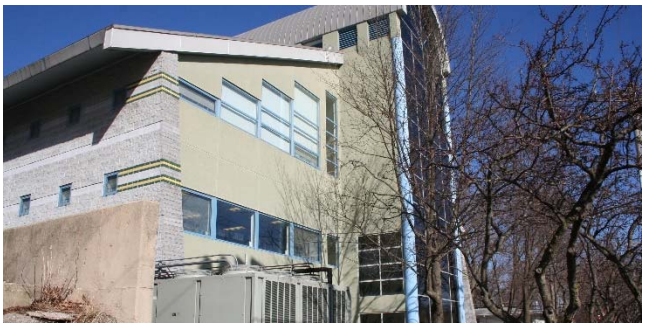
Kluber
Architects + Engineers

- LaGrange Park Public Library
- Water Infiltration Investigative Study
- April 28, 2015
- July 18, 2015 - Updated
- Kluber Project No. 15-357-960

Batavia: 10 South Shumway Avenue | Batavia, Illinois 60510 | 630.406.1213
Gurnee: 4212 Old Grand Avenue | Suite 101 I Gurnee, Illinois 60031 I 847.336.3428

www.kluberinc.com

Table of Contents



July 18, 2015

Ms. Lynn Elam
Acting Library Director
La Grange Park Public Library
555 North La Grange Road
La Grange Park, IL 60526

Re: Water Infiltration Investigative Study
Additional Services - Report Addendum
North & South Building Façade Review
Kluber, Inc. Project No. 15-357-960

Dear Ms. Elam,

This executive summary and attached supporting documentation comprise Kluber Architects + Engineers' additional services assessment and recommendations of the water infiltration issues at the Exterior Insulation Finish Systems (herein referred to as EIFS), the aluminum fixed and operable windows systems and the review of the existing masonry wall systems at the north, south and west building facades of the La Grange Park Public Library facility located at 555 North La Grange Road in La Grange Park, Illinois.

LOCATION / DESCRIPTION

The north, south and west elevations consist of brick and split face block masonry, EIFS at the upper clerestory windows, fixed and operable aluminum window systems, and combinations of metal standing seam and metal shingle roofing products. The north and south extended exterior soffits/overhangs are composed of prefinished metal soffit materials.

The existing brick and split face block masonry totals approximately 2,956 SF of wall surface area at each north and south elevation for a total of approximately 5,912 SF of wall surface area. The west façade masonry surfaces total 2,035 SF. Total masonry wall surfaces equal approximately 7,947 square feet.

EIFS surfaces total approximately 1,650 SF in area at the north and south facades. The fixed and operable windows total approximately 570 SF in area in these same locations. Of this number, the clerestory windows comprise 336 square feet in area.

Prior to conducting on-site visual observations of the north and south building facades, Kluber Inc. representatives re-reviewed the re-bid construction documents prepared by Frye, Gillan, Molinaro Architects, Ltd. Dated September 19, 1988. After the review of these documents was completed, Kluber Inc. representatives requested that specific areas of the existing interior drywall be removed to perform invasive inspection services to confirm constructability techniques and to determine if water infiltration is occurring at select north and south façade locations.

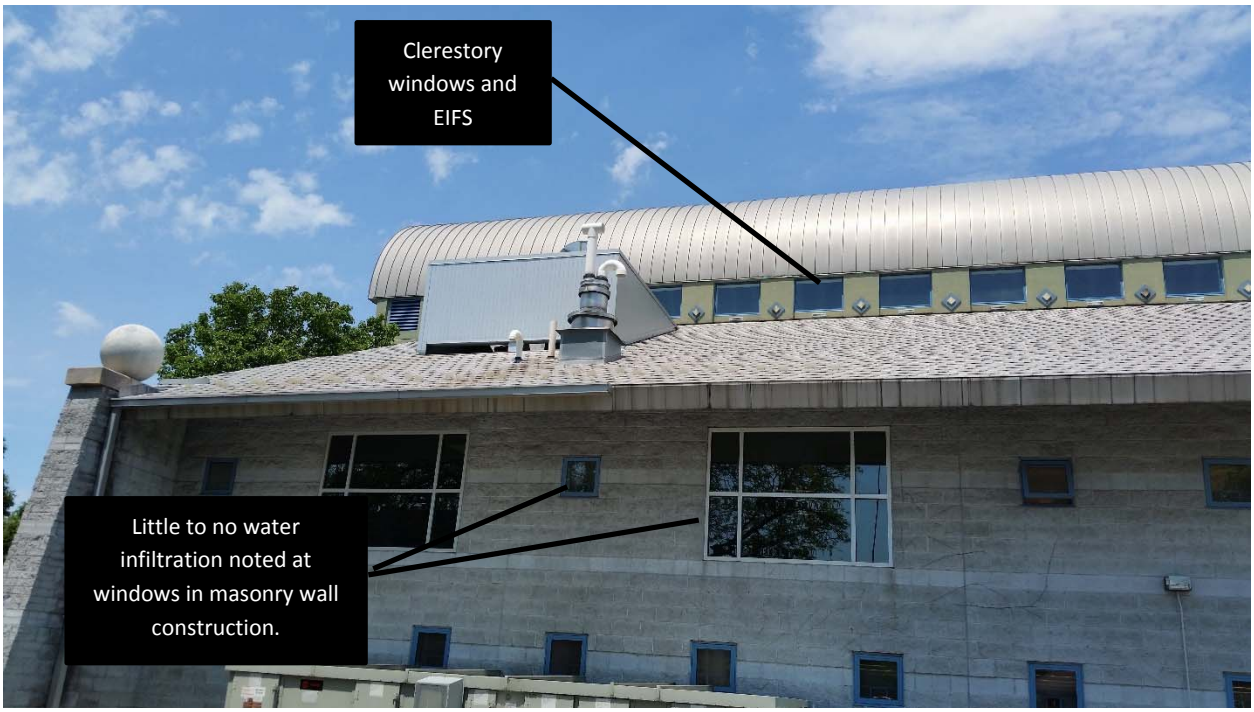
Please note, the original construction documents do not clearly indicate all construction techniques or design intent for the north and south wall locations. Existing Owner shop drawings were limited to elevation and detail drawings for the aluminum window systems only. Product data for the EIFS wall systems and the products used in the construction of the exterior wall systems could not be located by the owner. For this reason, our recommendations contained in this expanded report will be based upon best practices for similar installations that would have been installed in 1988 for the exterior wall products.

OBSERVATIONS

Non-Invasive Inspection – North and South Facades:

A non-invasive field inspection of the subject property was performed on Wednesday, June 3, 2015 and Monday, June 8, 2015. The non-invasive investigation utilized long range camera lenses and field glasses to review areas of water infiltration concern raised by the client. The re-review locations included the north and south exterior facades of the building and the masonry wall surfaces of the west facade. This included a re-assessment of the upper clerestory windows and EIFS systems. The extent of the upper clerestory review was limited to what could be seen previously from the mechanical roof platforms on the north and south roof sections. Non-invasive inspection photographs can be found in section 7 of this report along with notations indicating areas of concern.

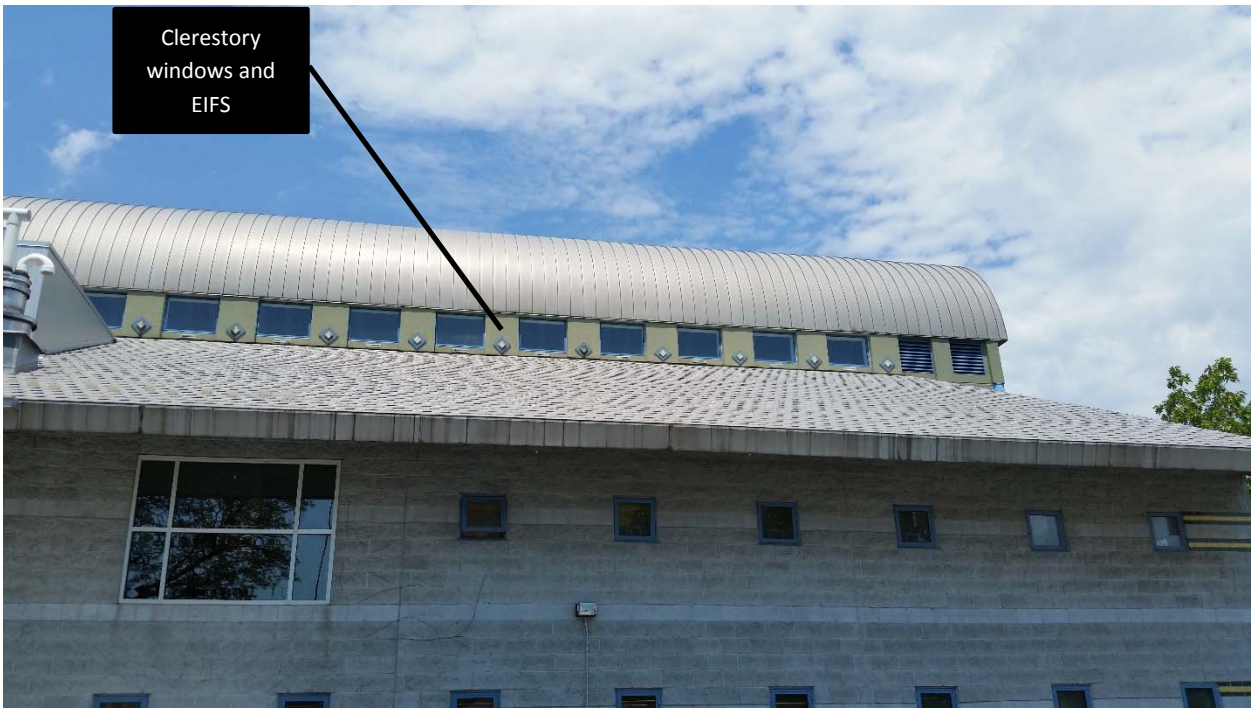
The non-invasive inspection indicated that exterior window surfaces at the north and south façades of the clerestory window locations located in EIFS stucco surfaces are experiencing combinations of water moisture buildup (condensation) and water infiltration (from exterior rain water) similar to what was encountered at the east and west facades of the building in EIFS construction. This is evident at several interior clerestory drywall window heads, jambs and sills at the north and south elevations of the building. Little to no water infiltration was noted at the windows located in the north and south masonry wall systems.



The exterior window systems at the north and south facades consist of narrow profile window units that are fixed or operable. The window systems are a non-thermally broken type and will conduct cold from outside to inside. This will cause water to condense on the interior glass and window framing surfaces of the windows in the colder months of the year. The interior moisture buildup is believed to have contributed to the moisture stains inside the exterior wall systems.

The original exterior window systems were designed to be barrier type installations similar to the east elevation windows reviewed previously. The goal of these systems is to prevent rainwater from entering the window and wall system utilizing perimeter joint systems composed of rubber gaskets or sealant. Unfortunately these systems were not designed to "weep moisture" out of the wall system if the first sealant / gasket barrier was compromised.

This type of window system was common when the building was originally constructed in the late 1980's. Barrier window systems rely heavily on proper installation and ongoing preventative maintenance plans to ensure the sealant joints and rubber gaskets at the perimeter of the windows are maintained. A close review of the window sealant systems at the north and south facades indicates that the existing sealant joints are now in need of replacement. Many sealant joints were cracked and no longer performing to keep water out of the wall assembly.



