

PROJECT MANUAL

**Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park , IL 60131**

FOR

**THE VILLAGE OF FRANKLIN PARK
9501 BELMONT AVENUE
FRANKLIN PARK, IL 60131**



**2112 W. Galena Blvd, Ste 8-433 • Aurora, IL 60506
Phone: 630-844-0110 • Fax: 630-844-0330
Gary S. Patterson, Senior Consultant**

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SECTION 00100
INVITATION TO BID

March 20, 2013

To: All Bidders

Subject: Invitation to Bid

Project: Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park , IL 60131

Project No.: 13-501

Gentleman:

You are invited to submit a bid, for the above referenced project, to provide all work as described in the project manual and drawings dated 03-18-13 prepared by Patterson Consulting, Ltd.

The Village of Franklin Park, IL underground drinking water reservoir is located at 9501 Belmont Avenue in Franklin Park , IL 60131 . The reservoir is a one million gallon capacity six sided concrete structure constructed shortly after 1945. Access to the interior of the structure is achieved through a man hole in its concrete ceiling. The structure is completely covered with approximately two feet of soil and mature sod topping.

The water containment vessel is rectangular in shape and measures approximately 125 feet long by 100 feet wide by 16 feet deep. The walls, base and ceiling are reported to consist of poured in place rebar reinforced concrete pad that is approximately 12 inches thick. There are a series of concrete columns installed on the interior of the reservoir that provide structural support for the ceiling pad.

The 12 inch thick poured in place rebar reinforced concrete ceiling has an expansion joint between concrete pad sections that bisects the construction both in length and width. The gap between ceiling sections is currently filled with asphalt impregnated fiberboard and covered with a flood coat pour of asphalt onto the concrete surface that extends about 12 to 18 inches on both sides of the joint.

The existing expansion joint waterproofing construction prevented groundwater infiltration to the interior of the reservoir until 2012. The performance of the expansion joint waterproofing detail has now become compromised at various locations and is allowing water infiltration to the interior. During the hot summer months of 2012, groundwater was discovered seeping into the reservoir through the ceiling expansion joint construction. The reservoir was drained and has remained in a dormant state since that time.

The Work for this Project consists of the complete replacement of all 225 feet of the existing hot asphalt waterproofing detail currently covering the expansion joint gap between pad sections. The new expansion joint detail will also extend from the horizontal surface about three (3) feet onto the vertical walls of the reservoir at four (4) separate perimeter edge locations.

The Village of Franklin Park is now interested in replacing the existing one million gallon drinking water reservoir expansion joint materials with new materials to completely replace the existing waterproofing construction and prevent further water infiltration into the interior of the reservoir.

SECTION 00100
INVITATION TO BID

The Work also includes boring a 12 inch diameter by 16 foot deep hole next to vertical wall expansion joint construction at four (4) locations and squaring the hole next to the wall to expose a 12 inch wide bare surface of concrete. The hole will then be filled with a solid packing of sodium bentonite.

The Village wants a the work to be performed by a qualified waterproofing contractor and warranted for 20-years by the waterproofing materials manufacturer.

It is the intent of the Owner to complete the entire installation within 60 calendar days from the commencement of Work.

Bids shall be received in accordance with the "Instruction to Bidders" included in the Project Manual by 11:00 am CT, on April 24, 2013. Bids shall be opened publically by The Village Clerk , Village of Franklin Park, and the results announced at a time and in manner to be determined by the Owner.

Bid security is not required. Questions may be directed to: Gary S. Patterson, Patterson Consulting, Ltd., 2112 W. Galena Blvd, Ste 8-433, Aurora, IL 60506, Phone: 630-844-0110 • Fax: 630-844-0330, gary@pattcon.net.

A copy of the specification may be obtained in Adobe PDF format on the Village of Franklin Park Website or from the following web address:
<https://dl.dropbox.com/u/8983091/Village%20of%20Franklin%20Park%20-%20Water%20Reservoir%20Expansion%20Joint%20Renovation%20Specification.pdf>

The owner reserves the right with or without reason, if he deems it in his interest to do so, to reject any and/or all bids; to accept any bid in whole or in part; or to waive any irregularities in the bidding process.

