not planned for in the 2016 budget. Typically, a request such as this would be included as a part of the annual carryover resolution in April of 2016. Due to the critical timing of the need for replacement, the request for repurposing of funds is being made now.

Thank you for your attention to this matter.

Sincerely,

Mike Schrandt  
Manager of Facilities

Kenosha County  
Administrative Proposal Form

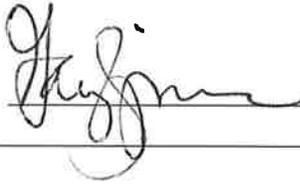
**1. Proposal Overview**

Division: Highway Department: Public Works

Proposal Summary (attach explanation and required documents):

Approve the Jurisdictional Transfer Agreement of a Segment of Springbrook Court from Kenosha County to the Village of Pleasant Prairie.

Dept./Division Head Signature: \_\_\_\_\_



Date: \_\_\_\_\_

**2. Department Head Review**

Comments:

Recommendation: Approval  Non-Approval

Department Head Signature: \_\_\_\_\_



Date: \_\_\_\_\_

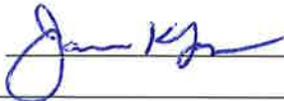
2-1-16

**3. Finance Division Review**

Comments:

Recommendation: Approval  Non-Approval

Finance Signature: \_\_\_\_\_



Date: \_\_\_\_\_

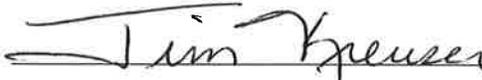
2-1-16

**4. County Executive Review**

Comments:

Action: Approval  Non-Approval

Executive Signature: \_\_\_\_\_



Date: \_\_\_\_\_

2-2-16

**KENOSHA COUNTY  
BOARD OF SUPERVISORS**

RESOLUTION NO. \_\_\_\_\_

<b>Subject:</b> RESOLUTION TO APPROVE THE JURISDICTIONAL TRANSFER AGREEMENT OF A SEGMENT OF SPRINGBROOK COURT FROM KENOSHA COUNTY TO THE VILLAGE OF PLEASANT PRAIRIE			
Original <input checked="" type="checkbox"/>	Corrected <input type="checkbox"/>	2nd Correction <input type="checkbox"/>	Resubmitted <input type="checkbox"/>
Date Submitted: February 8, 2016		Date Resubmitted:	
Submitted By: Public Works/Facilities Committee			
Fiscal Note Attached <input type="checkbox"/>		Legal Note Attached <input type="checkbox"/>	
Prepared By: Gary Sipsma		Signature:	

**WHEREAS**, Kenosha County and the Village of Pleasant Prairie in the State of Wisconsin have determined it to be in the best interest to jurisdictionally transfer a 0.06 mile segment of Springbrook Road and,

**WHEREAS**, Section 83.025, Wisconsin Statutes, enables the County to enter into jurisdictional transfer agreements with the Village of Pleasant Prairie, thereby facilitating alterations in jurisdictional highway systems.

**THEREFORE BE IT RESOLVED**, that the Kenosha County Board of Supervisors hereby approves the transfer of jurisdictional responsibility between Kenosha County and the City of Kenosha, and

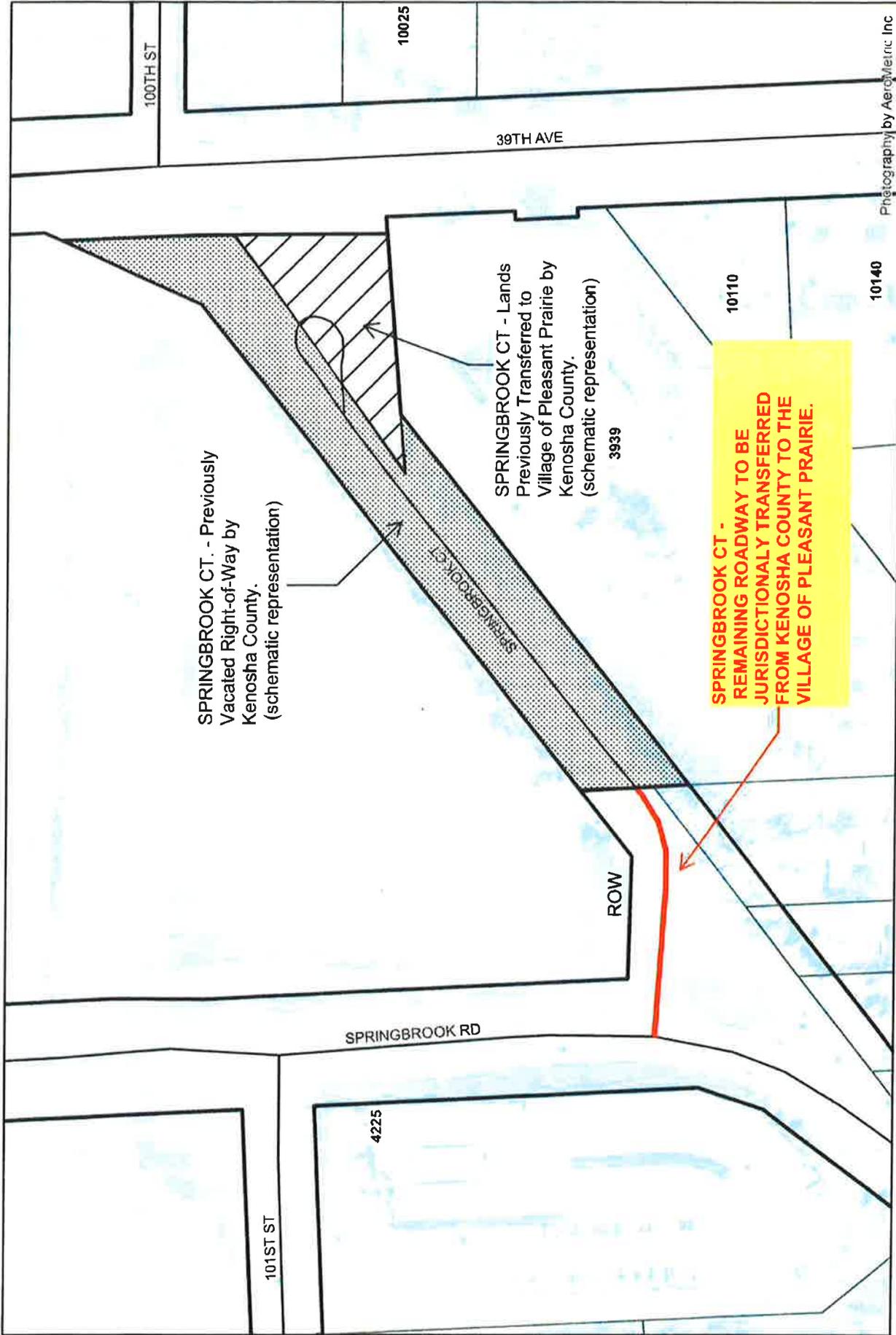
**BE IT FURTHER RESOLVED**, that the Kenosha County Highway Commissioner is authorized to process the jurisdictional transfer with the Wisconsin Department of Transportation subject to the Village of Pleasant Prairie Board approval of a Resolution jurisdictionally transferring the segment of 0.06 mile segment of Springbrook Road.

PUBLIC WORKS/FACILITIES COMMITTEE:

	<u>Aye</u>	<u>No</u>	<u>Abstain</u>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dennis Elverman, Chairperson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
William Grady, Vice-Chairperson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boyd Frederick, Secretary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mike Skalitzky	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
John Poole			

FINANCE COMMITTEE:

	<u>Aye</u>	<u>No</u>	<u>Abstain</u>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Terry Rose, Chairperson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ron Frederick, Vice-Chairperson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
John O'Day, Secretary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kimberly Breunig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rick Dodge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeffrey Gentz	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aaron Kohlmeier			



## SPRINGBROOK COURT JURISDICTIONAL TRANSFER



**TO:** Chairman & Members of Public Works Committee

**FROM:** Ray Arbet, Director – Public Works 

**RE:** Summary and Report of Structural Condition of the Pre-Trial Facility

**DATE:** 2-8-16

Please find attached the complete report as prepared by KPFF Engineering regarding the investigation of a range of cracks throughout the Pre-Trial Facility.

Given the location, size and nature of some of the cracks – we had KPFF conduct an investigation to determine if there were any structural issues contributing to the cracking that would require mitigation.

KPFF's report in its entirety is attached. A summary of the report is as follows:

- **Building is Structurally Sound** – it does not appear that the large crack in the basement holding area nor the smaller cracks in the exterior pre-cast panels are related to any structural issues.
- **Likely Basement Crack Cause** – the basement crack appears to be the result of the absence of a control joint that was specified but not installed at the time of construction.
- **Basement Crack Remediation** – Epoxy sealing of the crack and exterior landscape grade modification (to direct water away from the building) will remedy the situation.
- **Insulation Issues** – Offices directly above the basement crack have always had some “draftiness” that staff noticed – the investigation identified an absence of sealing/insulation of the panels adjacent to the drafty office areas.
- **Likely Cause of Exterior Panel Cracks** – these minor .007” to .015” cracks appear to be the result of wind-loading and or thermal movement, they do not indicate any distress nor do they warrant remedial action (though there may be some surface sealants that could provide some prevention of further degradation – this is being investigated).
- **Exterior Joint Sealing/Maintenance** – The investigation did confirm that panel joint sealing is failing and that there is a number of “spalled” areas that require patching.

It appears that we'll be able to address the basement crack-sealing, landscape grade modifications and insulation for roughly \$5,000.

When the 2016 budget was being prepared we did not know the cause of nor the remedy for what was happening to the building. We therefore budgeted \$75,000 as a placeholder to cover any potential building repairs. We will work to determine if the remaining funds will be sufficient to cover the joint sealant replacement, surface sealant and spalling repair.



January 8, 2016

Mr. Raymond G. Arbet  
County of Kenosha  
Director – Department of Public Works & Development Services  
19600 – 75th Street  
Bristol, WI 53104

Subject: Pre-Trial Building Investigation

### **BACKGROUND**

On October 14 through 16, 2015, KPFF personnel performed an investigation of select areas of the façade and interior areas of the Pre-Trial building. These areas were selected based on observations from the preliminary site inspection and review of design and construction documents. The Pre-Trial building is a steel-framed structure with precast sandwich panel exterior walls. Individuals present during the investigation were Scott Wyatt and Michael Isteefanos of KPFF. The weather was cool in the mornings with mild daily temperatures.