Exterior EIFS systems at the north and south elevations were observed. The EIFS installation is a barrier type system similar to the East and West elevations. This system relies heavily on the sealant joints that are adjacent to dis-similar materials such as at window openings to be properly maintained to keep water out of the building. Older barrier type EIFS systems do not allow for water drainage in the event water moisture gets past the sealant joints between panels or at window or door openings. The EIFS is showing some signs of water moisture damage at window head and sill locations as well as at the location of the exterior wall louvers.

The masonry wall surfaces at the north and south elevations consist of split face concrete block and accent brick/clay unit masonry. The masonry was installed as a veneer over a metal wall stud back-up system. The split face masonry units are in need of cleaning and sealing to retard water infiltration into the faces of the split face concrete masonry units. Typical split face block requires re-sealing every 8-10 years. The reviewer could not determine the last time the sealing was performed – if ever since the original construction was completed. Split face block is a very porous material. When exposed to weather without a sealer, it will absorb rainwater into its pores. During periods of freeze/thaw, water trapped inside this type of wall assembly can freeze and has the potential to "spall" the faces of the block. For this reason, the exterior split face units should be cleaned and sealed. Either a clear or opaque sealer that is "breathable" is recommended.

Of particular concern was the exterior masonry wall systems do not appear to have any type of rope weeps or venting installed at the base of the wall system. Weep holes and thru wall flashings allow moisture that might get into the exterior wall system to escape to the exterior of the building. Almost all base-of-wall joints reviewed appear to have been struck flush to the foundation wall surfaces. It is common to visibly see a small portion of the thru wall flashings extending into view at the base of the wall to divert water away from the building. You will note in the photo on the next page that no flashing or weep holes are visible. We suspect that thru wall flashing may have been omitted at all masonry wall locations. See photo on the next page.

Behind the masonry wall cladding at the north and south facades lies a metal stud cavity wall system. The metal stud cavity has been insulated with batt insulation similar to our findings at the east façade. A visqueen vapor barrier was observed to have been installed on the inside (interior) face of the metal studs prior to the interior drywall being placed.

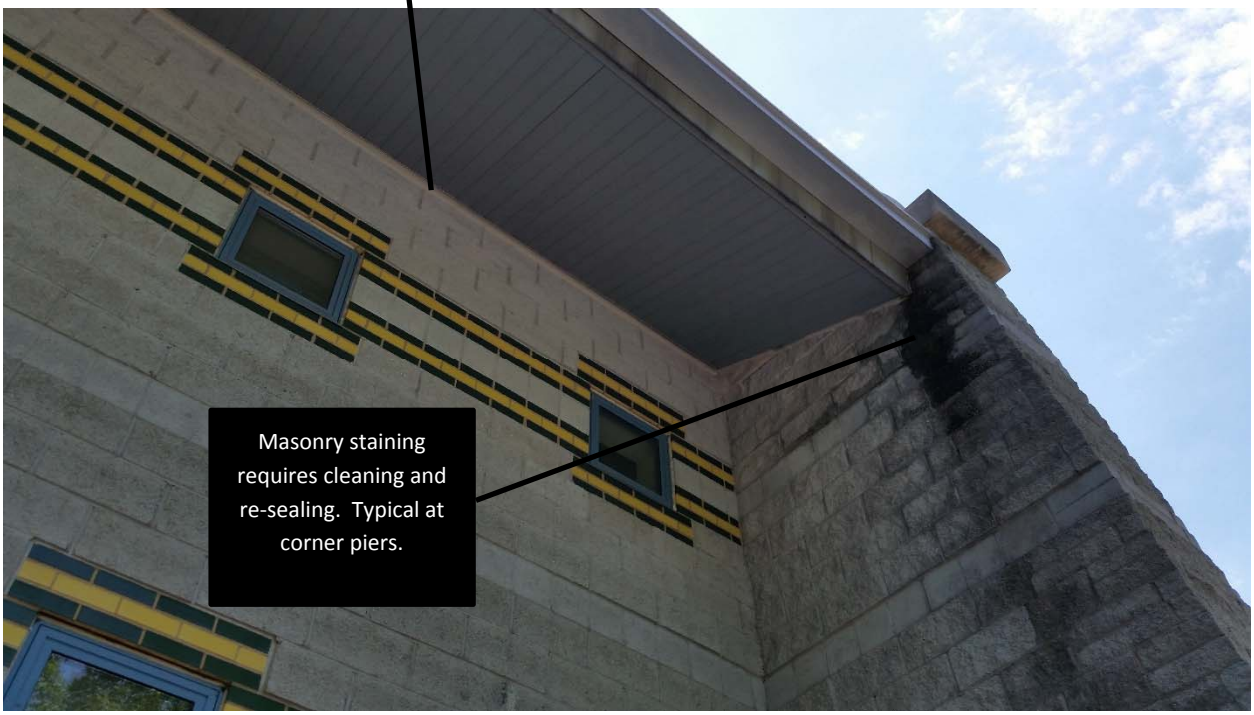
Our non-invasive site visit also included an above ceiling inspection at two locations where suspended ceilings are installed. These locations included the upper floor Library Director's office and at the sloped acoustical ceiling section near the southeast corner of the building by the study counters. Above ceiling observation noted little presence of water infiltration at these locations however a noticeable "gap" between the exterior drywall wall sheathing and the structure was observed. This "gap" means that interior tempered air can migrate into the exterior wall framing systems. This condition will need to be corrected to minimize the opportunity for moisture to condense in the exterior wall. It should be noted that this condition is similar as noted previously at the east and west facades of the building.

The visqueen vapor barrier reviewed at above ceiling locations was not sealed to the floor framing above or roofing framing locations or at transition points. This results in a non-occlusive seal in the vapor barrier. This may allow conditioned building air to enter into the wall stud cavity and can form condensation in the stud cavity. Note that this condition was similar to the conditions found in the east EIFS wall system.

The north and south roofing systems consist of metal, interlocking shingles at the sloped roof sections, standing seam type at the barrel vault location and rubber membrane systems at the mechanical area wells. The roofing systems appear to be in excellent condition. Only minor sealant joints need to be replaced at seam locations between dis-similar materials.

One concern regarding roof ventilation has been detected. The sloping roof ventilation systems have been sealed shut causing a build-up of heat in the air cavity space between the roof decking and the suspended ceiling insulation

system that has been installed. Typically the interstitial space between the roof decking and the insulation layer would be naturally vented by drawing colder air from the lower soffit overhang and discharging it near the ridge area of the roof structure. It was observed that the soffit vents and the wall vents near the sloped ridge line have been sealed shut. Little to no air flow was present to vent the roof cavity. This condition increases the likelihood that the mechanical systems will need to run longer to condition the building and this condition should be corrected.



At the locations of the buttress walls, excessive organic staining was evident. This is a typical condition at all four corners of the building but more severe at the northern elevations not exposed to direct sunlight as often.

Invasive Inspection:

Invasive inspection services were performed from the interior side of the building at the upper floor area where water infiltration was believed to be a concern. A series of drywall openings were created at the Library Director's office and at the upper barrel vault near the east end of the building. The purpose of the invasive investigation was to review the original installation methods and techniques to determine if the wall assembly design components were properly installed and to determine if improvements are necessary to retard the moisture build-up and water infiltration concerns inside the wall assembly.

Kluber Inc. recommended that interior drywall surfaces at four wall assembly locations of the upper floor and one at the basement level be uncovered. Approximately 25 square feet of drywall was removed to perform these inspection services.

The invasive (destructive) testing was performed on Monday, June 8, 2015. Representatives from Kluber Inc. (Mr. Chris Hansen) and from Independent Construction Services (Mr. Dan Eallonardo) were present to review the as-installed conditions. Man lifts were utilized to inspect the openings up high in the barrel vault roofing assembly. Photographs of the invasive testing can be found in Section 8 of this report for your reference.

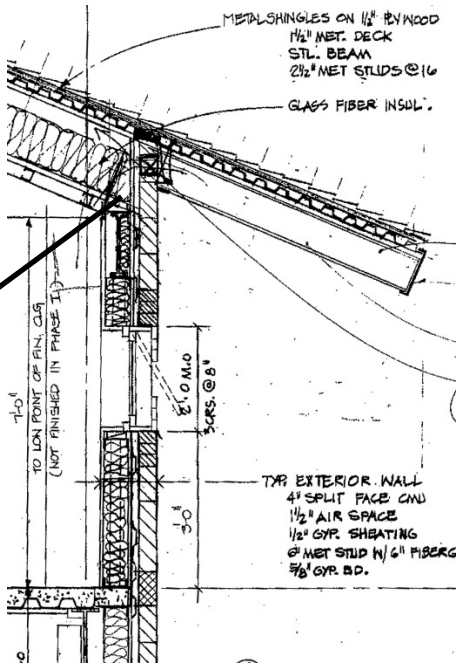
The main areas of concern as a result of invasive inspection are as follows:

- The exterior wall vapor barrier on the interior side of the wall assembly at the north and south wall locations is not occlusive. (Not continuous). These "gaps" allow conditioned air into the exterior wall system.
- Sloping roof ventilation systems at the north and south metal shingled roof areas have been sealed shut causing a build-up of excess heat in the roof assembly.
- The window sill flashings (where installed at window units) do not incorporate "end dams" that prohibit water from entering the building. This means the water would not be directed to the exterior but would be released to the "jamb" locations of the window sills on the interior side of the building.
- Window installations do not incorporate thermal breaks which are found in modern day aluminum window system in this area of the country. This causes the window system to conduct cold temperatures into the interior face of the window system and condense into water droplets, affecting the interior surfaces it comes in contact with.
- The EIFS wall cladding systems at the clerestory window systems are not drainable type systems as found in modern day wall assemblies and have no secondary drainage pathways.
- Moisture damage was noted at all false and operational wall louvers. This was most evident at the interior drywall wall locations near the sills of the louvers.
- The barrel vault ceiling drywall has "cracked" approximately every 8 – 10 feet along the length of the vault. Owner may wish to correct this situation with the installation of control joints.
- Masonry wall surfaces require cleaning re-sealing and "thru-wall" base flashings and weep venting appears to have been omitted.

The following are copies of the original construction document details for your review alongside invasive inspection photos. We have noted our areas of concern that will likely require corrective action to occur. Failure to repair these conditions will result in continued deterioration of the exterior wall assembly.

The photo at the right was taken at the sloped ceiling line of the Library Director's office. You can see the open joint at the transition point between the sloping roof surface and the vertical stud wall assembly. These joints need to be insulated and sealed shut. An open joint in this location will allow air flow into the exterior wall cavity. If the vapor retarder is not properly sealed shut, conditioned air may enter into the wall cavity and condense in the wall assembly itself.

The photo at the left was taken in the same ceiling cavity at the Library Director's office. Note the moisture stain on the top of the steel beam. This indicates that some moisture build-up is occurring in the wall cavity behind the drywall surfaces. We believe this residual moisture can be reduced by simply making sure the vapor barrier is taped and sealed fully to the steel beams and at all transition points.