Please notify the writer immediately if you do not intend to submit a bid. Thank you, in advance, for your participation.

Sincerely,

PATTERSON CONSULTING, LTD.



Gary S. Patterson
Senior Consultant

SECTION 00110
NOTICE TO BIDDERS

Dave L. Talbott, P.E.
Smith LaSalle, Inc.
211 51st St.
Western Springs, IL 60558
Phone: 708-505-4356 • Fax: 877-774-6695
dtalbott@smithlasalle.com

Bids must be received in person or by Postal Service no later than 11:00 am CT, on April 24, 2013 at the Village of Franklin Park Clerk's Office and will be opened upon receipt by The Village Clerk , Village of Franklin Park, for furnishing the material and labor performance for the execution and construction of:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131

Separate bids will be received for:
1. Base Bid - Waterproofing.

Attendance at a scheduled pre-bid conference is mandatory. The pre-bid conference will be held on the waterproofing project site at 10:00 am CT on Wednesday, April 10, 2013. Participants will meet at main entrance to the Franklin Park offices and then conduct a pre-bid meeting at a location selected by Village representatives. Each bidding contractor is required to attend the pre-bid meeting and to become thoroughly acquainted with the site and project conditions prior to submitting a bid.

The Information for Bidders, Form of Proposal, Plans, and Specifications, will be distributed at the pre-bid conference. Questions should be directed to: Gary S. Patterson, Patterson Consulting, Ltd., 2112 W. Galena Blvd, Ste 8-433, Aurora, IL 60506, Phone: 630-844-0110 • Fax: 630-844-0330, gary@pattcon.net

Copies of Plans, Specifications, and blank Bid Forms together with any further information desired may be obtained from the office of Patterson Consulting, Ltd., 2112 W. Galena Blvd, Ste 8-433, Aurora, IL 60506, Phone: 630-844-0110, Fax: 630-844-0330.

Should you have any questions in preparing your proposal, please contact Patterson Consulting, Ltd., 2112 W. Galena Blvd, Ste 8-433, Aurora, IL60506, Phone: 630-844-0110, Fax: 630-844-0330.

Sincerely,

PATTERSON CONSULTING, LTD.



Gary S. Patterson
Senior Consultant

SECTION 00200
INSTRUCTIONS TO BIDDERS

CONSULTANT:

Gary S. Patterson
Patterson Consulting, Ltd.
2112 W. Galena Blvd, Ste 8-433
Aurora, IL 60506
Phone: 630-844-0110 • Fax: 630-844-0330
gary@pattcon.net

PROJECT:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

March 20, 2013

To be considered, Bids must be made in accord with these Instructions to Bidders:

1.2 DOCUMENTS

- A. Pre-qualified bidders may obtain Sketches, Details, and Project Manuals as stipulated in the Invitation to bid. No partial sets will be issued; no sets will be issued by the Consultant to sub-bidders.

1.3 EXAMINATION

- A. Bidders shall carefully examine the Documents and the project site to obtain first hand knowledge of existing conditions. Contractors shall not be given extra payments for conditions which can be determined by examining the site and documents.
- B. To examine the roof, an accompanied site visit will be conducted at 10:00 am CT on Wednesday, April 10, 2013. No other time will be allotted for site visit. Participants will meet at main entrance to the Franklin Park offices and then conduct a pre-bid meeting at a location selected by Village representatives.

1.4 QUESTIONS

- A. Questions about the Sketches, Details, and Project Manual are to be submitted in writing to the Consultant. Replies will be issued to all prime bidders of record as Addenda to the Drawings or Project Manual and will become part of the Contract. The Consultant will not be responsible for oral clarification. Questions received less than 2 days prior to the Bid opening cannot be answered.
- B. To obtain approval to propose unspecified products, bidders shall submit written requests at least 3 days before the Bid opening date and hour. Requests received after this time will not be considered. Requests shall clearly describe the product for which approval is sought, including all data necessary to demonstrate acceptability. If the product is acceptable, the Consultant will approve it in an Addendum issued to all prime bidders of record.