The objectives of this project entailed:

- Determine the extent of the precast panel cracking.
- Identify contributing causes to the precast panel cracking.
- Develop recommendations for any necessary repairs or remediation.
- Identify the cause of the leak in the southwest basement.
- Evaluate the source of drafts reported in the southwest offices.

To accomplish the objectives, KPFF utilized visual inspection including photographic documentation, crack mapping, and crack width measurements; and non-destructive testing including hammer sounding, and Ground Penetrating Radar (GPR). The inspection methodologies and results are described in the following sections.

### **INSPECTION**

#### ***FAÇADE EXTERIOR INSPECTION***

Nine “drops” were performed to evaluate the exterior façade. Each drop consisted of a complete inspection of a section of panels, between adjacent joints, from the top of the parapet to the ground, as shown in Photos 1 and 2. Access to reach the entire height of the façade was provided by a 60-foot JLG man-lift, with parking restrictions imposed along the east side of 10th Ave. and in the parking lot north of the Pre-Trial Facility. Figures 1 and 2

show the sections of façade that were inspected and also provide Column Line and Panel numbering that are referenced throughout this report. The façade inspection was limited to the exterior surface only; inspection of the structural connections to the steel framing was not part of the investigation.

For each panel of each drop, the panels were visually inspected to identify all cracking, spalls, and any other miscellaneous defects present on the panels. The panels were also hammer sounded to locate potential areas of delaminations or voids that are not visually discernable (see Photo 3). Additionally, GPR was performed selectively during the inspection to identify depth and spacing of steel reinforcement in the panels (see Photo 4). GPR scans were taken horizontally and vertically for the full width and height of the panels. The results of the exterior inspection are documented in Figures 3 through 11.

### ***BASEMENT LEAK INSPECTION***

Water is leaking into the basement holding area on the west wall from Lines 11 to 12. The water is running down the west wall of the holding cell and also dripping through the ceiling at approximately Line B. The inspection of the basement leak involved visual observation of the plenum area above the ceiling in the basement holding area via an access panel through the finished ceiling. The ceiling access panel is 10 to 15 feet east of the west wall, which prevented a close-up inspection of the interior face of the panel and joints. Additionally, the exterior area along the west wall from Lines 11 to 12 was slightly excavated by hand and inspected at the ground line interface between the precast panel and foundation wall.

### ***INTERIOR DRAFT INSPECTION***

The office on the first floor southwest corner, as well as the office and locker room on the second floor southwest corner were inspected for the source of the reported draft. Interior finishes (drywall) limited the inspection of the interior face of the panels to the ceiling plenum (the space between the bottom of the floor slab above and the ceiling). The offices were inspected by removing panels of the drop ceiling to access the plenum space above the ceiling. In this space, a portion of the vertical joint between the exterior precast panel and CMU demising wall was visible on the first floor. The locker room has a drywall ceiling, and access to the plenum was limited to a small panel approximately 15 feet from the west wall, which prevented a close-up inspection of the interior face of the panel and joints.

## ***FINDINGS AND RECOMMENDATIONS***

### ***EXTERIOR FAÇADE***

The inspection covered approximately 15 percent of all the exterior façades precast panels. Therefore, the findings of the exterior façade inspection are limited to the areas covered during the inspection. Additional repair and maintenance items likely exist throughout the remainder of the façade. Therefore, prior to beginning any comprehensive repair or

maintenance program identified below, we recommend performing a complete 100% inspection of the façade to identify all areas in need of repairs.

**Panel Cracking and Efflorescence** - The most prominent cracking throughout the façade is fairly linear block pattern cracking (see Photos 5 and 6). The cracks are tight, ranging in width from 0.007 to 0.015 inch. These are the cracks which become accentuated by moisture after a rain event and are not uncommon for these types of precast sandwich panels. They do not indicate distress or structural failure of the panels. The cracking is attributed to out-of-plane forces acting on the panels from wind loading or thermal movement. This loading causes tension in the outer surface of the concrete which then cracks, allowing the panel reinforcement to engage as designed. Additionally, the majority of the architectural reveal joints in the panels are cracked (see Photo 9). These types of decorative joints are common in precast panels and typically crack because they are an intentional stress concentration point for any out-of-plane flexure from lateral loading.

Reinforcement placement was determined by GPR to be spaced uniformly at 6 inches on center in both directions throughout all of the panels. The consistency of the spacing indicates it is likely wire mesh. No precast panel shop drawings with reinforcement were available for verification; however, this type of reinforcement is common.

The white chalky powder visible along some of the cracks is efflorescence of the concrete. Efflorescence discolors the concrete finish and is caused by water entering the cracks and encountering soluble deposits such as salts. The water then leaches out of the cracks and evaporates, leaving the deposits on the concrete surface. Efflorescence is not damaging to the panels.

The cracks and efflorescence mainly represent an aesthetic concern. Because there is no rust staining evident on the surface of the panels, moisture is likely not reaching the depth of the reinforcement, which would initiate corrosion of the reinforcing steel. There are several options to consider with regard to addressing the panel cracking. First, thorough repair of the cracks would involve routing and sealing the cracks to prevent further moisture intrusion, crack growth, and efflorescence. This would be an expensive and time-consuming repair. Additionally, routing and sealing the cracks will make them permanently and highly visible, rather than only visible after rain, as they are currently. A second option is to paint the panels or apply a surface sealer. This will improve aesthetics but is not as durable a remediation, and as the panels move the cracks may reopen, requiring more frequent reapplications. The final option is the "do nothing" alternative. As mentioned, the cracking is aesthetic only and consideration of budgetary constraints and pros and cons of the other alternatives may make this a viable option.

**Joint Sealant Failing** - The exterior joint sealant between precast panels has reached the end of its expected service life and is beginning to fail in several areas (see Photos 7 and 8). We recommend replacing all of the joint sealant throughout the exterior façade. Although widespread sealant failure has not yet occurred, spot replacement of failed sealant is not recommended due to its age. If cost is prohibitive to replace of all the joints throughout the façade at once, then we recommend a staggered program, perhaps replacing the joint

material in one elevation at a time. If this course is chosen, we recommend beginning with the west elevation, then east, south, and north. Budgetary estimate for joint replacement is between \$45,000 to \$55,000, including repair of corner spalls.

**Corner Spalls** – Spalling of concrete is a surface defect caused by forces within the concrete. There are two locations where corner spalls have developed on panels. One is on the upper-north corner of Panel 139 and the other is on the lower-west corner of Panel 137 (see Photos 10 and 11). Both of the spalls are on upper levels set back from the lower-level roof edge and are a minimal falling hazard to pedestrians. However, these areas should be repaired as soon as practical by removing the spalled concrete and patching with a suitable material. These repairs should be included when the joint replacement is undertaken and would likely add . Th

**Miscellaneous Items** – Several miscellaneous items were noted, including an un-caulked abandoned cable penetration (Photo 12), minor rust staining from shallow cover over reinforcement (Photo 13), a previous repair of a hidden panel-to-panel connection that is cracking (Photo 14), and small areas of potential delaminations.

**Panel Offsets** – Panels 50, 51, and 91 were observed to be offset by approximately 1/2 inch out of plane from the adjacent panels. These locations should be monitored periodically for signs of additional movement.

#### ***BASEMENT LEAK***

Water appears to be entering the building at the joint between the lower level precast panel and the top of slab/foundation wall. Holes were observed in joint material or water-proofing membrane at the ground line between the precast panel and slab/foundation wall (see Photo 15). The water is then running down the inside of the west wall and also progressing east, ~~likely along the interface beneath the first floor slab and stay in place metal forms, until~~ it reaches Line B, where it drips out of the forms along the beam and then through the ceiling into the holding cell. Water stains were observed on the west face of the beam at Line B in the ceiling plenum. On the exterior, the landscaping in this area has created a small swale or depression in the grass just to the north of the southwest building entrance. Water cannot drain out of this area north toward the existing drain inlet, and therefore accumulates which adds to the problem (see Photo 16).

The area along the west foundation wall needs to be excavated to expose the full length of the joint between Panel 10 and top of slab/foundation wall to evaluate the condition of the joint sealant or water barrier membrane between the panel and slab. The seal should be replaced and/or repaired as necessary. After the joint has been repaired, the grass area along the west wall should be re-graded to allow water to flow north to the existing drain inlet located between Column Lines 9 and 10, or a stub drain should be installed to drain water from the low area to the existing inlet. Budgetary estimate for addressing the basement leak is \$5,000 to \$8,000.

***DRAFTY INTERIOR***

Although access limitations only permitted observation of a single interior panel/CMU wall interface above the first floor office, this location is missing a section of joint sealant (see Photo 17). It is likely that this condition persists at other joints in the vicinity of the reported draft. Additionally, the joint between the precast panel and the ceiling of the locker room has separated slightly (see Photo 18), indicating differential movement between the ceiling and panel has occurred. All interior joints should be fully sealed between the precast panels and adjacent walls. Because this may require removal of drywall at considerable expense and inconvenience, we recommend first attempting to seal all accessible joints through the ceiling space. If this is unsuccessful in eliminating the reported draft, then small inspection holes could be made in the walls of the office and ceiling of the locker room to determine the condition of those joints. We also recommend re-caulking the window on the first level of the west wall. Finally, resealing the exterior panel joints as recommended above should also help to reduce drafts through the joints.

We appreciate the opportunity to work with the County of Kenosha again, please contact us with any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. T. Wyatt".

Scott T. Wyatt, P.E.  
Associate

STW:kjl

1500005



### **ADDENDUM 1**

On December 17, 2015, KPFF personnel revisited the Pre-Trial Facility with County of Kenosha staff. Areas inspected included the basement holding cell, first floor southwest corner office, interstitial space above the southwest entrance vestibule, and grassy area outside of the southwest entrance. The following observations and recommendations are made, complementing those in the body of this report.