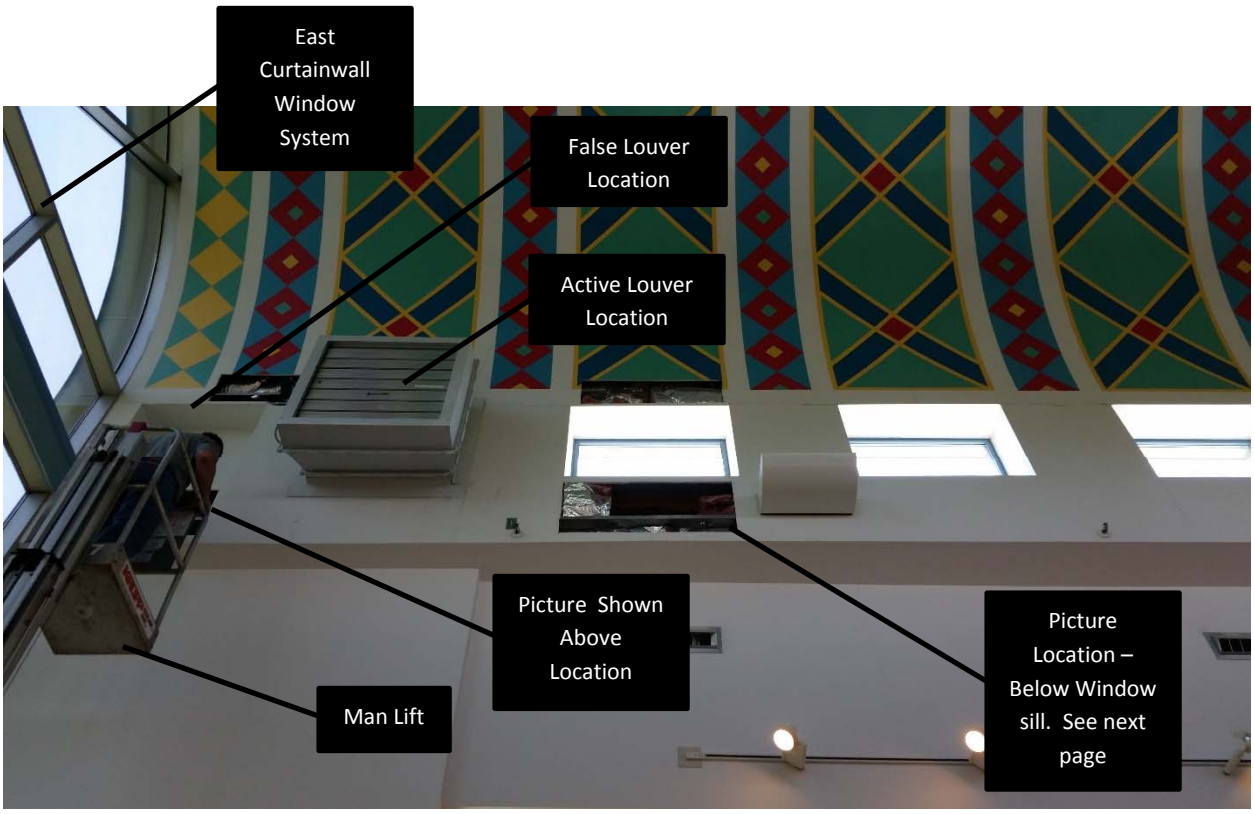


Inspection Location

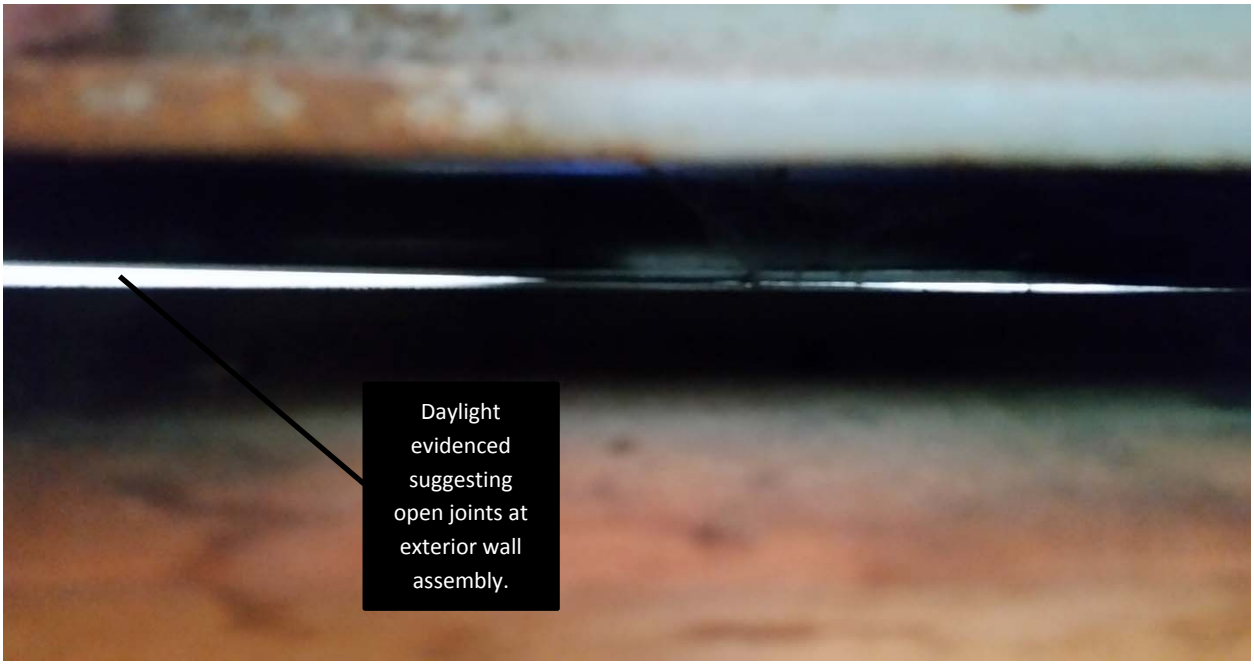
Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

The photo at the right was taken near the structural support tube steel at the east curtainwall wall system just below the false and active wall louvers. Minimal moisture was present in the wall cavity. The moisture staining on some framing members is believed to have been the result of water infiltration at the sills of the wall louvers immediately above this location. The batt insulation has been installed as noted on the Owner's as-built drawings in this location and incorporates a foil reinforced kraft paper (FRK) vapor barrier. (The silver facings on the insulation) It appears that the joints in the insulation have been taped between sections to maintain an occlusive seal.



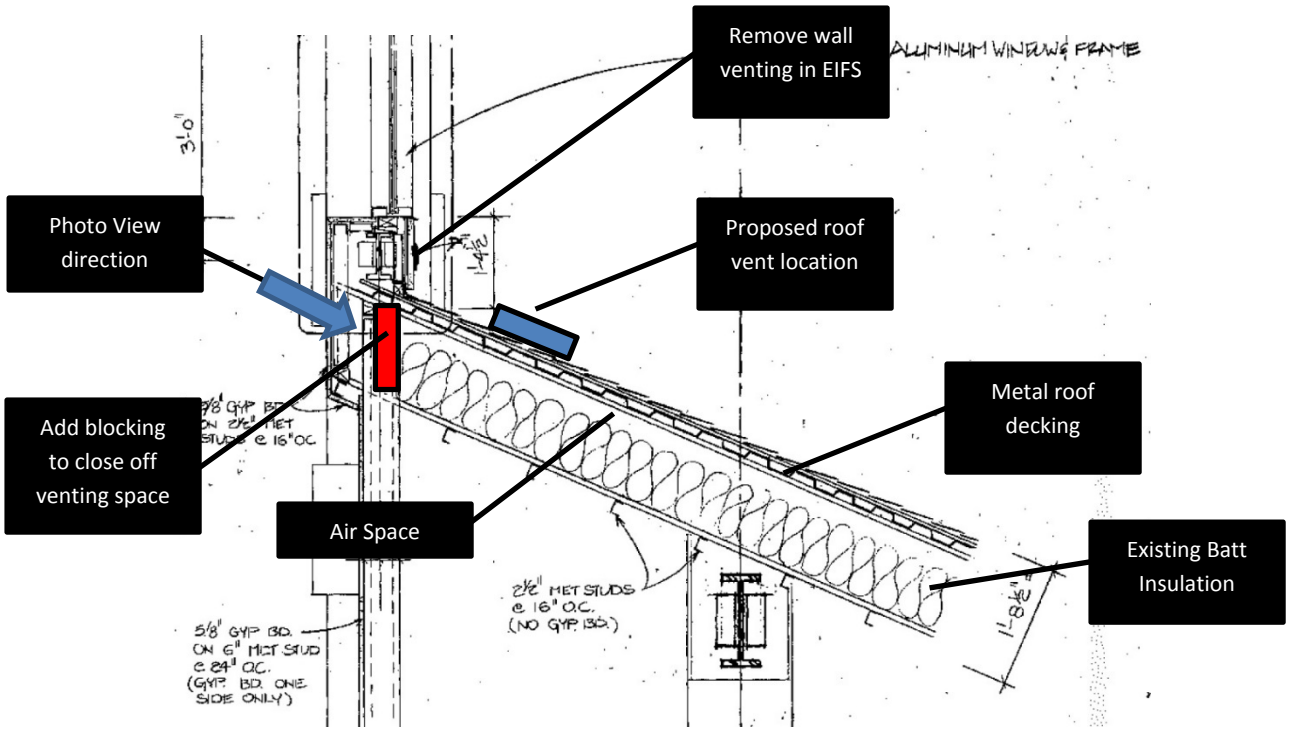
The photo above was taken at the location of one of the clerestory windows at the southeast portion of the building. The photo below is take at the juncture between the sloping roof system and the window sill above. You can see some evidence of water infiltration in the wood members. This may suggest that the window sills do not have end dams similar to the findings of the east and west window locations.



This photo was taken at an opening west of the Southeast wall louver that was opened up for inspection. As you can see, we were able to see daylight to the exterior in this photo. This means there is an open joint between the roof line and the sloping shingles that needs to be corrected. The photo below is looking towards the SE active wall louver. Note the significant cracks in the drywall surfaces due to the lack of control joints.

Note additional drywall cracking is forming at additional areas of the vaulted ceiling due to the lack of control joints being placed. Owner should consider correcting this issue. We do not feel this is a result of water infiltration but normal building movement of the materials.

The photo above is looking down the sloped ceiling cavity towards the south building elevation above the suspended batt insulation layer and below the roof decking. See original details this page for more location information. We suggest adding small square roof vents at the top of the sloped roof section so the louver vents in the EIFS below the window sills can be removed.