SECTION 00200
INSTRUCTIONS TO BIDDERS

1.5 BASIS OF THE BID

- A. The bidder shall submit a Lump Sum Base Bid in order to bid on any Alternates or Additives. Unit price and Time/Materials bids shall be included. Bids not complying will be rejected.

1.6 PREPARATION OF BIDS

- A. Bids shall be made on unaltered Bid Forms furnished by the Consultant or on unaltered photocopies of the Bid Form. Fill in all blank spaces, sign, date, and submit two copies. Bids shall be signed and the name printed below the signature. Where the bidder is a corporation, the legal name of the Corporation must be signed, the State of incorporation listed, and the signature of an Officer authorized to bind the corporation to a contract must be affixed.

1.7 BONDS

- A. The Owner may require bonds covering faithful performance of the Contract and payment of all obligations arising thereunder. Bonds shall be furnished in such a manner as the Owner may prescribe and with a surety company acceptable to the Owner. Where required, the Owner will pay for the bonds. The bidder shall deliver bonds to the Owner not later than the date of execution of the Contract. Failing or neglecting to deliver bonds, as specified, shall be considered as abandonment of the Contract.

1.8 SUBCONTRACTORS

- A. Names of principal subcontractors shall be listed and attached to the Bid. There shall be only one subcontractor named for each classification listed.

1.9 APPROVED APPLICATOR STATUS

- A. A bidder shall submit a manufacturer's affidavit for each roof system upon which he bids. Such verification shall accompany his Bid and shall attest that the bidder has qualified and is currently approved to apply the specified roofing for which that manufacturer may issue the required guarantee.

1.10 SUBMITTAL

- A. Bids will be received until 11:00 am CT, on April 24, 2013 at the address indicated on the Bid Form. Bids may be delivered by facsimile transmission to the attention of The Village Clerk, Village of Franklin Park, no later than the date and time indicated in this paragraph. If this method of delivery is utilized, a complete original Bid Form, confirming the facsimile or email Bid, must be received at the office of The Village Clerk no later than 11:00 am CT, on April 24, 2013.
- B. Bidders are responsible for the timely receipt of Bid Forms by the Owner and Consultant, and assume all risk of delays or loss of Bid by third party carriers or by inability to send or receive Fax transmissions. Owner is not obligated to consider late or delayed Bids.

SECTION 00200
INSTRUCTIONS TO BIDDERS

1.11 MODIFICATION AND WITHDRAWAL

- A. Bids may not be modified after submittal. Bidders may withdraw Bids anytime before the Bid opening, but may not resubmit them. No Bid may be withdrawn or modified after the Bid opening except where the award of contract has been delayed for 60 calendar days.

1.12 DISQUALIFICATION

- A. The Owner reserves the right to disqualify Bids, before or after opening, upon evidence of collusion with intent to defraud or of other illegal practices upon the part of the bidder.

1.13 GOVERNING LAWS OR REGULATIONS

- A. The Contractor must ascertain and comply with all ordinances, codes, and laws which are applicable at the project site and which govern business practices and construction.

1.14 OPENING AND AWARD

- A. Bids shall be opened as announced in the Invitation to Bid. The Contract shall be awarded on the basis of the lowest responsible Bid from the bidder of whose qualifications the Owner approves. Included in Bid selection shall be consideration of: Lump Sum Base Bids; Bids on Alternates and Additives contained in the original Project Manual; Bids on Alternates and Additives in approved Addenda; Unit Prices; Time/Material Repair Bids.

1.15 EXECUTION OF THE CONTRACT

- A. The Owner reserves the right to accept any Bid, and to reject any and all Bids, or to negotiate Contract Terms with various bidders, when such is deemed by the Owner in his best interests.
- B. Notwithstanding any delay in the preparation and execution of the formal Contract Agreement, each bidder shall be prepared, upon notice of Bid acceptance, to commence work as stipulated in the Owner-Contractor Agreement.
- C. The accepted bidder shall assist and cooperate with the Owner in preparing the formal Contract Agreement, and within 3 days following its presentation shall execute same and return it to the Owner.