- Dirt had been mounded up to some extent along the top foundation wall/lowest precast panel interface on the west wall after receipt of our initial report. This created a slope away from the face of the wall. No water intrusion was observed by County staff in the basement during the storm on the weekend of December 12<sup>th</sup>.
- The vertical crack in the west basement wall is not uncommon. It can be sealed by epoxy injection. Although the design plans are not entirely clear, there appears to be a control joint specified in this location that may not have been installed.
- Consideration should be given to applying a surface sealer to the precast panels to prevent further egress of moisture into the panels through the cracks. There are a wide variety of precast concrete sealers available and selection of a sealer should be made after consultation with several manufacturers. Additionally, we recommend applying the sealer to a small area of one of the upper level set-back panels to evaluate aesthetics prior to applying the sealer wholesale to the facility. Many manufacturers will provide free samples of products for this exact purpose.
- The interstitial space above the vestibule adjoining the first floor office should be inspected more thoroughly to determine whether it is properly insulated.
- ~~The interior joint sealant between precast panels acts as an air and vapor barrier.~~ Although this joint is generally inaccessible due to architectural finishes, it will be visible when the exterior joint sealant is replaced. The interior joint should be inspected while the exterior joint replacement is occurring to verify its presence and condition, especially in the vicinity of the reported drafts; and repaired or replaced as necessary.