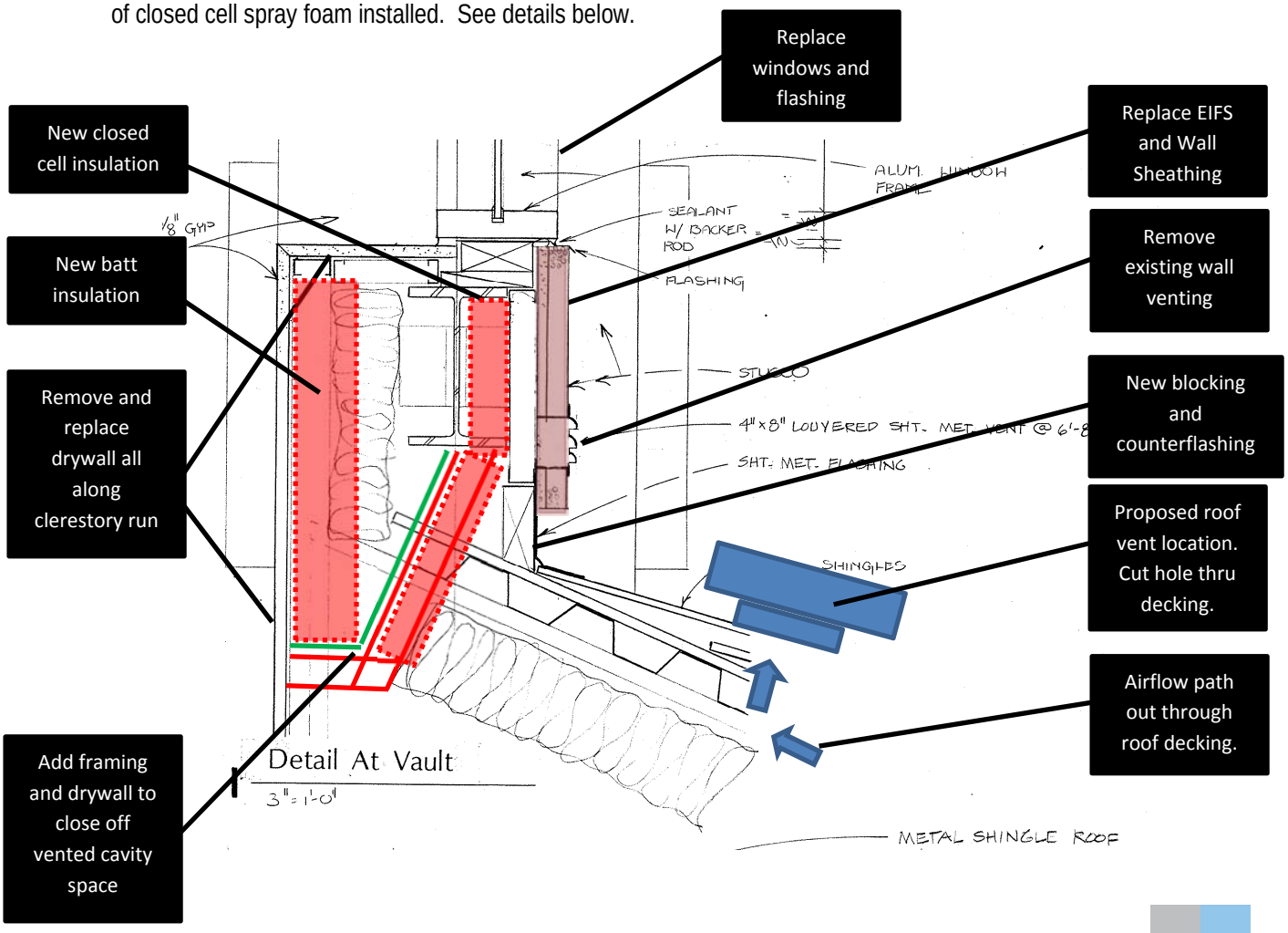


DISCUSSION, OPINIONS AND RECOMMENDATIONS

Our additional services are limited to the review of water damaged exterior wall components that compose the north and south facades of the building. This includes the metal standing seam and metal shingle roof systems and the masonry wall surfaces.

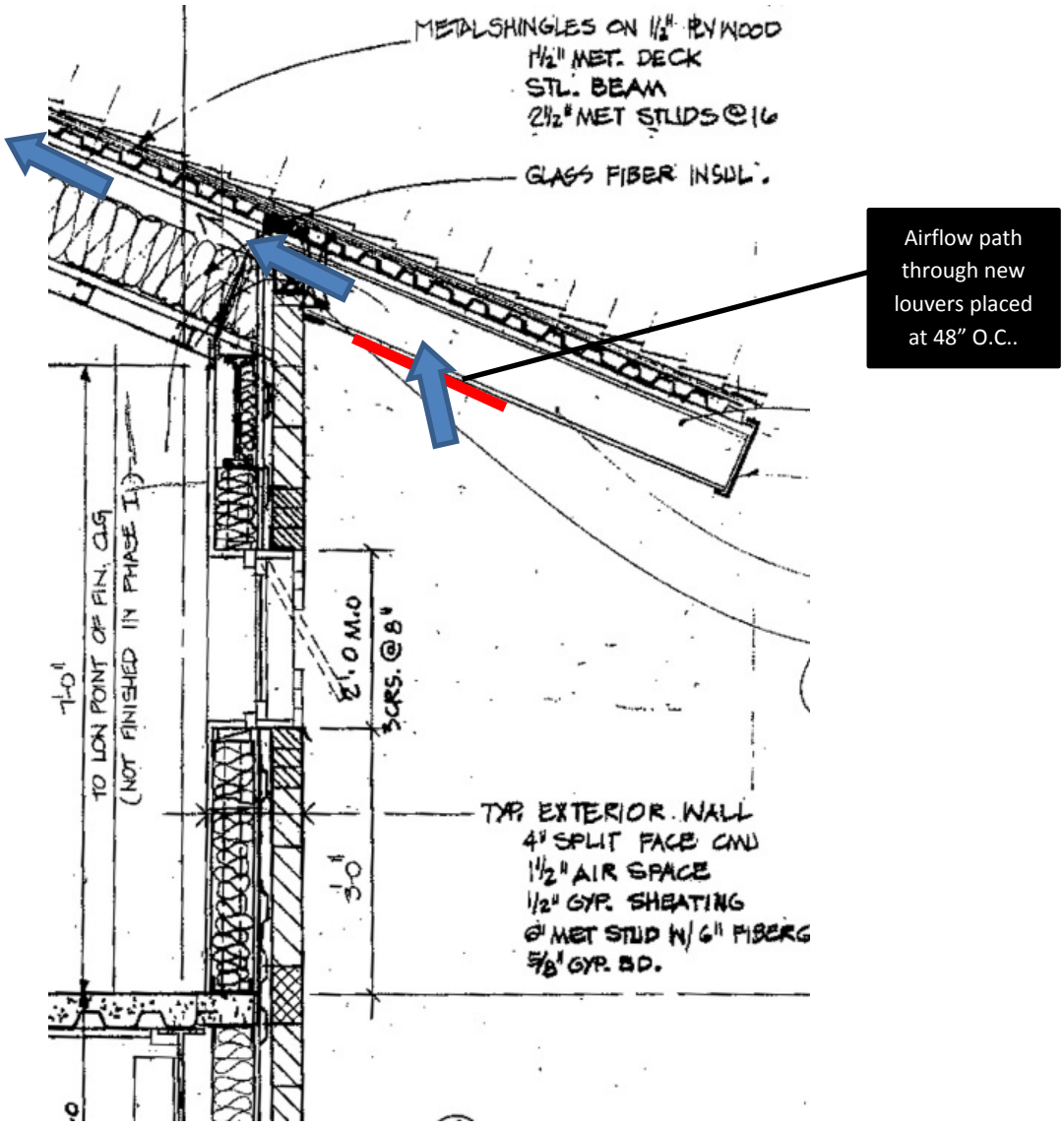
A review of the original construction drawings utilized to construct the building indicate a lack of sufficient detail to fully determine the original design intent of the various exterior wall assemblies. Our site observations noted above and our professional experience reinforce our opinion that the exterior wall assemblies for both masonry and EIFS surfaces, as currently installed, will not retard or divert water infiltration out of the wall systems without some improvements being made as noted below.

The exterior EIFS and associated sheathing at the clerestory window areas, all batt wall insulation (where installed), existing window systems and associated flashings should be removed and replaced from the exterior at the time of EIFS and window replacement work is conducted for the east and west elevations. By combining these replacement services into a single project, the owner will reduce the construction expenses for remobilization and labor increases over time. Upon existing EIFS and siding removal, new counterflashing should be installed at the existing roofing shingles and extended up a minimum of 8 inches behind the EIFS materials. The existing 4" x 8" louvered vents below the clerestory windows shown below can be removed after sloped roof system have new roof mounted vents installed and the top of the air space is completely sealed. The outboard side of the wall cavity should have 2 inches of closed cell spray foam installed. See details below.



The placement of the roof vents along the north and south elevations below the clerestory areas is noted in Section 9 of this report for your review. Roof vents are recommend to be placed at 48" on center. Key to this solution is to separate the sloped roofing system "venting" from entering the vertical wall system where the clerestory windows are located. This will separate warm air from below the sloped roof deck from getting into the upper wall cavity as originally designed; thus alleviating the large temperature differentials that would accelerate condensation from forming near and around the window locations.

We are also recommending that new soffit venting be installed by cutting 6 x 12 openings into the existing metal soffit at 48" on center as shown below to allow for cooler air to naturally ventilate the sloped roof system.



Interior drywall replacement at the clerestory window and EIFS replacement locations is anticipated along the length of the clerestory windows. Work will be limited to damaged soffits, window jamb, head and sill locations as well as near the false and active wall louver areas. Some drywall repairs are also needed at the locations of the curtainwall window systems near structural attachment. Costs for drywall repairs at the east and west curtainwall window locations (at the point of tie-in) are already accounted for in the original scope cost estimate for the east and west facades.

It should be noted that we are recommending additional drywall surfaces be repaired throughout the barrel vault location. Although outside the scope for this report, we have observed that the barrel vault, gypsum board ceiling assembly does not incorporate appropriately spaced control joints as recommended by the national gypsum construction handbook to retard drywall cracking. Normally control joints in this application would be placed at +/- 20 foot intervals following the curvature of the ceiling assembly.

The installation of new control joints in the vaulted ceiling assembly can be accomplished without the need to remove the existing suspended drywall surfaces assuming the metal sub framing was installed parallel to the length of the barrel vault as shown on the original contract documents. The proposed control joints would simply be “cut into” and taped into the existing ceiling assembly. After installation, the entire ceiling would require repainting including the ceiling mural if desired by the library board. Costs for these alternative repairs have been identified separately in Section 10 of this updated report.

All existing masonry surfaces at the exterior of the building require detergent or chemical cleaning to remove observed organic staining. After masonry surfaces are cleaned. They require the installation of a “breathable sealer” to retard moisture penetration into the wall surfaces. These sealers can be either clear, to maintain the original design appearance or opaque, which would allow the library to change the color of the masonry surfaces. Brick masonry “banding” would not require sealing.

The larger masonry concern is the current installation at the base of the masonry wall surfaces placed immediately on top of existing concrete foundation wall systems. No visible thru wall flashing was observed nor were weep holes. These two products are designed to shed water out of the masonry wall cavity and away from the building. Although water infiltration at the base of the masonry wall systems was only observed at the basement mechanical room exterior wall louver, the Library board may wish to consider installing the recommended flashing and weep holes to further protect the building asset from water infiltration. Costs to perform this work have been identified separately as an alternate on our cost estimate noted in section 10 of this report.

COST INFORMATION

The overall cost to correct the conditions noted above for the north and south facades can be found in Section 10 of this revised report for your review and consideration.

Kluber reserves the right to make modifications to the preliminary estimate during the implementation phase of the work if the means and methods of construction change from what is presented herein.

DISCLAIMERS AND QUALIFICATIONS

This supplemental report does not express or imply any warranty of the building but only addresses the conditions for the portion that was accessible and observed at the time of our site survey.

The information contained in this supplemental report represents our professional opinion based on the observed conditions. The opinions of this supplemental report are limited to the observed conditions only as viewed from the ground or as viewed during invasive testing.

Please feel free to call me if you have any questions regarding the above information.