1.16 LIQUIDATED DAMAGES

- A. Bidder agrees to complete the work covered by the contract for the Project as follows:
 - 1. Substantial completion of work covered in the Project Manual in (except for weather delays days where roofing work cannot be performed due to inclement weather conditions) from the date of contract execution.
 - 2. Final Completion in 10 consecutive days from the date of substantial completion.

SECTION 00200
INSTRUCTIONS TO BIDDERS

- B. Should the Contractor fail to substantially complete work under this Contract on or before the date stipulated for Substantial Completion (or such later date as may result from extension of time granted by Owner), he shall pay Owner, as liquidated damages, the sum of \$1,500.00 for each consecutive calendar day that terms of the Contract remain unfulfilled beyond date allowed by the Contract, which sum is agreed upon as a reasonable and proper measure of damages which Owner will sustain per diem by failure of Contractor to complete work within time as stipulated; it being recognized by Owner and Contractor to complete on schedule is uncertain and cannot be computed exactly.
- C. In no way shall costs for liquidated damages be construed as a penalty on the Contractor. For each consecutive calendar day that the work remains incomplete after the date established for Final Completion, the Owner will retain from the compensation otherwise to be paid to the Contractor the sum of \$1,500.00. This amount is the minimum measure of damages the Owner will sustain by failure of the Contractor to complete all, correct deficient work, clean up the project site and perform other miscellaneous tasks as required to complete all work specified. This amount is in addition to the liquidated damages prescribed above.

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SECTION 00300

INFORMATION AVAILABLE TO BIDDERS

CONSULTANT:

Gary S. Patterson
Patterson Consulting, Ltd.
2112 W. Galena Blvd, Ste 8-433
Aurora, IL 60506
Phone: 630-844-0110 • Fax: 630-844-0330
gary@pattcon.net

PROJECT:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

Sampling for Asbestos Containing Roofing Materials (ACRM):

Sampling for Asbestos Containing Roofing Materials (ACRM) has not been performed. If ACRM are suspected by interested bidding participants, the party shall perform independent testing and advise the Consultant of test results as soon as they are known.

Contractor:

(Firm Name)

(Authorized Signature)

(Title)

Disposal Site:

(Site Name)

(Site Address)

(Site City, State, Zip)

SECTION 00410

BID FORM

BID TO:

The Village Clerk
Village of Franklin Park
9500 Belmont Avenue
Franklin Park, IL 60131

BID FOR:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

BID FROM:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

The Undersigned:

1. Acknowledges receipt of:
 - A. Project Manual for the referenced Project.
 - B. Details numbered 1.
 - C. Addenda number _____, dated _____
 - D. Addenda number _____, dated _____

2. Attests to examination of the site and the Bidding Documents and to familiarity with all work stipulated in the Bidding Documents.

3. Agrees:
 - A. To hold this Bid open for 60 calendar days after the Bid due date.
 - B. To commence and complete the Work in accord with the dates stipulated in the Contract Agreement.
 - C. To enter into and execute a Contract, if awarded on the Basis of the Bid, and to furnish all bonds and insurances required in the Bidding Documents.
 - D. To accomplish the Work in accord with the Contract Documents.

SECTION 00410

BID FORM

BID TO:

The Village Clerk
Village of Franklin Park
9500 Belmont Avenue
Franklin Park, IL 60131

BID FOR:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

BID FROM:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

The Undersigned will construct the referenced Project and submits the following prices and guarantee:

**1. REPLACE 225 LINEAL FEET OF HORIZONTAL AND THREE (3)
LINEAL FEET OF VERTICAL EXPANSION JOINT DETAILING
AT FOUR (4) SEPARATE PERIMETER LOCATIONS:**

\$ _____

**2. INSTALL SOLID PACKING OF SODIUM BENTONITE IN 12 INCH
DIAMETER X 16' DEEP BORING HOLE NEXT TO WALL EXPANSION
JOINT AT FOUR (4) SEPARATE PERIMETER LOCATIONS:**

\$ _____

WATERPROOFING GUARANTEE:

Waterproofing Manufacturer's Warranty: 10-year waterproofing system warranty, as specified.
Waterproofing Contractor's Warranty: 2-year waterproofing system warranty, as specified.