**APPENDIX A – PHOTO LOG**



Photo 1 – Inspection Access



Photo 2 – Inspection Access



Photo 3 – Hammer Sounding



Photo 4 - GPR



Photo 5 – Typical Panel Cracking



Photo 6 – Typical Efflorescence



Photo 7 – Joint Sealant Failure

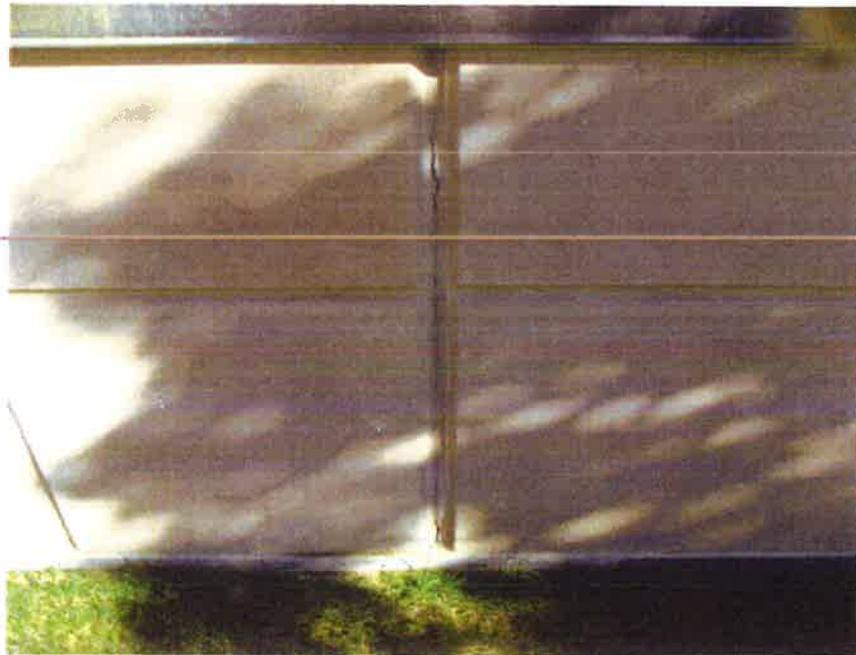


Photo 8 – Joint Sealant Failure



Photo 9 – Reveal Joint Cracking

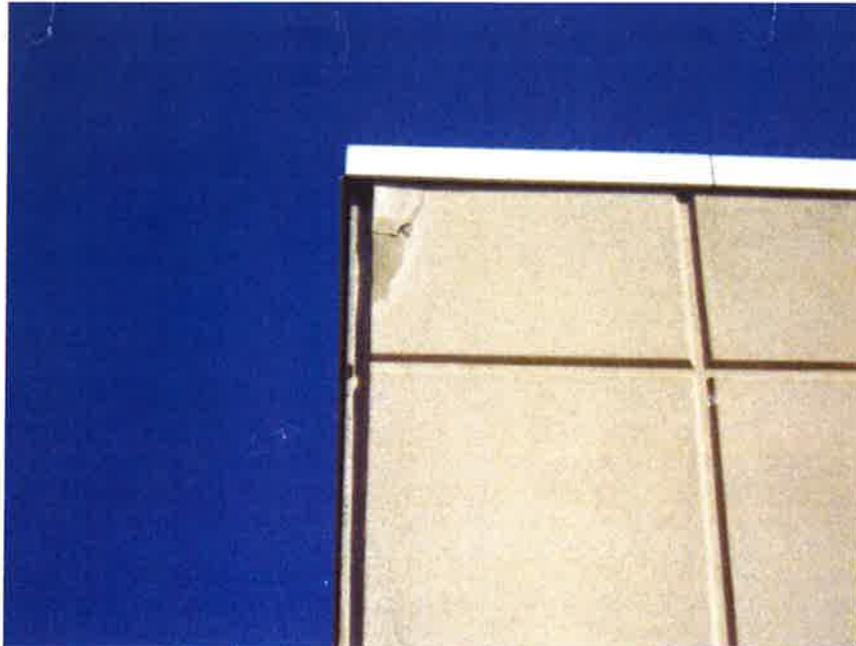


Photo 10 - Corner Spall

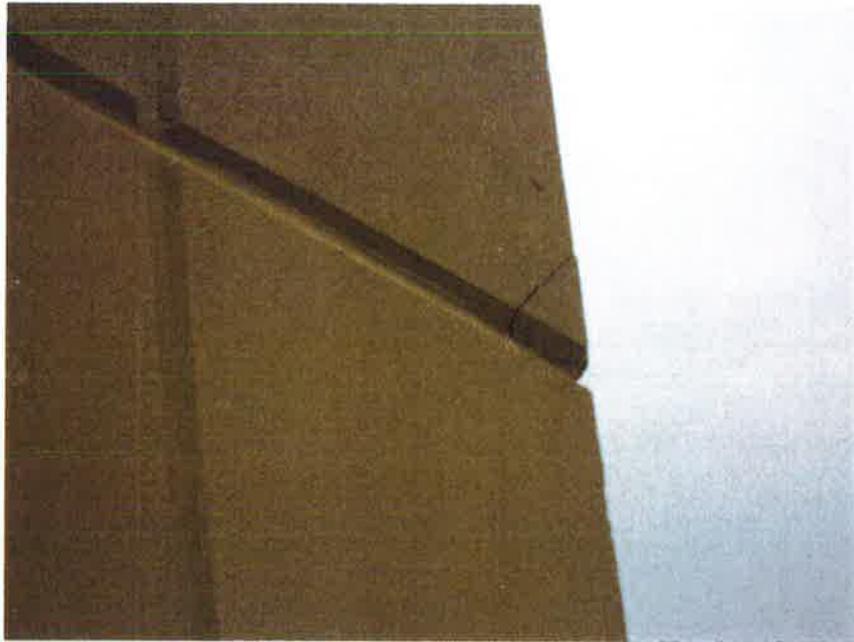


Photo 11 – Corner Spall

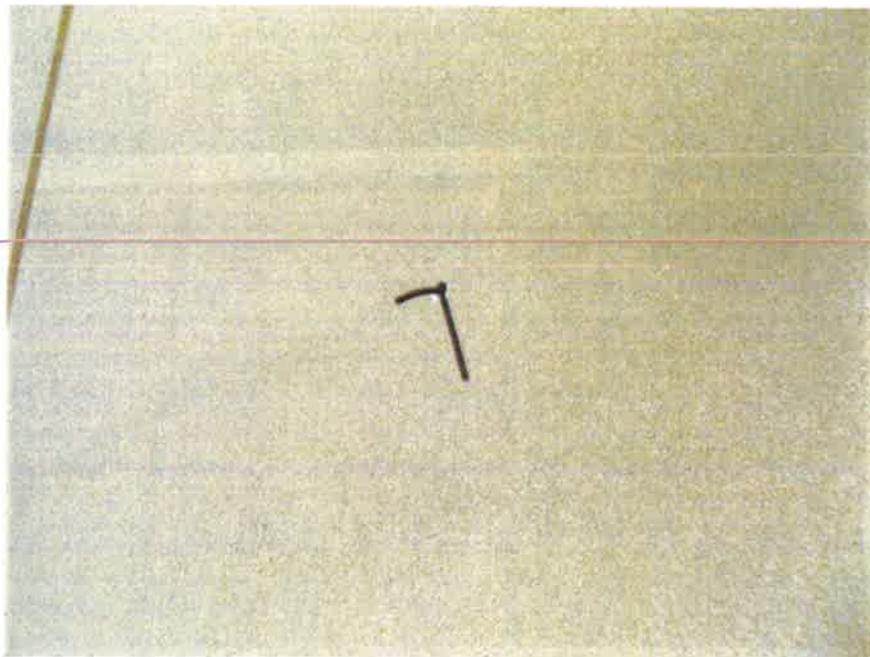


Photo 12 – Abandoned Cable



Photo 13 – Minor Rust Staining

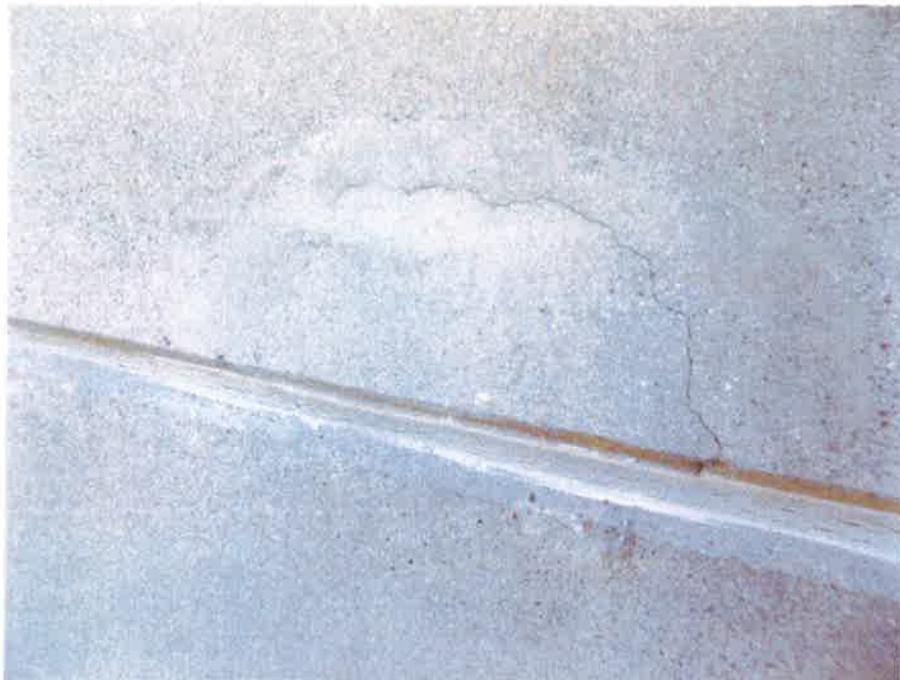


Photo 14 – Cracking at Previous Repair



Photo 15 – Holes in Water Barrier Membrane at Ground Line

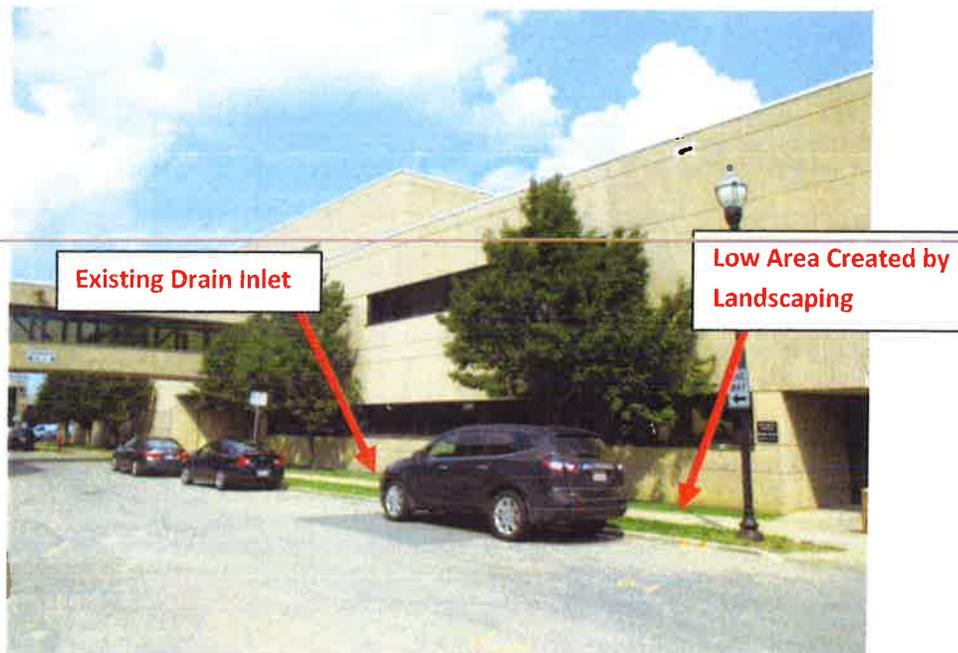


Photo 16 – Exterior Area of Basement Leak



Photo 17 – Missing Sealant between Precast Panel and CMU Wall above First Floor Office

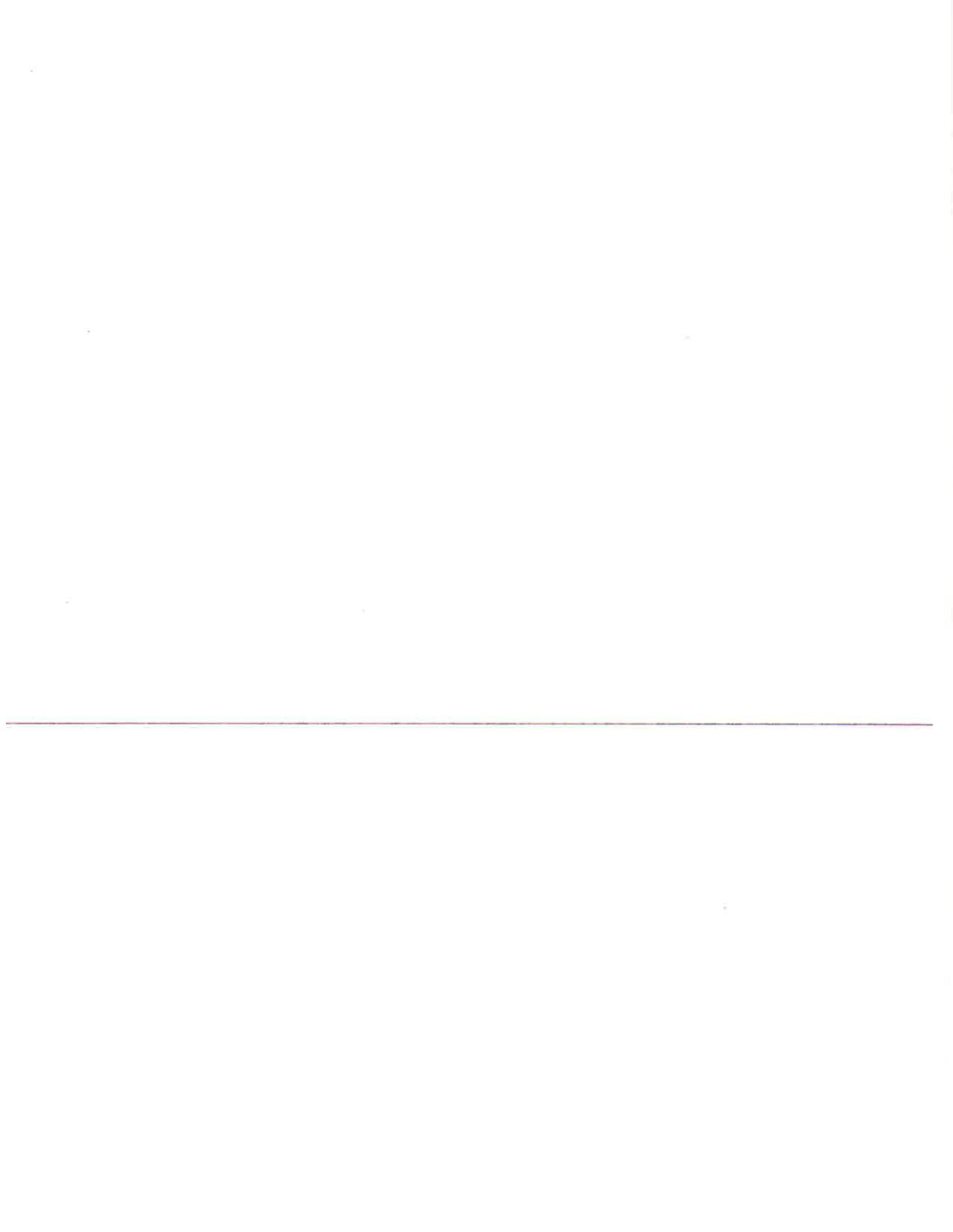


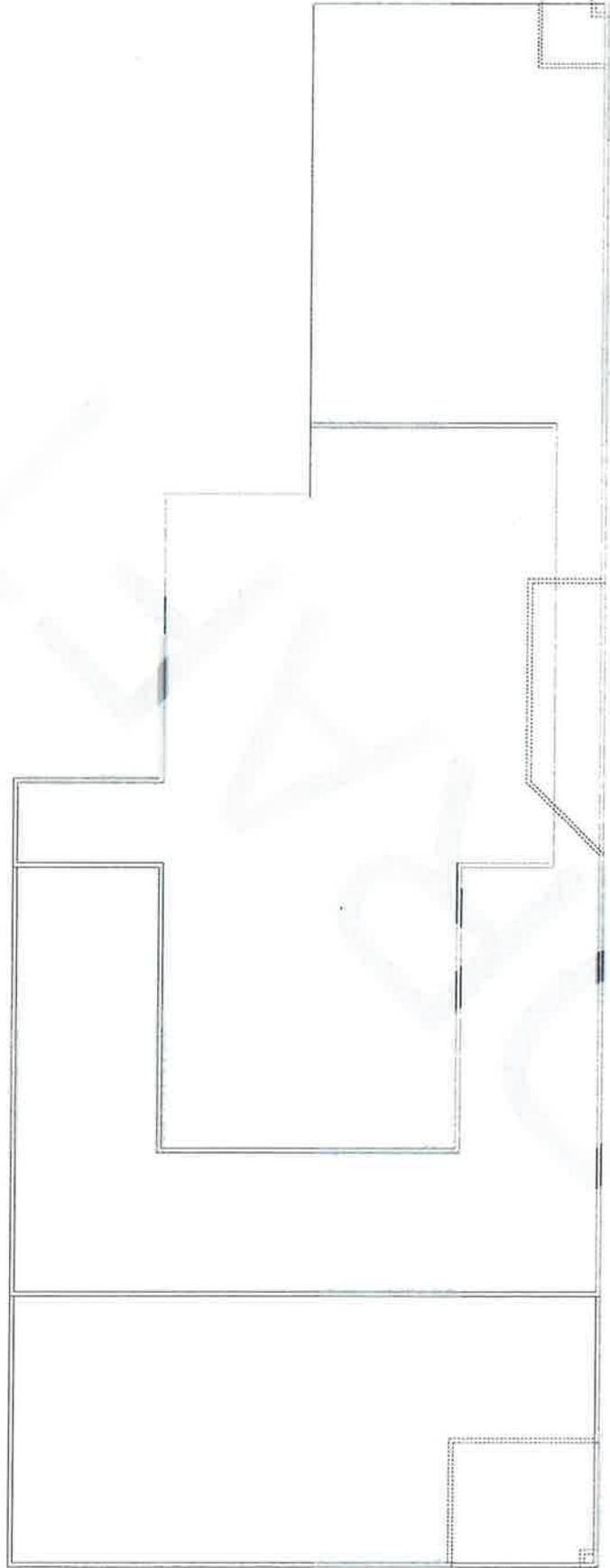
Photo 18 – Joint Separation between Precast Panel and Locker-Room Ceiling