Sincerely,

Christopher Hansen, AIA, NCARB
Vice President
Kluber Architects + Engineers

Encl.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9636

Description:
Southwest upper roof location near the louvers. Note that the furthest louver to the west is a "false" louver. On the inside of the building, we confirmed some water infiltration at this false louver location which may suggest that the installation may not be fully weather tight.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9638

Description:
We noted that the clerestory window heads have vented louvers in them. The venting of the underside of the roof decking is common however this condition relies heavily on the proper placement of the inboard insulation materials and a fully occlusive vapor barrier to be installed. Invasive testing noted the interior bat insulation is “inboard” of the venting area and appears to be operating as designed.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9641

Description:
Under window vents at the upper clerestory windows have all been caulked over. We believe the original intent was for this vent to be active venting for the lower shingle roof area. After invasive inspection, we are recommending that these vents be removed and additional roof venting added in the shingle roof sections.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9644

Description:
View looking from the SW mechanical roof platform to the SW corner of the building.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9645

Description:
View from the SW mechanical roof area looking to the east. We noted a slight undulation in the roof decking near the east end of the building.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9654

Description:
Some cracked open joints are noted at the upper clerestory window, inside corner EIFS locations. Window sealant joints were also observed to have been cracked at several upper window locations.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9655

Description:
South wall upper clerestory window counterflashing below a window at the sealed in roof vent. Note that some of the EIFS in this location has come loose and did not appear to have been properly back-wrapped with reinforcing mesh.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9663

Description:
NW mechanical roof platform looking towards the NW louvers. Note the western most wall louver is a false louver that is inactive. Interior moisture near this locations suggests that the wall louver may have been improperly installed.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9665

Description:
Downspout from upper gutter over main entrance doorway appears in good condition for a building of this age.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9670

Description:
Perimeter sealant joints at the louvers appears dried and cracked and should be replaced. An open joint at the sill of one of the louvers was visible. Invasive testing indicates that the louvers should all be removed and new counterflashings installed to properly drain to the exterior of the building.

INSPECTION PHOTO

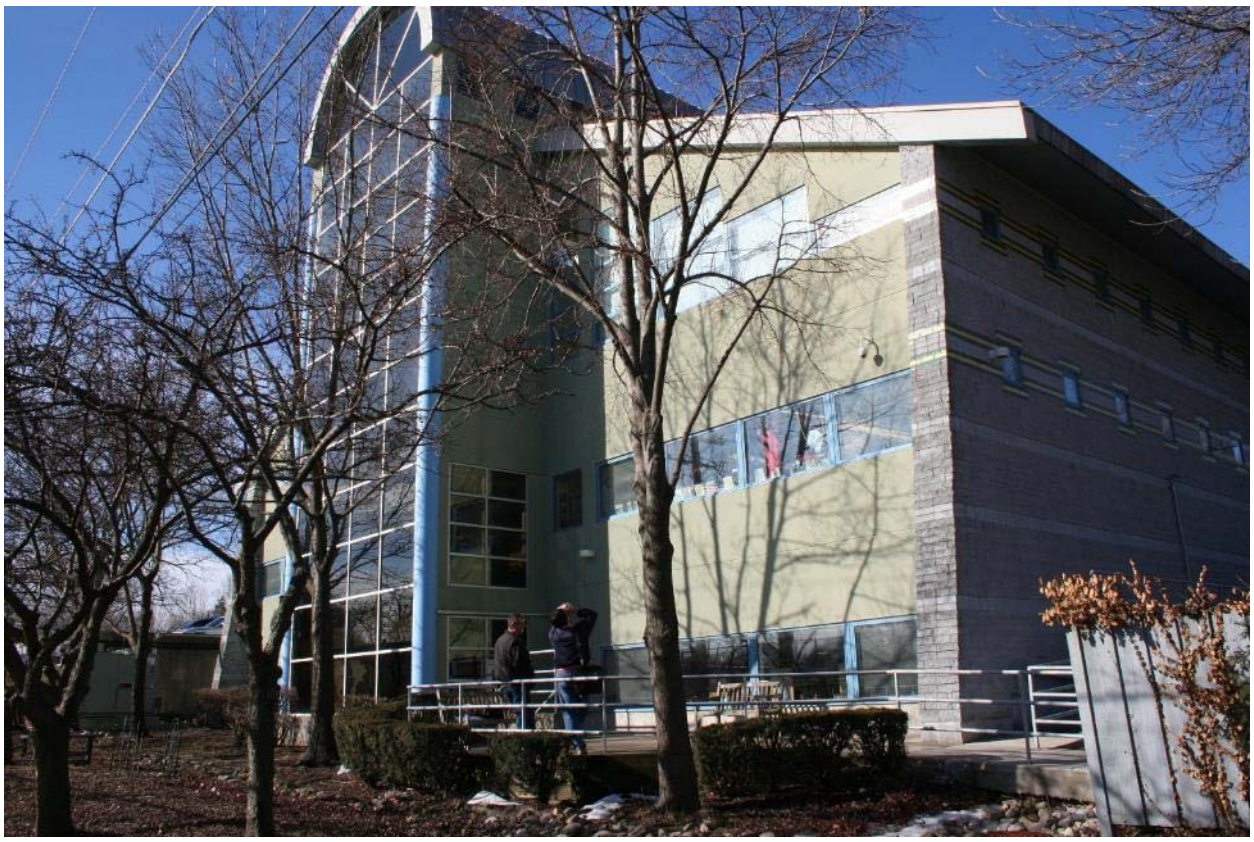
Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9672

Description:
North clerestory window wall venting louver is caulked in similar to all south side louvers. Note the EIFS under the louver appears to have deteriorated as evidenced by the white insulation board that is visible.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428



INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9712

Description:
Northeast corner of the building looking towards the split face CMU and clay unit masonry accent bands. Masonry units in this location were found to be soiled and appear to need to be cleaned and re-sealed to prevent moisture penetration.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9716

Description:
East façade looking towards the SE corner of the building. Note the split face and clay unit masonry is beginning to discolor at this location as well and will require cleaning and sealing to prevent water moisture penetration.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9736

Description:
NE corner of building EIFS / Windows to masonry condition for reference. Note staining on the split face block that needs to be cleaned.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9775

Description:
SW corner at first floor operable windows. Note combinations of split face block, smooth face block and clay unit masonry.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9776

Description:
SW corner of building looking up at second floor windows. A few masonry cracks were observed in the smooth face concrete masonry units.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9832

Description:
SW barrel vault condition near the louver location. The "false" louver is on the outside of the building at the location of the recessed drywall box-out. Note the water infiltration occurring at this location and drywall cracking occurring at various locations. Invasive inspection at the SE false louver suggests some water infiltration at this location.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A9842

Description:
A view looking up from the second floor towards the SW round steel column. Note the cracked corner bead at the recess leading to the false louver at the exterior and some moisture damage to the drywall near the column to beam location. Excessive drywall cracking at the length of the barrel vault was evident and needs to be repaired.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A0208

Description:
A view at the basement mechanical room near the fresh air intake louver system. Note some moisture evident at the area well leaching in from the exterior.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A0554

Description:
A view of the south elevation looking up towards the roof overhang. Note some staining of the fascia's is common for this building material. Also note the large sealant joint at the top of masonry wall condition. This joint may have been the location of the original soffit venting however the original drawings are vague if soffit vents were called out at this location.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A0557

Description:
View looking towards southwest corner of the building. Note the excessive staining at the masonry pier locations near the downspout connection. This staining is believed to be organic deposits that should be easily cleaned with detergent based cleaning solutions.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A0657

Description:
South elevation looking towards the roof areas and the south mechanical well. Note the staining of the split face concrete masonry units.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A0737

Description:
A view of the south elevation looking towards the southeast corner of the building. Less masonry staining evident at this location.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1135

Description:
South wall at southeast corner foundation. It appears that masonry thru wall flashing or weep vents have not been installed as commonly found at the lower level of the masonry wall systems ate the north and south elevations. This is an unusual condition for masonry cavity wall construction.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1143

Description:
A closer view of the top of foundation wall condition. No weep vents are visible.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1323

Description:
Looking at the Northwest masonry pier on the North side of the building. Noticeable staining is occurring on the split face concrete masonry units. This staining is believed to be organic material that should be easy to clean with detergent based cleaning materials.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1327

Description:
North elevation looking up at large sealant joint at the top of masonry wall condition. This may be the former location of the soffit venting.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1329

Description:
Looking east on the north side of the building towards the park. Block masonry appears to have some water "wicking". Split face block is a porous material and requires a clear or opaque sealer to be installed to retard moisture infiltration.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1354

Description:
Base of masonry wall condition at North side of the building. No weep vents are noted at this location. Thru-wall flashing is also not visible.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1401

Description:
A closer view of the top of wall condition. Note the very unusual “struck back” large mortar joint at the top of the foundation wall. This was likely the result of improperly placed and leveled concrete foundation wall systems.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1458

Description:
Raked masonry joints at the tapered masonry piers at the four corners of the building. Since the original design incorporated "stepped" masonry piers constructed out of split face materials, these exposed horizontal "ledges" need to be properly sealed with a clear or opaque product to retard moisture penetration.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1506

Description:
A close up view of the top of concrete foundation. No visible weep vents or rope wick weeps are noted. No thru-wall flashing has been found.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A5700

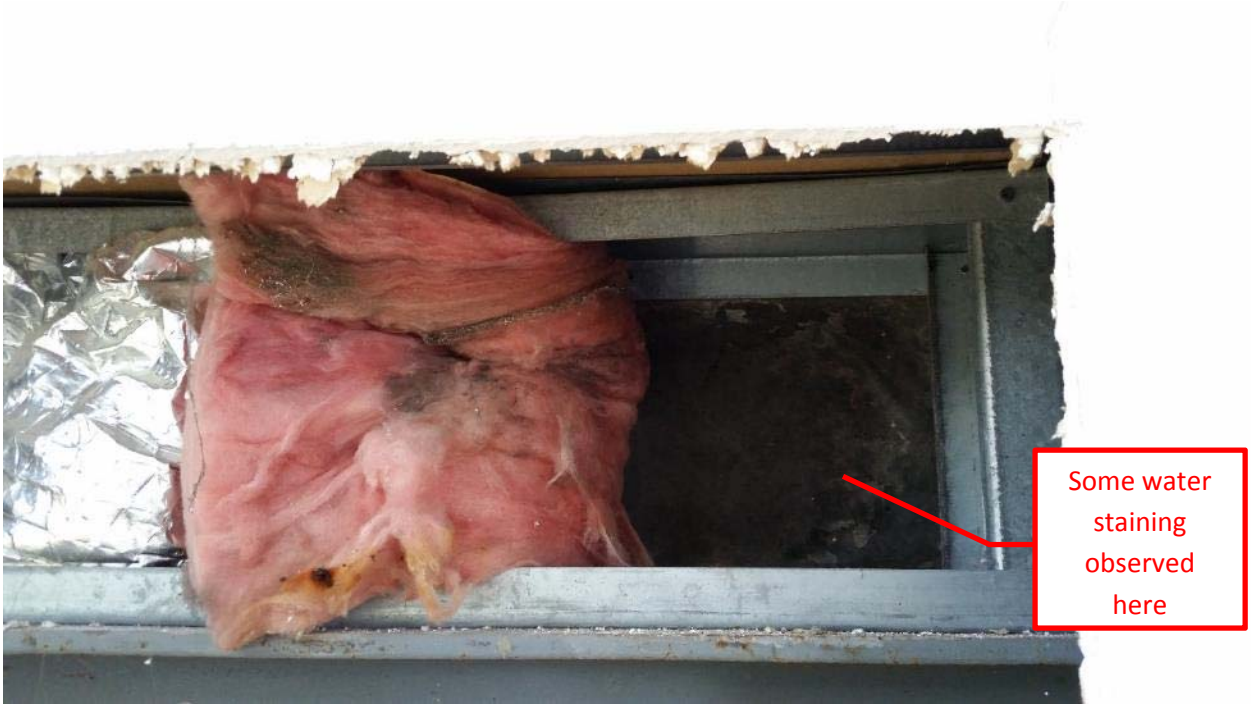
Description:
Phot was taken above the north ceiling at the Library Director's office at the vertical wall to sloped ceiling transition. Note the open joint at this transition point that was not insulated nor was the gap filled with insulation.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A5714

Description:
Condensation was noted in the ceiling cavity at the Library Directors office. This was likely due to condensation build-up and not from water infiltration from the exterior. This area is just below the diagonal roof framing in the previous photo that showed an open gap in the “top of wall surfaces”.



INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1124

Description:
Photo taken at the southeast barrel vault ceiling location just below the “false louver” on the exterior of the building. Some moisture staining was noted on the surface of the exterior wall sheathing. Moisture is believed to be the result of improper sill end damming at the louver locations as well as failed sealant joints at the perimeter of the louvers.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A1423

Description:
This photo is taken at the southeast barrel vault at the head of the false louver location. The contractor performing the investigative work removed a portion of the insulation materials at this location to allow Kluber to view inside the wall cavity. The insulation joints were lapped and stapled between insulation sections to form an occlusive seal. No visible moisture concerns were noted at this location.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A2048

Description:
A further view of the southeast barrel vault roof area where invasive testing was performed showing the locations of the investigations.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A2057

Description:
Invasive location just below the far southeast clerestory window location that was opened up for review.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A2103

Description:
The invasive work also included opening up the barrel vault just above the southeast clerestory window location. You can see excessive cracking in the drywall surfaces as shown.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A2106

Description:
A view to the head location of the southeast “false louver” location that was opened up for inspection.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A3823

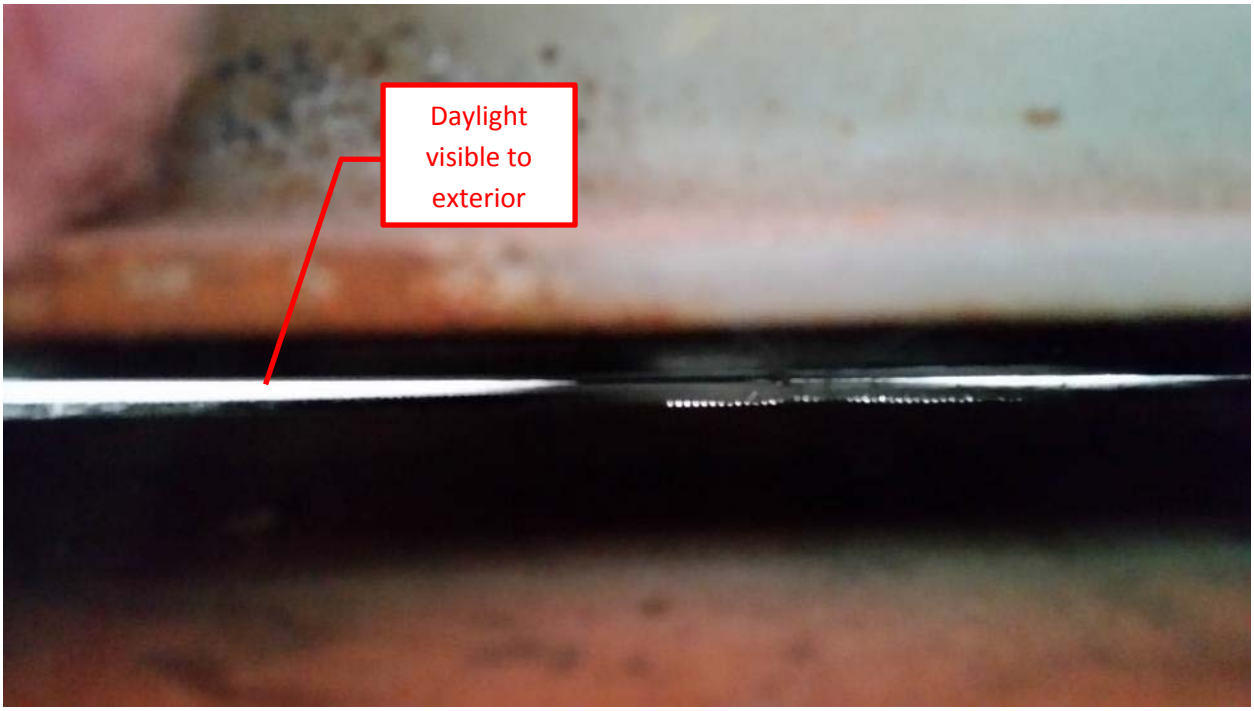
Description:
This photo is taken at the southeast clerestory window sill where wood blocking was installed at the sloped metal shingle roof system to the vertical wall. You will note water infiltration has damaged some of the wood blocking suggesting that the counterflashings for the roofing and window sills are not installed properly to drain water away from the wall assembly.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A3842

Description:
This photo was taken below the southeast clerestory window sill looking towards the southeast. The insulation in this location is properly installed towards the inside face of the building with the foil reinforced kraft (FRK) vapor retarder towards the interior of the building.



INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A4029

Description:
This photo was taken below a clerestory window sill just below the “spring-point” in the steel structure for the barrel vault roof. You can see daylight at this point suggesting air infiltration is occurring at this point. This location is near the stopping point of the EIFS materials on the exterior of the building.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A4038

Description:
Photo looking towards operational exhaust louver at the southeast corner of the building. Note the significant drywall cracks in the barrel vault and at the top of the louver head.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A4048

Description:
Additional cracks in the drywall at the barrel vault. These cracks occur approximately every 10 feet across the length of the barrel vault. In modern day applications, drywall control joints would be installed to allow for movement and controlled cracking at designated control joint locations.

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A4051

Description:
Additional barrel vault cracking is visible at multiple locations.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

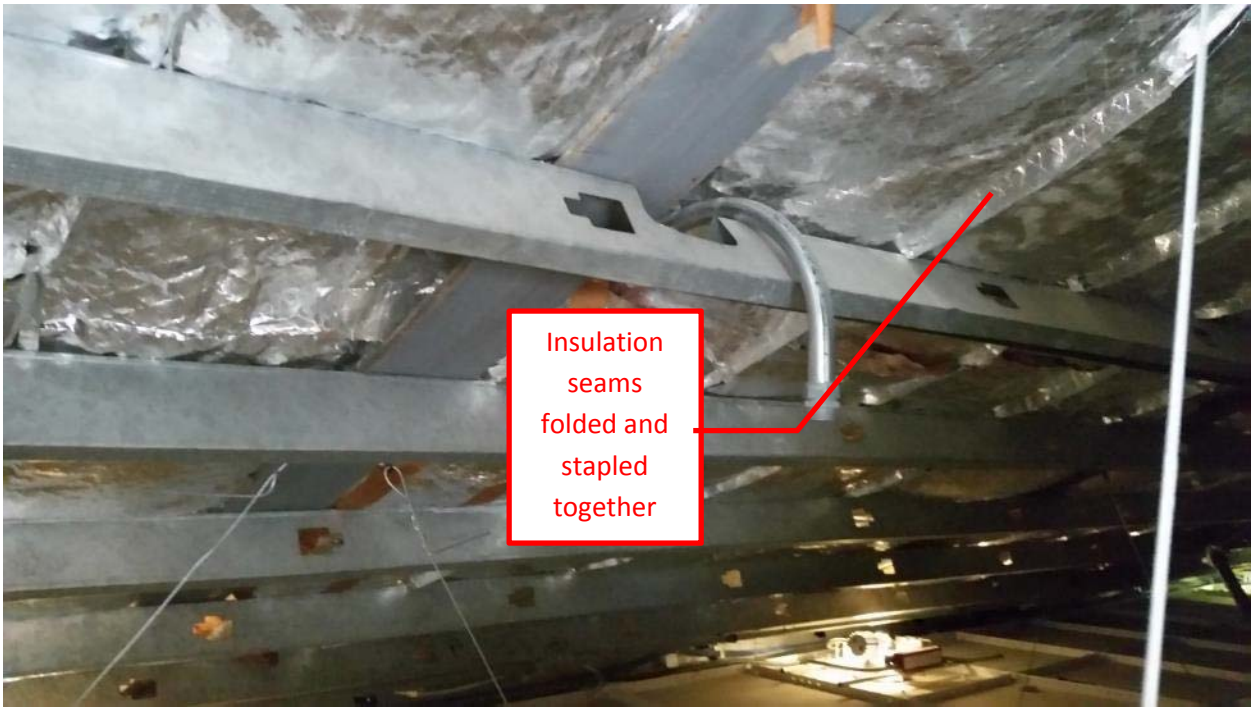
Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428

INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A4236

Description:
View looking down sloped ceiling cavity to the south above the insulation layer with metal roof decking above. Heat was evidenced coming from this cavity because natural ventilation is not present to cool the space.



INSPECTION PHOTO

Project: LaGrange Park Public Library Water Infiltration Investigative Study

Photo Number: A5240

Description:
View to sloped ceiling cavity at second floor southeast corner. Metal framing was installed to support the foil reinforced kraft (FRK) paper vapor retarder insulation products. The insulation products were stapled between the batt insulation sections.

INSPECTION PHOTO

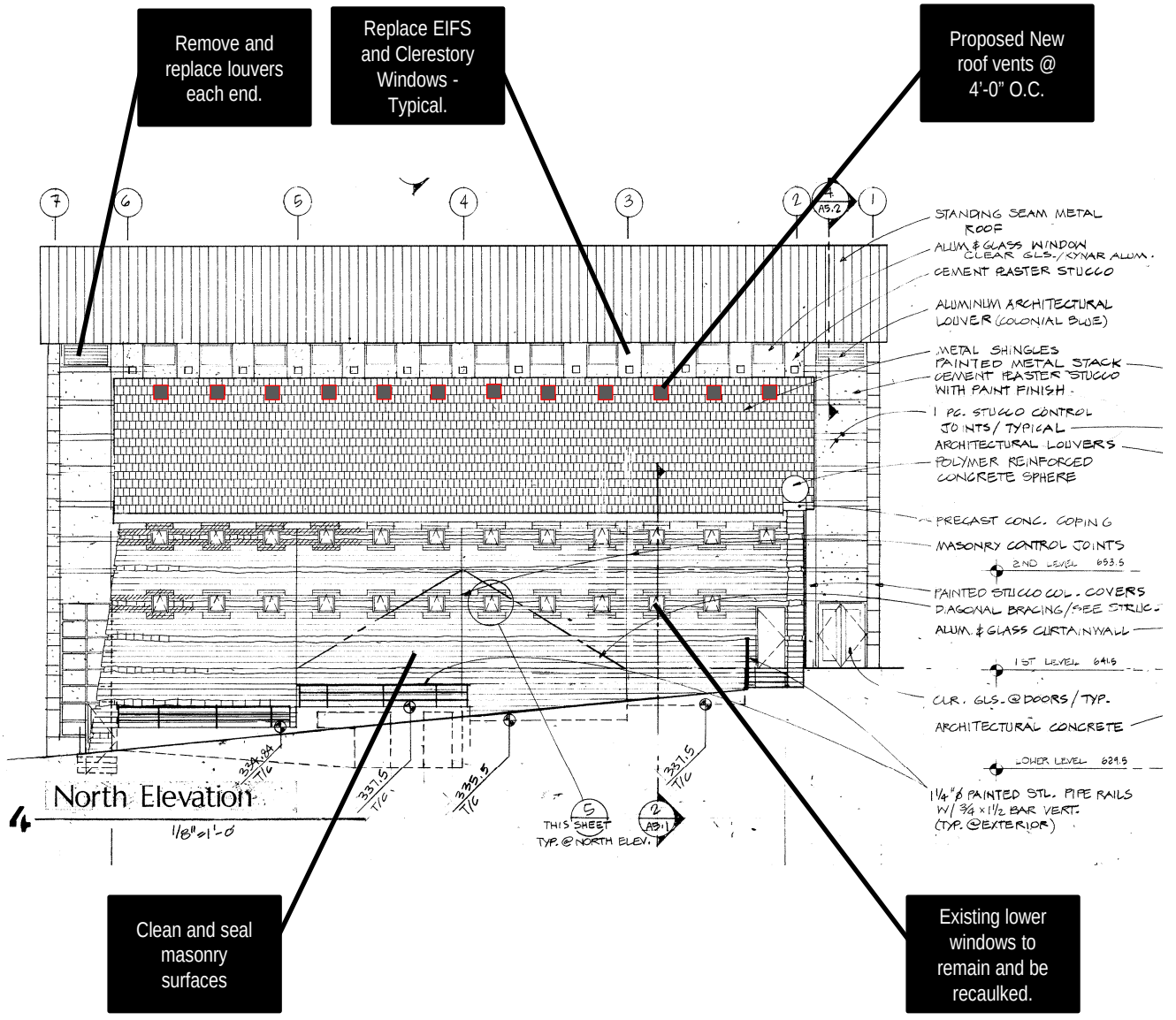
Project: LaGrange Park Public Library Water Infiltration Investigative Study