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SECTION 00410

BID FORM

BID TO:

The Village Clerk
Village of Franklin Park
9500 Belmont Avenue
Franklin Park, IL 60131

BID FOR:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

BID FROM:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

UNIT PRICES:

- | | | |
|--|---------------------|----------|
| 1. Repair concrete pad | per sq. ft. of area | \$ _____ |
| 2. Installation of additional expansion joint detailing on horizontal surfaces as specified, including all preparation procedures. | per lineal ft. | \$ _____ |
| 3. Installation of additional expansion joint detailing on vertical surfaces as specified, including all preparation procedures. | per lineal ft. | \$ _____ |

TIME AND MATERIALS:

- | | | |
|---|--|-------------------|
| 1. Repair of conditions not described. | Material cost plus %
Per man-hour, | _____
\$ _____ |
| 2. Repair crew of three (3) men with tools and equipment. | Material cost plus %
Per 8-hour day | _____
\$ _____ |

WATERPROOFING GUARANTEE:

Waterproofing Manufacturer's Warranty: 15-year waterproofing system warranty, as specified.
Waterproofing Contractor's Warranty: 2-year waterproofing system warranty, as specified.

SECTION 00410

BID FORM

Project Name: Water Reservoir Expansion Joint Renovation

Location: 9501 Belmont Avenue, Franklin Park, IL 60131

Project No.: 13-501

This chart shall be submitted as a requirement of the Base Bid to itemization the value of individual materials.

Contractor: _____

By: _____ Date submitted: _____

Recommend for approval from by: _____

Accepted for Owner: _____

By: _____ Date submitted : _____

<u>Code</u>	<u>Principal Contract Feature</u>	<u>Number of Units</u>	<u>Total Value</u>
A. []	MOBILIZATION AND STAGING	_____	\$ _____
B.	PROCURAL AND DELIVERY		
[]	Insulation	_____	\$ _____
[]	Roofing membranes	_____	\$ _____
[]	Bituminous products	_____	\$ _____
[]	Flashings	_____	\$ _____
[]	Flashings and coatings	_____	\$ _____
[]	Sheet metal and caulks	_____	\$ _____
[]	Aggregate	_____	\$ _____
[]	Surface coating	_____	\$ _____
[]	Miscellaneous products	_____	\$ _____
C. []	DEMOLITION AND REMOVAL	_____	\$ _____
D.	INSTALLATION:		
[]	Base sheet	_____	\$ _____
[]	Insulation	_____	\$ _____
[]	Roof membrane	_____	\$ _____
[]	Flashings	_____	\$ _____
[]	Flashings and coatings	_____	\$ _____
[]	Sheet metal and caulk	_____	\$ _____
[]	Aggregate	_____	\$ _____
[]	Surface coating	_____	\$ _____
E. []	WARRANTY/GUARANTEE	_____	\$ _____

SECTION 00410

BID FORM

BID TO:

The Village Clerk
Village of Franklin Park
9500 Belmont Avenue
Franklin Park, IL 60131

BID FOR:

Water Reservoir Expansion Joint Renovation
9501 Belmont Avenue
Franklin Park, IL 60131
Project No.: 13-501

BID FROM:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

Subcontractor listing and Manufacturer's Affidavits are attached.

Authorized signature in affirmation of the statements and Bid prices on the BID FORM:

(Name of Corporation)

(Authorized Signature)

(State of Inc.)