**APPENDIX B - DRAWINGS**









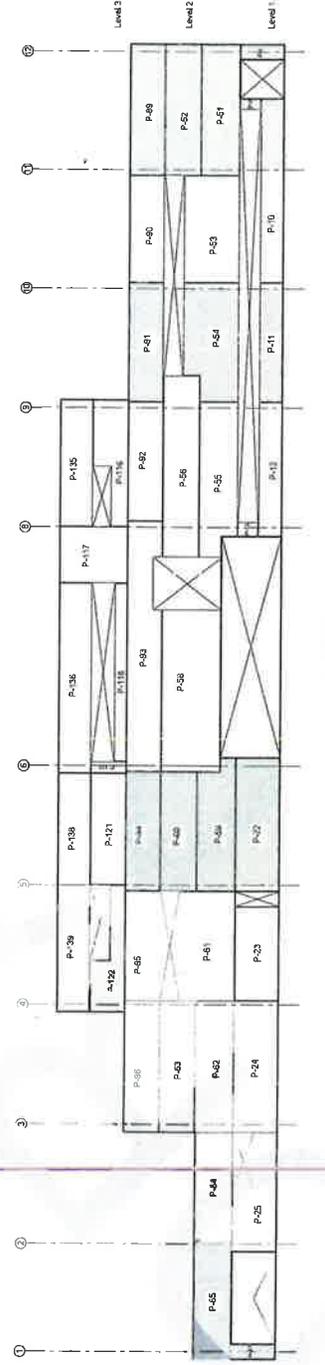
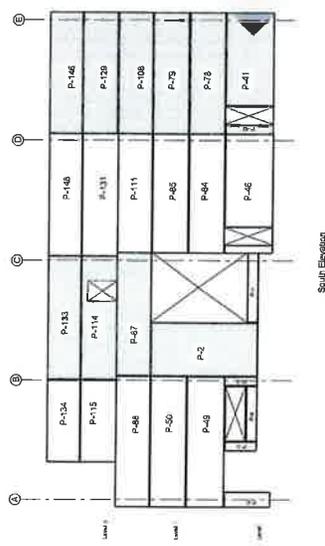
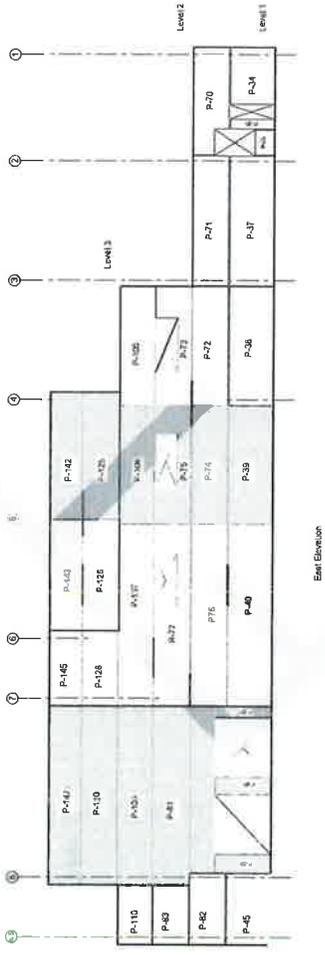
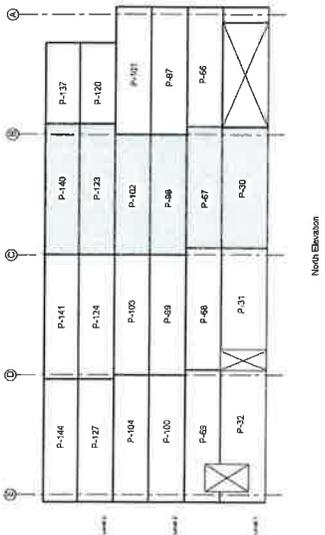
Plan

**Legend**

Section of Panels Inspected



 <small>Kenosha Professional Fire Fighting, Inc.</small> <small>Kenosha, Wisconsin</small>	<b>County of Kenosha</b> <small>Kenosha, Wisconsin</small>	<b>Pre-Trial Facility</b> <small>Kenosha, Wisconsin</small>	<small>KPFF Job No. 10041500005</small> <small>Date: Oct. 2015</small> <small>Drawn By: JM</small>	<b>Pg 1</b>
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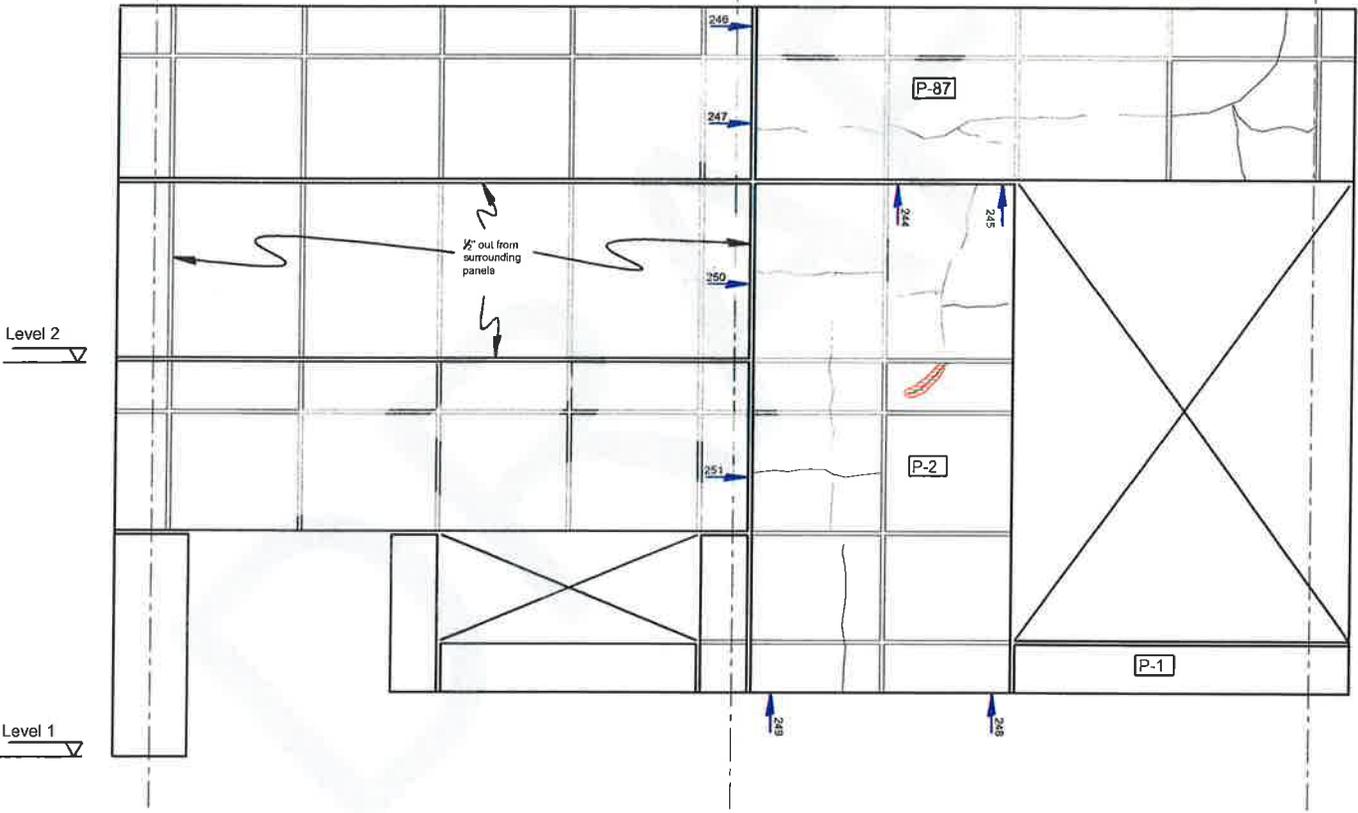
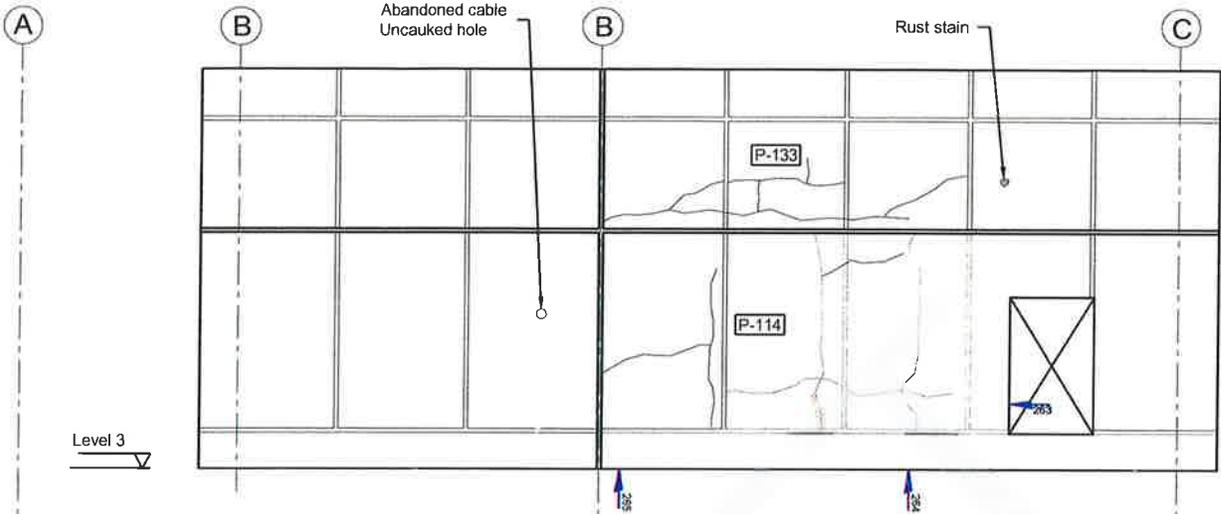


**Legend**

Section of Panels Inspected

	632 Davis St. 5th Floor Kenosha, WI 53102	<b>County of Kenosha</b> Kenosha, Wisconsin	KPFF Job No. 100x1500005 Date: Oct. 2015 Drawn by: ML
	<b>Pre-Trial Facility</b> Kenosha, Wisconsin		