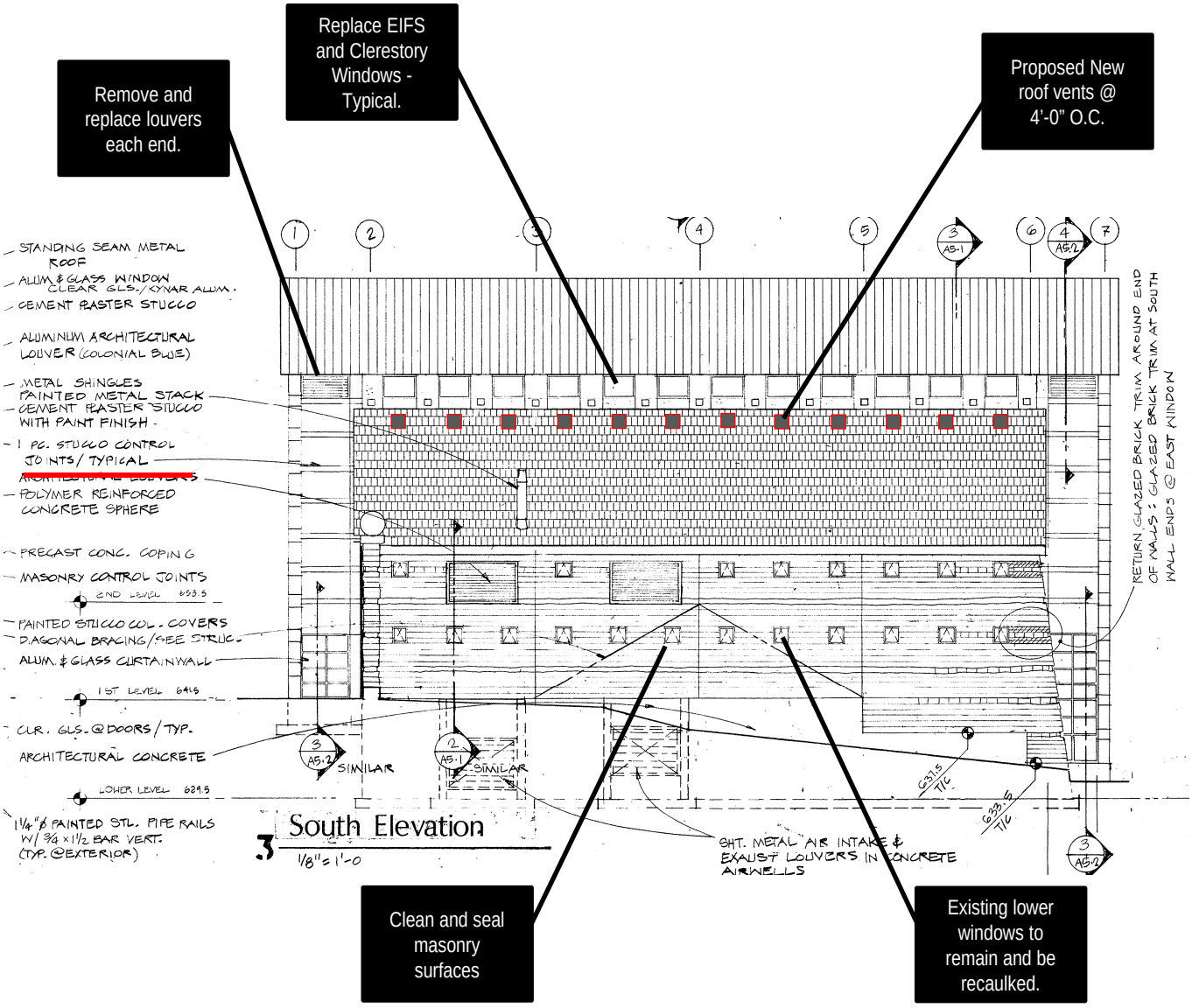
Photo Number: A5244

Description:
Another view of the sloped ceiling area supporting the batt insulation.

Batavia Office
10 South Shumway Avenue
Batavia, Illinois 60510
630.406.1213

Gurnee Office
4212 Old Grand Avenue, Suite 101
Gurnee, Illinois 60031
847.336.3428


Remove and replace louvers each end.
Replace EIFS and Clerestory Windows - Typical.
Proposed New roof vents @ 4'-0" O.C.
STANDING SEAM METAL ROOF
ALUM. & GLASS WINDOW CLEAR GLS./KYNAR ALUM.
CEMENT PLASTER STUCCO
ALUMINUM ARCHITECTURAL LOUVER (COLONIAL BLUE)
METAL SHINGLES
PAINTED METAL STACK
CEMENT PLASTER STUCCO WITH PAINT FINISH
1 PC. STUCCO CONTROL JOINTS/ TYPICAL
ARCHITECTURAL LOUVERS
POLYMER REINFORCED CONCRETE SPHERE
PRECAST CONC. COPING
MASONRY CONTROL JOINTS
2ND LEVEL 653.5
PAINTED STUCCO COL. COVERS
DIAGONAL BRACING/SEE STRUC.
ALUM. & GLASS CURTAINWALL
1ST LEVEL 641.5
CLR. GLS. @ DOORS/TYP.
ARCHITECTURAL CONCRETE
LOWER LEVEL 629.5
1 1/4" Ø PAINTED STL. PIPE RAILS W/ 3/4 x 1 1/2 BAR VERT. (TYP. @ EXTERIOR)
North Elevation
1/8"=1'-0"
THIS SHEET
TYP. @ NORTH ELEV.
Clean and seal masonry surfaces
Existing lower windows to remain and be recaulked.


Remove and replace louvers each end.
Replace EIFS and Clerestory Windows - Typical.
Proposed New roof vents @ 4'-0" O.C.
STANDING SEAM METAL ROOF
ALUM. & GLASS WINDOW CLEAR GLS./KYNAR ALUM.
CEMENT PLASTER STUCCO
ALUMINUM ARCHITECTURAL LOUVER (COLONIAL BLUE)
METAL SHINGLES PAINTED METAL STACK
CEMENT PLASTER STUCCO WITH PAINT FINISH
1 PC. STUCCO CONTROL JOINTS / TYPICAL
POLYMER REINFORCED CONCRETE SPHERE
PRECAST CONC. COPING
MASONRY CONTROL JOINTS
2ND LEVEL 653.5
PAINTED STUCCO COL. COVERS
DIAGONAL BRACING/SEE STRUC.
ALUM. & GLASS CURTAINWALL
1ST LEVEL 629.5
CLR. GLS. @ DOORS / TYP.
ARCHITECTURAL CONCRETE
LOWER LEVEL 629.5
1 1/4" Ø PAINTED STL. PIPE RAILS W/ 3/4 x 1 1/2 BAR VERT. (TYP. @ EXTERIOR)
RETURN GLAZED BRICK TRIM AROUND END OF WALLS; GLAZED BRICK TRIM AT SOUTH WALL ENDS @ EAST WINDOW
SIMILAR
SIMILAR
SHT. METAL AIR INTAKE & EXAUST LOUVERS IN CONCRETE AIRWELLS
3 South Elevation
1/8" = 1'-0
Clean and seal masonry surfaces
Existing lower windows to remain and be recaulked.

Preliminary Opinion of Probable Costs
Project Cost Summary

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Proj. Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Construction Floor Area: 0 SF
Remodeled Floor Area: 4,510 SF
Total Project Floor Area: 4,510 SF

LINE	COST ITEM		COST	COST / SF
01	Building New Construction Cost		$0	$0.00
02	Building Remodel Construction Cost		$363,949	$80.70
03	Building Design Contingency	(10.00%)	$36,395	$8.07
04	SUBTOTAL BUILDING CONSTRUCTION COST		$400,344	$88.77
05	General Contractor OH & P	(15.00%)	$60,052	$13.32
06	General Contractor Bond & Insurance	(2.00%)	$9,208	$2.04
07	TOTAL BUILDING CONSTRUCTION COSTS		$469,604	$104.13
08	Site Work Construction Cost		$5,000	$1.11
09	Site Design Contingency	(2.00%)	$100	$0.02
10	SUBTOTAL SITE CONSTRUCTION COST		$5,100	$1.13
11	General Contractor OH & P	(15.00%)	$765	$0.17
12	General Contractor Bond & Insurance	(2.00%)	$117	$0.03
13	TOTAL SITE CONSTRUCTION COSTS		$5,982	$1.33
14	Building Construction Contingency	(15.00%)	$70,441	$15.62
15	Site Construction Contingency	(2.00%)	$120	$0.03
16	Estimated Permit Fees			$0.00
17	Fixtures Furniture and Equipment	(0.00%)	$0	$0.00
18	A/E Fees	(9.75%)	$46,370	$10.28
19	TOTAL SOFT COSTS		$116,931	$25.93
20	TOTAL PROJECT COST		$592,517	$131.38

21	Alternates:		
	Alternate No. 1: Remove and replace lower masonry CMU block 2 feet high across the tops of all foundations wall systems at the north, south and west levations and furnish and install new thru wall flashings and weep vents at base of wall to allow wall system to properly drain to exterior. 273 LF x 2 feet high = 546 SF of removal and replacement. Note: Work will need to be performed in alternating 4 foot wall sections to maintain the integrity of the wall and then repointed after installation.	$34,500	
	Alternate No. 2: Correct cracked drywall surfaces at the barrel vaulted ceiling area. Furnish and install control joints at approximately 20 foot centers to the curvature of the vault radius to control cracking. This approach assumes that the supplemental framing for the vault is installed as shown on the original construction documents. Work also includes retaping the barrel vault areas and sanding smooth. 3,665 SF barrel vault ceiling surface area. An allowance for re-painting the ceiling mural is noted below.	$18,750	
	Vaulted Ceiling Mural Painting Allowance: After control joint placement in the vaulted ceiling, furnish and install a painted mural, multi-colored pattern to match existing. Note: this allowance is an estimate and assumes that existing scaffolding is in place with base drywall work to repair the drywall surfaces and install control joints in the gypsum board. 3,665 SF.	$28,770	
Notes:	Cost projections assume FY 2016 implementation. If work is performed in any other year, adjustments will be necessary to account for inflation and changes in material and labor costs.		