(Bid Date)

(Print Name of Signer)

SECTION 00430
SUBCONTRACTOR LISTING

SECTION 00430
BID FORM
ATTACHMENT A
PROJECT NO. 13-501

In accord with the Instructions to Bidders, we submit the following:

SUBCONTRACTOR'S:

CATEGORY OF WORK:

- Plumbing
- Landscaping
- Sheet Metal
- Mechanical
- Electrical
- Masonry
- Carpentry
- Painting
- Decking
- Crane
- Disposal
- Interior Protection

CONTRACTOR:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

SECTION 00440

STIPULATIONS REGARDING SCHEDULE OF BID WORK

**SECTION 00440
BID FORM
ATTACHMENT B
PROJECT NO. 13-501**

NOTE TO BIDDERS:

The Owner stipulates that [X] no overtime and that [X] only non-premium rate Saturday and overnight work shall be included in this Bid(s). Affirm your response to this stipulation below.

TO THE OWNER:

The bids we have submitted are calculated on the basis of working (check applicable):

- five, 8-hour days Monday through Friday only.
- five, 8-hour days including Saturdays when necessary due to weather.
- five, 8-hour evenings Monday through Friday only.
- five, 8-hour evenings including Saturdays when necessary due to weather.
- four, 10-hour week evenings.
- four, 10-hour evenings including Saturdays when necessary due to weather.
- five evening work per week with as many hours as possible.
- five evening work per week including Saturdays and as many hours as possible.
- six evening work per week and as many hours as possible.

We have scheduled and stipulate the following in our Bid (check applicable):

- a) Saturday work: None Weather make-up only Occasional Regular
- b) Sunday work: None _____
- c) Holidays off: (list dates) _____
- d) Special events: (list dates) _____

CONTRACTOR:

Firm Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Date: _____

SECTION 00520
OWNER-CONTRACTOR AGREEMENT

Inserted by reference:

Standard Form of Agreement Between Owner and Contractor for a small Project where the basis for payment is a stipulated sum, AIA DOCUMENT A105-1993.

General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.

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SECTION 00520

OWNER-CONTRACTOR AGREEMENT

INSURANCE REQUIREMENTS

Contractor shall obtain, pay for and keep in force at all times during the performance of the Work, and afterwards, as may be required in this Exhibit, the following insurance coverages placed with insurance companies having an A.M. Best rating of A VI or better:

- a) Workers' Compensation Insurance as required by statute in the state in which the Project is located.
- b) Employer's Liability Insurance with limits of liability of not less than:
\$500,000 each accident
\$500,000 disease policy limit
\$500,000 disease – each employee
- c) Automobile Liability Insurance, including owned, hired, and non-owned coverage with a combined single limit of not less than One Million Dollars (\$1,000,000) per occurrence.
- d) Commercial General Liability Insurance (without exclusion for Products and Completed Operations, Personal and Advertising Injury and Contractual Liability coverages) with limits of not less than Five Million Dollars (\$5,000,000) per occurrence and Ten Million Dollars (\$10,000,000) aggregate (general aggregate to apply on a per project basis). Owner and its lender (if any) and project manager (if any), as well as any other individual or entity (together with its agents and employees) having legal or equitable interest in the Project, shall be added as an additional insured. The policy shall provide such additional insured with a thirty (30) day written notice of cancellation, non-renewal or material change. Any certificates of insurance furnished in accordance with this Agreement shall specify who has been added as additional insured and shall state that the policy has been amended to provide the thirty (30) day advance written notice.

SECTION 00530
COST VALUE CHART

Project Name: Water Reservoir Expansion Joint Renovation

Location: 9501 Belmont Avenue, Franklin Park, IL 60131 Project No.: 13-501

This chart shall be submitted in accord with Conditions of the Contract and shall form the basis for calculating payment requests.