Fig 2

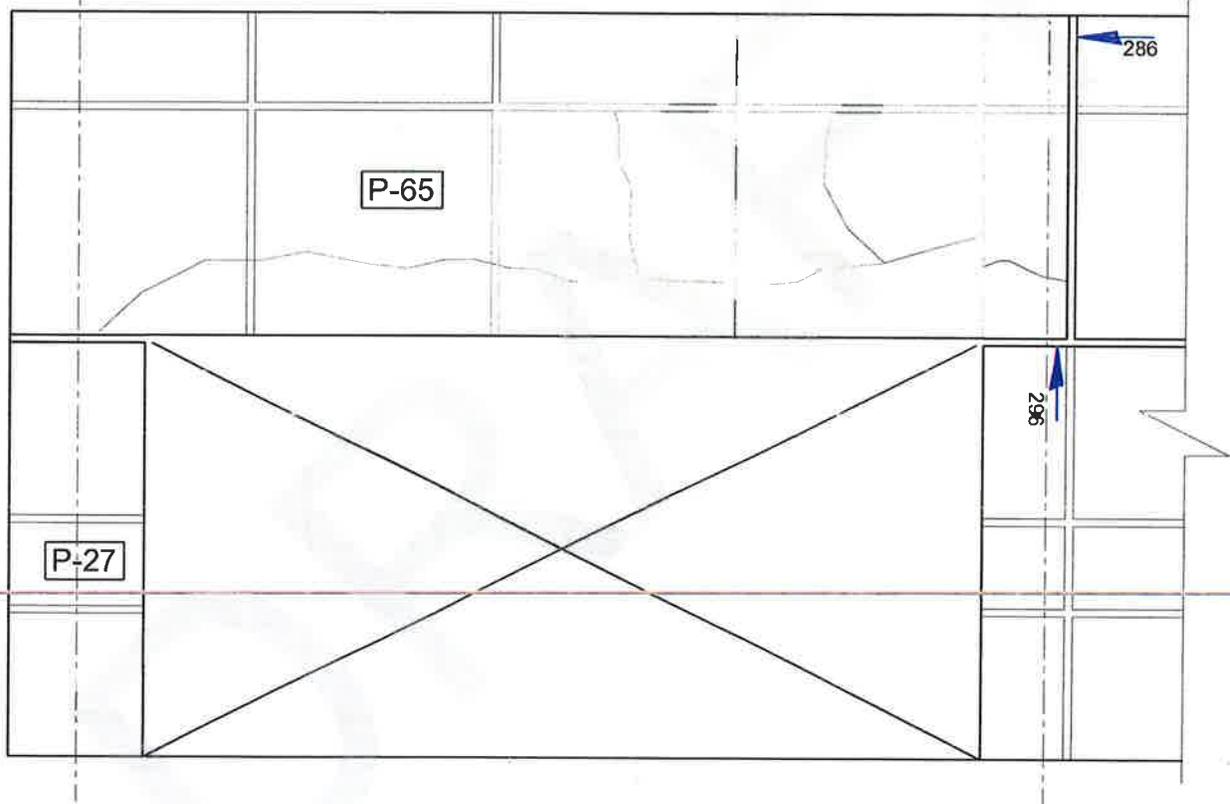


South Elevation  
Drop 1

- Legends**
-  Existing crack
  -  Efflorescence
  -  Delamination

1

2



West Elevation  
Drop 2

**Legends**

-  Existing crack
-  Efflorescence
-  Delamination



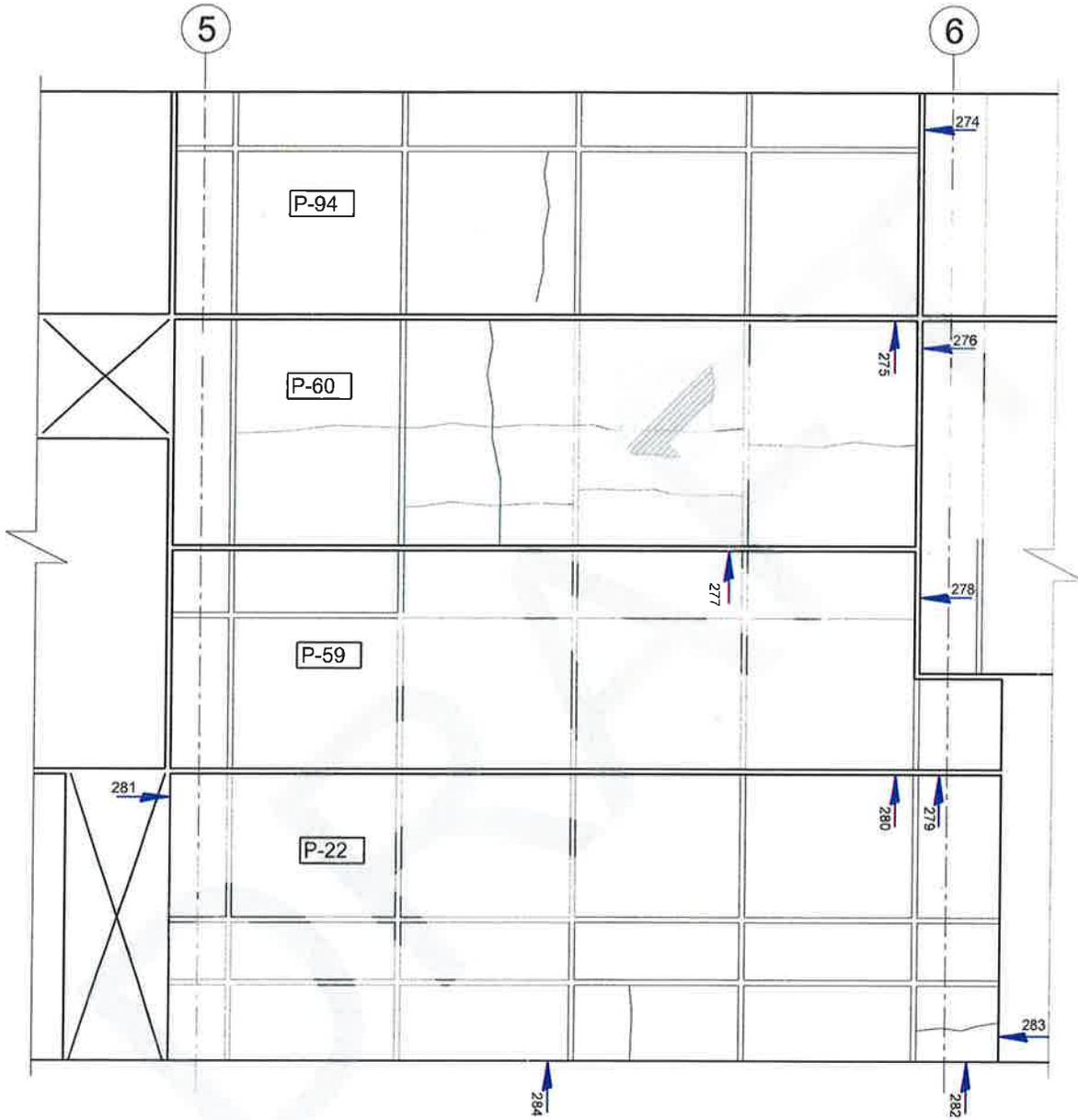
630 Davis St.  
5th Floor  
Evanston, IL 60201