Preliminary Opinion of Probable Costs
Construction Cost Summary

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Proj. Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Kluber Architects + Engineers

Project Size	
New Construction Area:	0 SF
Remodeled Area:	4,510 SF
Total Project Area:	4,510 SF

DIVISION	DESCRIPTION - OPTION A	REMODELED COST	REMODELED COST / SF
Facility Construction		$358,949	$79.59
DIV 01	GENERAL CONDITIONS	$125,425	$27.81
DIV 02	EXISTING CONDITIONS	$49,514	$10.98
DIV 03	CONCRETE	$0	$0.00
DIV 04	MASONRY	$29,636	$6.57
DIV 05	METALS	$3,500	$0.78
DIV 06	WOODS, PLASTICS AND COMPOSITES	$5,850	$1.30
DIV 07	THERMAL AND MOISTURE PROTECTION	$68,546	$15.20
DIV 08	OPENINGS	$30,142	$6.68
DIV 09	FINISHES	$46,336	$10.27
DIV 10	SPECIALTIES	$0	$0.00
DIV 11	EQUIPMENT	$0	$0.00
DIV 12	FURNISHINGS	$0	$0.00
DIV 13	SPECIAL CONSTRUCTION	$0	$0.00
DIV 14	CONVEYING EQUIPMENT	$0	$0.00
Facility Services		$5,000	$1.11
DIV 21	FIRE SUPPRESSION	$0	$0.00
DIV 22	PLUMBING	$0	$0.00
DIV 23	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)	$2,500	$0.55
DIV 25	INTEGRATED AUTOMATION	$0	$0.00
DIV 26	ELECTRICAL	$2,500	$0.55
DIV 27	COMMUNICATIONS	$0	$0.00
DIV 28	ELECTRONIC SAFETY AND SECURITY	$0	$0.00
Site and Infrastructure		$5,000	$1.11
DIV 31	EARTHWORK	$0	$0.00
DIV 32	EXTERIOR IMPROVEMENTS	$5,000	$1.11
DIV 33	UTILITIES	$0	$0.00
DIV 34	TRANSPORTATION	$0	$0.00
	TOTAL CONSTRUCTION COST	$368,949	$81.81

Notes:

Preliminary Opinion of Probable Costs
Construction Cost Detail

Kluber Architects + Engineers

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 01 -	General Requirements					$125,425	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
01 30 00	ADMINISTRATIVE REQUIREMENTS					$39,975	
	Superintendent (Full Time)	3	mo	9,450.00	$28,350		$113,400/yr salary
	Project Management (Part Time)	3	mo	3,875.00	$11,625		
01 40 00	QUALITY REQUIREMENTS					$5,000	
	Construction Testing	1	ls	5,000.00	$5,000		Allowance for water infiltration testing
01 50 00	TEMPORARY FACILITIES AND CONTROLS					$75,450	
	Temporary Utilities	1	ls	2,000.00	$2,000		
	Field Office	1	ls	3,000.00	$3,000		Added for 3 months only
	Temporary Toilets	1	ls	750.00	$750		Added for 3 months only
	Temporary Barriers	1	ls	15,000.00	$15,000		
	Construction Fence	1	ls	4,500.00	$4,500		
	Temporary Enclosures	1	ls	8,500.00	$8,500		
	Special Security Measures	1	ls	2,500.00	$2,500		
	Dumpsters	1	ls	4,200.00	$4,200		
	Interior Scaffolding Allowance	1	allow	35,000.00	$35,000		Fixed scaffolding at vaulted ceiling areas.
01 70 00	EXECUTION AND CLOSEOUT REQUIREMENTS					$5,000	
	Final Cleaning	1	ls	5,000.00	$5,000		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 02 -	Existing Conditions					$49,514	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
02 40 00	DEMOLITION AND STRUCTURE MOVING					$49,514	
	Selective Demolition: Interior Drywall Walls	2,812	sf	4.65	$13,076		Mostly high work in vaulted locations.
	Selective Demolition: Interior Acoustical Ceiling Panels and grid to give access to seal wall joints above ceiling.	800	sf	2.50	$2,000		
	Selective Demolition: Exterior EIFS Materials	1,650	sf	4.55	$7,508		
	Selective Demolition: Exterior Window Systems	336	sf	11.25	$3,780		
	Selective Demolition: Remove portions of existing exterior metal soffits to add ventilation grilles.	48	ea	125.00	$6,000		High work off boom lifts
	Selective Demolition: Exterior Wall Sheathing and Batt Insulation	1,650	sf	3.00	$4,950		
	Selective Demolition - Metal roofing shingles for new counterflashing and sloped roof venting installation	600	sf	12.00	$7,200		Keep existing shingles for re-use.
	False and Active louver demolition	0	ea	225.00	$0		Accounted for in base number
	Remove and re-install owner furniture and shelving systems including allowance to temporarily store and re-shelve books.	1	allow	5,000.00	$5,000		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 03 -	Concrete					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
03 30 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 04 -	Masonry					$29,636	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
04 20 00	UNIT MASONRY					$29,636	
	Exterior Wall Construction						
	Masonry cleaning - detergent based	7,947	SF	1.25	$9,934		
	Masonry Re-pointing allowance	1	allow	5000	$5,000		
	Masonry Clear Sealer	7,947	SF	1.85	$14,702		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 05 -	Metals					$3,500	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
05 40 00	COLD-FORMED METAL FRAMING					$2,500	
	Exterior Wall Stud Replacement Allowance	1	allow	2500.00	$2,500		For rusted components determined to need replacement.
05 50 00	METAL FABRICATIONS					$1,000	
	Lintels Repair / Replacement allowance where needed	1	allow	1000.00	$1,000		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 06 -	Woods, Plastics and Composites					$5,850	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
06 10 00	ROUGH CARPENTRY					$5,850	
	Wood Blocking - Treated Lumber replacement at window jambs, sills, heads and new roof blocking at high/low condition	1	allow	5850.00	$5,850		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
DIV 07 -	Thermal & Moisture Protection					$68,546	
07 21 00	THERMAL INSULATION					$5,048	
	Exterior Wall - Closed Cell Spray Foam: 2" Thick = R-12	1,825	sf	2.30	$4,198		
	Closed Cell spray foam at window jamb shim spaces - allowance	1	allow	850	$850		
07 24 00	EXTERIOR INSULATION AND FINISH SYSTEMS					$27,968	
	2" EPS foam insulation over 5/8" Dens Glass sheathing. Drainable & Breathable system	1,650	sf	16.95	$27,968		
07 60 00	FLASHING AND SHEET METAL					$24,030	
	Misc Flashing & Counterflashing Work	1	allow	12,750	$12,750		
	Re-Install metal roof shingles after roof vent installation	600	sf	15.00	$9,000		
	Sloped Roof Vents 12 x 12	24	ea	95.00	$2,280		
07 80 00	FIRE AND SMOKE PROTECTION					$2,000	
	Firestopping	1	allow	2000.00	$2,000		
07 90 00	JOINT PROTECTION					$9,500	
	Backer Rod and Sealant Joints in Exterior Wall Construction (window sealants, masonry controls joints, building expansion joints) - Allowance	1	allow	9500.00	$9,500		Inlcudes re caulking all windows in masonry surfaces scheduled to remain as installed.

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 08 -	Openings					$30,142	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
08 40 00	ENTRANCES, STOREFRONTS AND CURTAIN WALLS					$20,782	
	Storefront Window System replacement at clerestory w/ 1" insulated glazing tinted, tempered, kynar finish	336	sf	61.85	$20,782		Military blue paint to match existing frame color
08 90 00	LOUVERS AND VENTS					$9,360	
	Wall louvers - Rain Resistant - Drainable.	0	ea	485.00	$0		Cost in east / west façade restoration
	Soffit Venting - North & South overhangs	48	ea	195.00	$9,360		High work off boom lifts

Preliminary Opinion of Probable Costs
Construction Cost Detail

Kluber Architects + Engineers

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 09 -	Finishes					$46,336	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
09 20 00	PLASTER AND GYPSUM BOARD					$36,938	
	5/8" Thick, Type X, Mold Resistant - Level 4 Finish on supplemental metal framing. Interior application.	3,750	sf	6.25	$23,438		Upper clerestory gypsum board replacement at length of vault and at north and south walls above acoustical ceilings.
	Drywall repairs at the clerestory window locations where drywall is to remain. Includes corner bead repairs/replacement and re-taping.	1	allow	5000.00	$5,000		
	Add additional drywall control joints at the soffit areas of the clerestory wall framing to control cracking.	1	allow	8500.00	$8,500		
09 50 00	CEILINGS					$3,960	
	Acoustical Ceilings	800	sf	4.95	$3,960		Affected areas of work only. Minor grid and tile removal and replacement.
09 90 00	PAINTING AND COATING					$5,438	
	Painting - Walls & Ceilings	3,750	sf	1.45	$5,438		Does not include painting radial vaulted ceiling locations. Refer to alternates.

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 10 -	Specialties					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
10 10 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 11 -	Equipment					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
11 10 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 12 -	Furnishings					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
12 20 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 13 -	Special Construction					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
13 10 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 14 -	Conveying Equipment					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
14 20 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 21 -	Fire Suppression					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
21 10 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 22 -	Plumbing					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
22 07 19	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Kluber Architects + Engineers

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 23 -	Heating, Ventilating and Air Conditioning (HVAC)					$2,500	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
23 30 00	HVAC AIR DISTRIBUTION					$2,500	
	Remove and reinstall existing smoke removal fans	0	ea	850.00	$0		Cost covered in East & West wall construction estimate.
	Temporarily relocate diffusers and re-install after exterior wall work is completed.	1	allow	2500.00	$2,500		

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 25 -	Integrated Automation					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
25 00 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 26 -	Electrical					$2,500	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
26 50 00	LIGHTING					$2,500	
	Temporarily relocate and re-install lighting near sloped ceiling locations.	1	allow	2500	$2,500		allowance, subject to revision

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 27 -	Communications					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 28 -	Electronic Safety and Security					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
28 31 00	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 21 -	Earthwork					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 32 -	Exterior Improvements					$5,000	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
02900	LANDSCAPING					$5,000	
	Restoration allowance	1	allow	5000.00	$5,000		North and south facades

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 33 -	Utilities					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
	NOT USED					$0	

Preliminary Opinion of Probable Costs
Construction Cost Detail

Project: La Grange Park Public Library Water Infiltration
Owner: La Grange Park Public Library
555 North La Grange Road, La Grange Park , IL
Date: 7/18/2015
Proj. No: 15-357-960
Status: ADDTL SVCS. - 100% Report Completion
Est. By: CJH

Project Size:
New Const.: 0 SF
Remodeled: 4,510 SF

DIV 34 -	Transportation					$0	
					Remodeling Costs		
Item	Description	Rem.	Unit	Unit Price	Subtotals	Totals	Notes
34 00 00	NOT USED					$0	