**County Of Kenosha**  
Kenosha, Wisconsin

**Pre-Trial Facility**  
Kenosha, Wisconsin

KPFF Job No. 10041500005  
Date: Oct. 2015  
Drawn by: MI

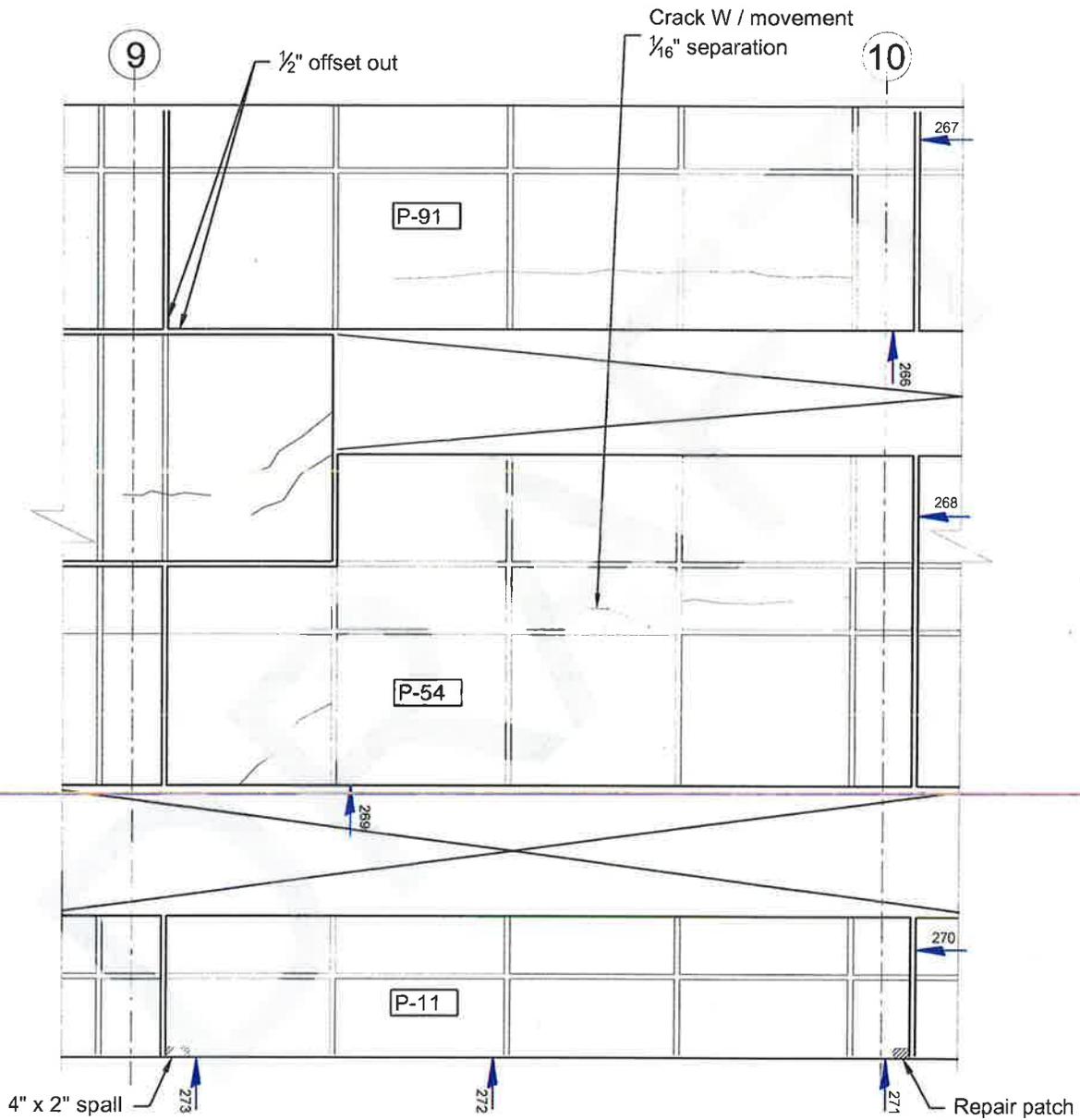
**Fig 4**



West Elevation  
Drop 3

**Legends**

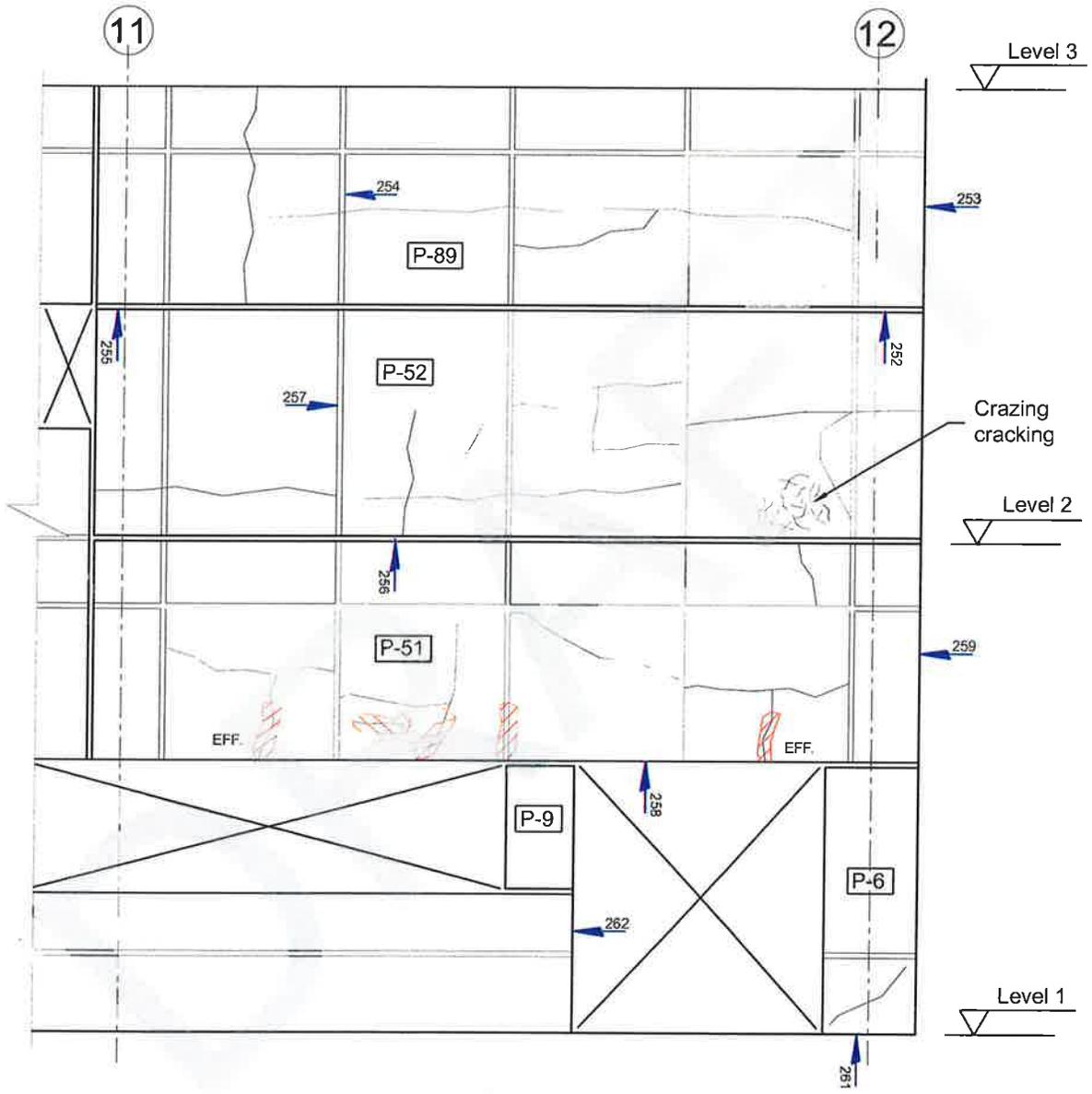
-  Existing crack
-  Efflorescence
-  Delamination



West Elevation  
Drop 4

**Legends**

-  Existing crack
-  Efflorescence
-  Delamination



West Elevation  
Drop 5

**Legends**

-  Existing crack
-  Efflorescence
-  Delamination



630 Davis St.  
5th Floor  
Evanston, IL 60201

**County Of Kenosha**

Kenosha, Wisconsin

**Pre-Trial Facility**

Kenosha, Wisconsin

KPFF Job No. 10041500005

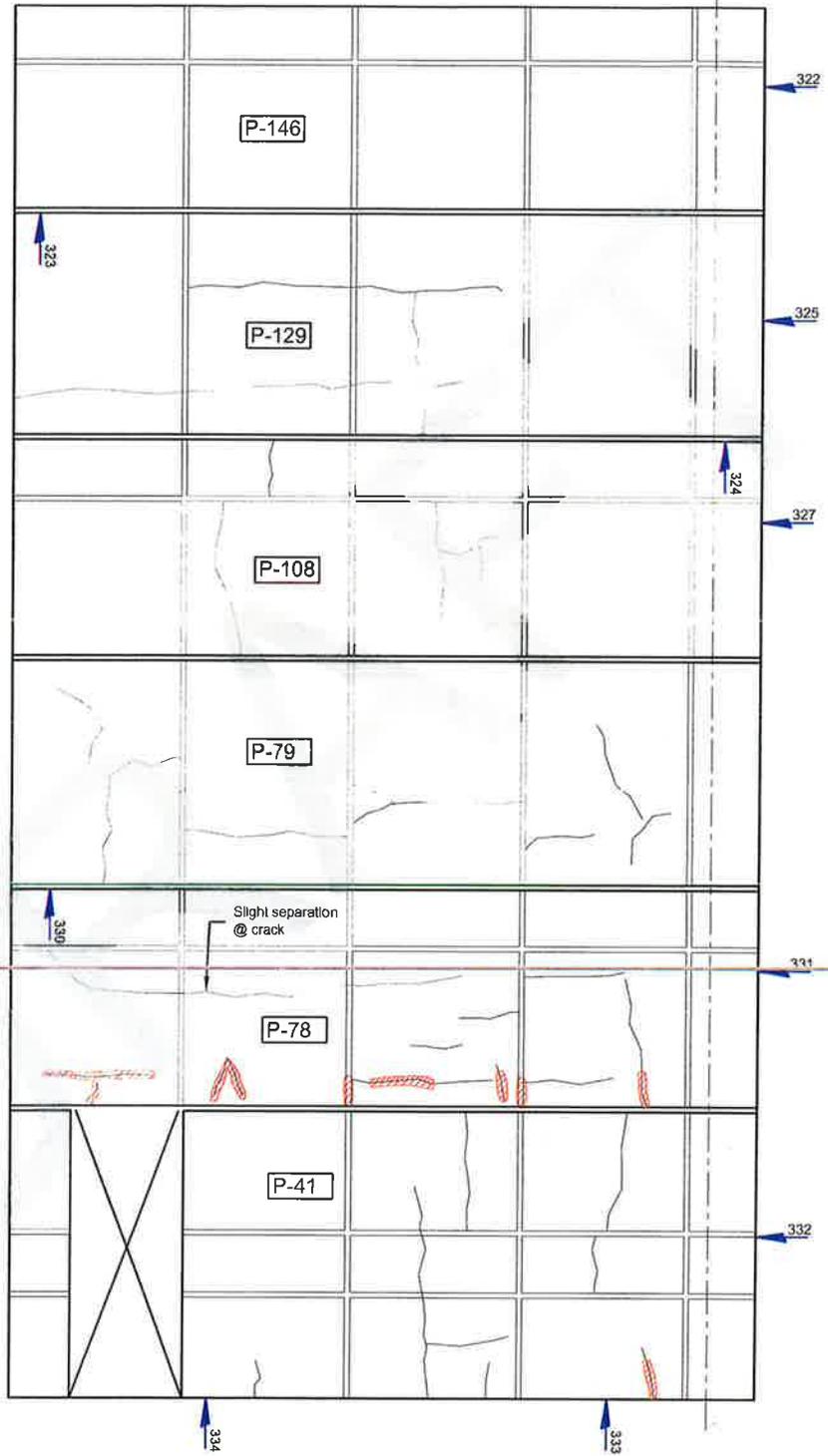
Date: Oct. 2015

Drawn by: MI

**Fig 7**

D

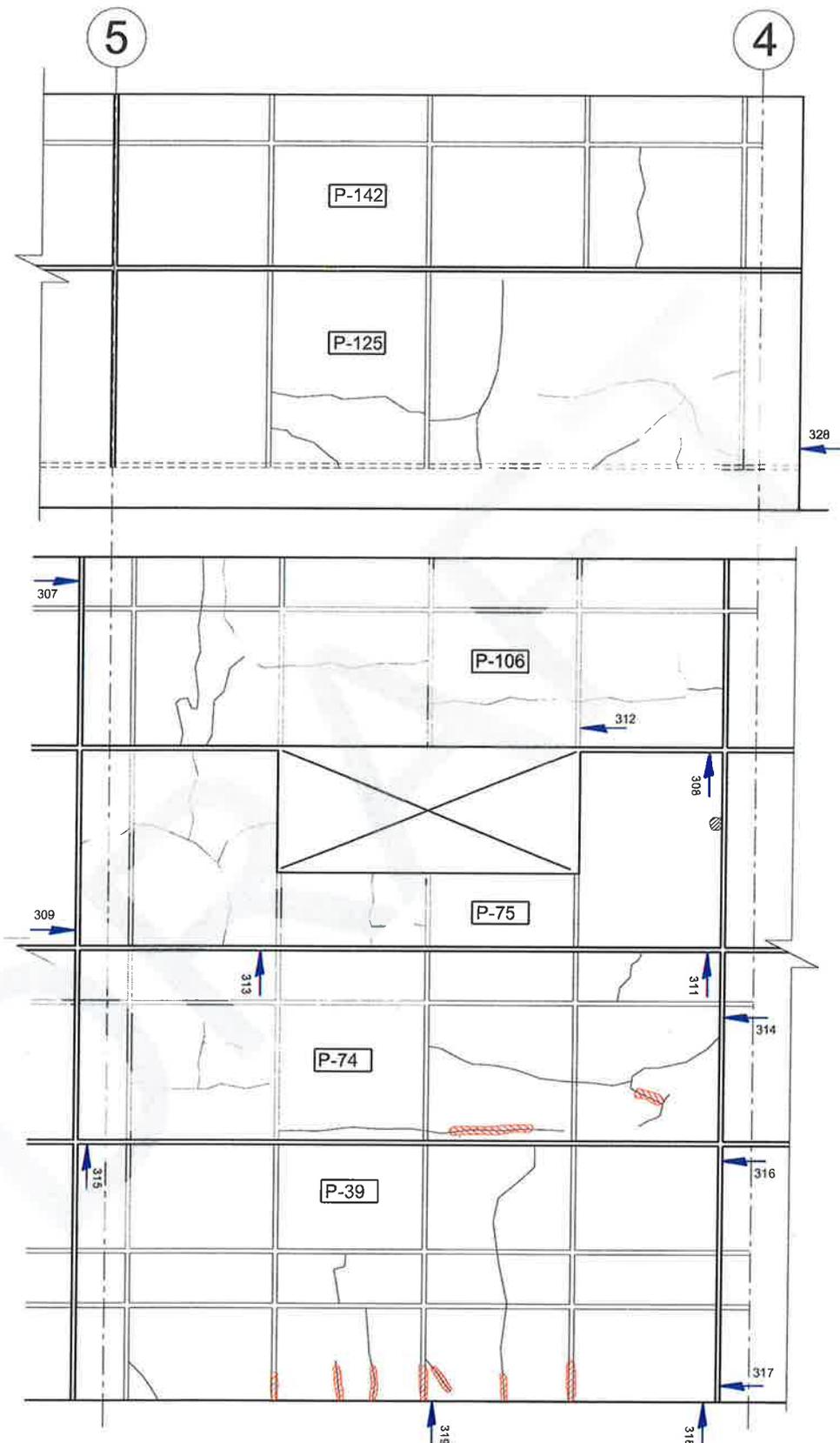
E



**Legends**

-  Existing crack
-  Efflorescence
-  Delamination

South Elevation  
Drop 6

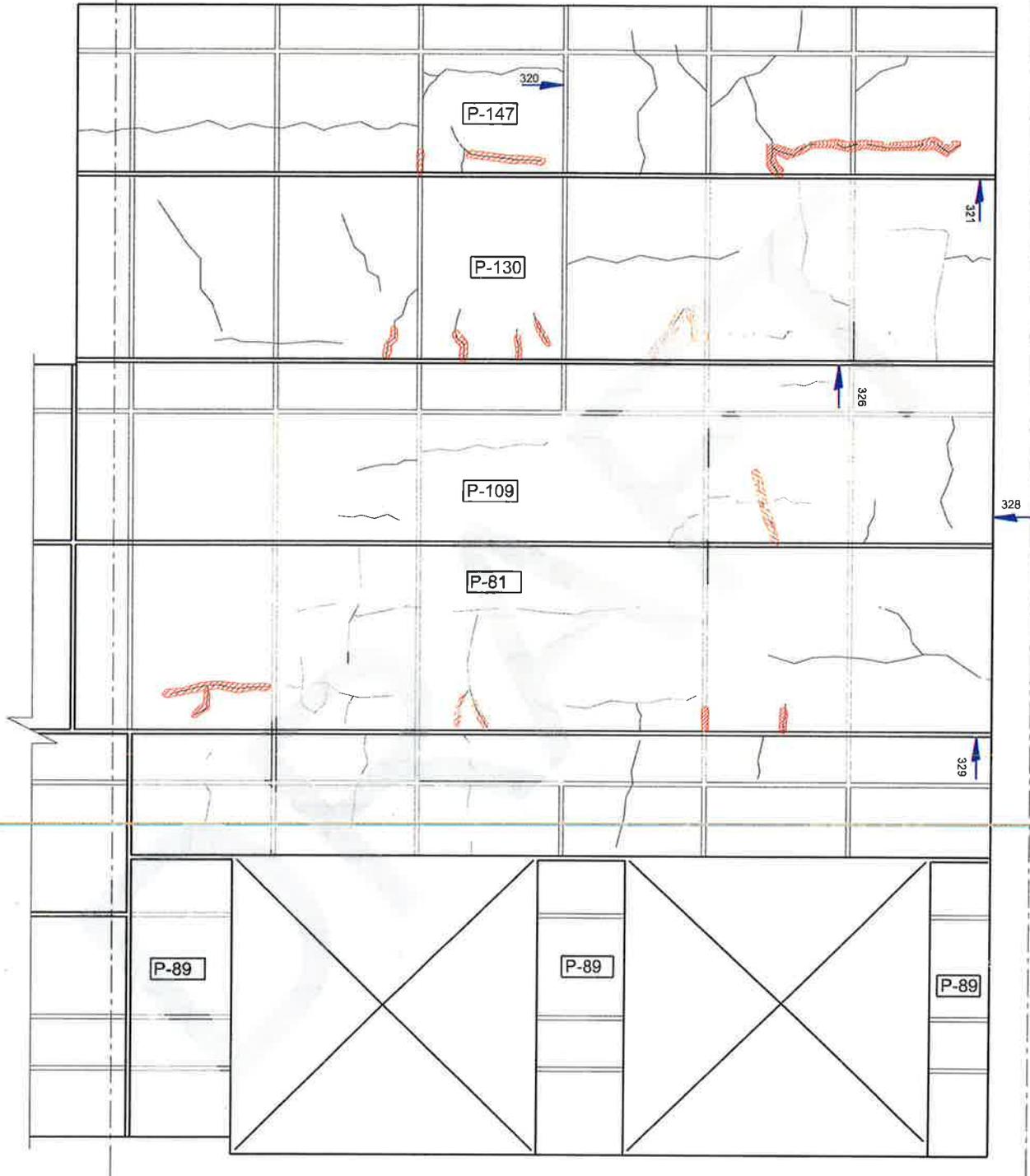


East Elevation  
Drop 7

- Legends**
-  Existing crack
  -  Efflorescence
  -  Delamination

8

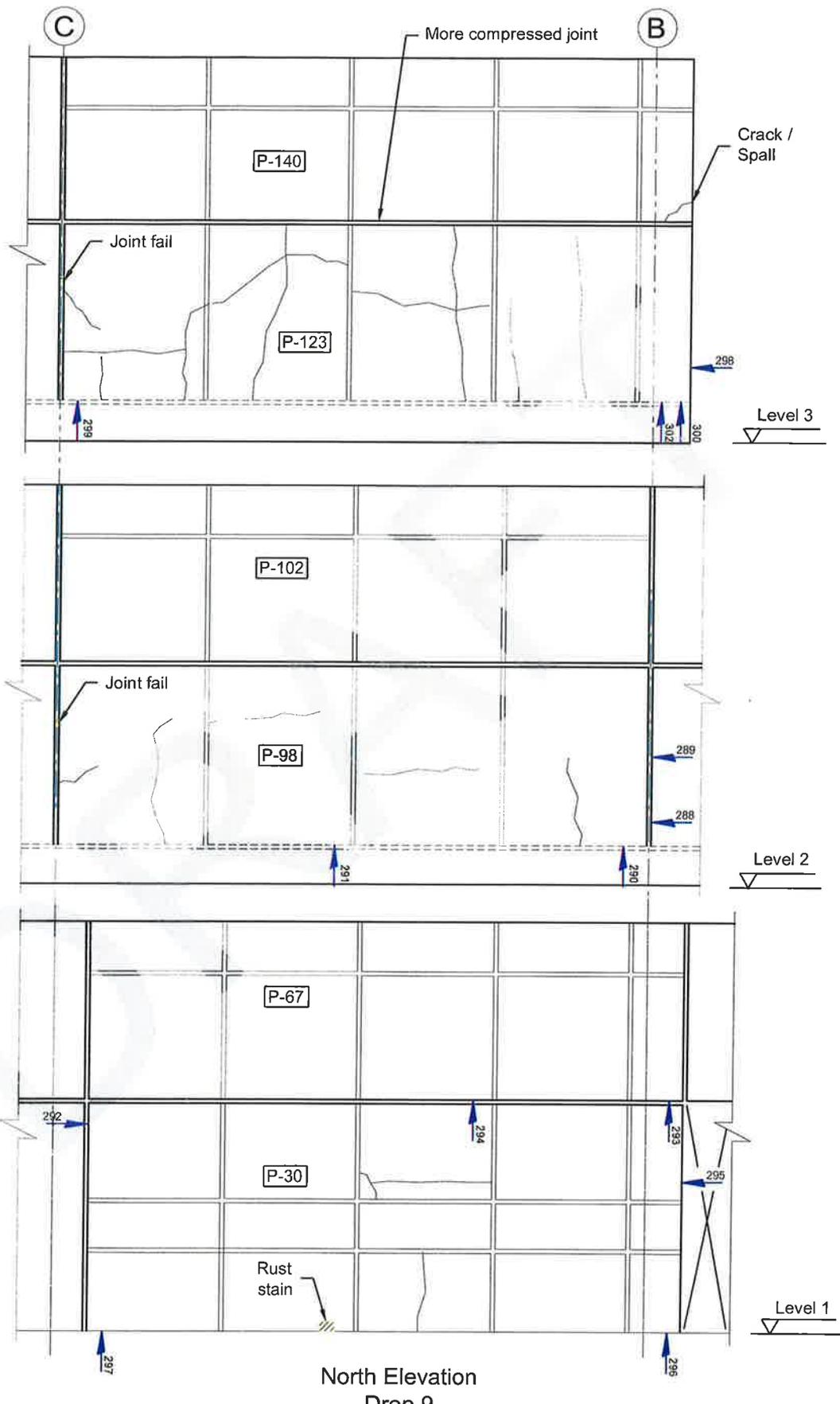
7



**Legends**

-  Existing crack
-  Efflorescence
-  Delamination

East Elevation  
Drop 8



- Legends**
-  Existing crack
  -  Efflorescence
  -  Delamination

North Elevation  
Drop 9