Contractor: _____

By: _____ Date submitted: _____

Recommend for approval from by: _____

Accepted for Owner: _____

By: _____ Date submitted : _____

<u>Code</u>	<u>Principal Contract Feature</u>	<u>Number of Units</u>	<u>Total Value</u>
A. []	MOBILIZATION AND STAGING	_____	\$ _____
B.	PROCURAL AND DELIVERY		
[]	Insulation	_____	\$ _____
[]	Roofing membranes	_____	\$ _____
[]	Bituminous products	_____	\$ _____
[]	Flashings	_____	\$ _____
[]	Flashings and coatings	_____	\$ _____
[]	Sheet metal and caulks	_____	\$ _____
[]	Aggregate	_____	\$ _____
[]	Surface coating	_____	\$ _____
[]	Miscellaneous products	_____	\$ _____
C. []	DEMOLITION AND REMOVAL	_____	\$ _____
D.	INSTALLATION:		
[]	Base sheet	_____	\$ _____
[]	Insulation	_____	\$ _____
[]	Roof membrane	_____	\$ _____
[]	Flashings	_____	\$ _____
[]	Flashings and coatings	_____	\$ _____
[]	Sheet metal and caulk	_____	\$ _____
[]	Aggregate	_____	\$ _____
[]	Surface coating	_____	\$ _____
E. []	WARRANTY/GUARANTEE	_____	\$ _____

PROGRESS SUBMITTAL

SECTION 00540

CONSTRUCTION PROGRESS CHART

Project Name: Water Reservoir Expansion Joint Renovation

Location: 9501 Belmont Avenue, Franklin Park, IL 60131 Project No.: 13-501

In accord with Conditions of the Contract, submit this form with the "scheduled" weeks' percentages completed to show anticipated deliveries and installations.

With each payment request submit a copy of this form with the "actual" percentages filled-in to indicate real construction progress.

THIS PROJECT IS ANTICIPATED TO CONTINUE FOR _____ WEEKS.

Contractor: _____

By: _____ Date submitted: _____

Recommend for approval from by: _____

Accepted for Owner: _____

By: _____ Date submitted : _____

Contract Feature		1	2	3	4	5	6
A. Mobilization & Staging	Sched.	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
B. Delivery & Procurement	Sched.	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
C. Demolition	Sched.	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
D. Installation:							
Roofing: #1	Sched	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
Flashing: #2	Sched	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
Sheet Metal: #3	Sched	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%
Surfacing: #4	Sched	____%	____%	____%	____%	____%	____%
	Actual	____%	____%	____%	____%	____%	____%

PROGRESS SUBMITTAL

SECTION 00540
CONSTRUCTION PROGRESS CHART

Project Name: Water Reservoir Expansion Joint Renovation

Location: 9501 Belmont Avenue, Franklin Park, IL 60131 Project No.: 13-501

In accord with Conditions of the Contract, submit this form with the "scheduled" weeks' percentages completed to show anticipated deliveries and installations.

With each payment request submit a copy of this form with the "actual" percentages filled-in to indicate valid construction progress.

THIS PROJECT IS ANTICIPATED TO CONTINUE FOR ____ WEEKS.

Contractor: _____

By: _____ Date submitted: _____

Recommend for approval from by: _____

Accepted for Owner: _____

By: _____ Date submitted : _____

Contract Feature	Wk	1	2	3	4	5	6	7	8	9	10	11	12
A. Mobilization & Staging	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
B. Delivery and Procurement	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
C. Demolition	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
D. Demolition	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
E. Installation: Roofing	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
F. Flashing	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
G. Sheet Metal	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
H. Surfacing	Act.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%
	Sch.	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%	___%

PROGRESS SUBMITTAL

SECTION 00550

SAMPLE: INFORMATION ON SUBMITTED INVOICES

- PROGRESS BILLING
- FINAL BILLING

Project Name: Water Reservoir Expansion Joint Renovation
Project Location: 9501 Belmont Avenue, IL 60131
Project No.: 13-501

Original Contract Amount:	\$ XXX,XXX.
Change Order Number I.	\$ XXX,XXX.
Change Order Number II.	\$ XXX,XXX.
Change Order Number III.	\$ XXX,XXX.
ADJUSTED CONTRACT AMOUNT:	\$ XXX,XXX.

REFERENCE: CONSTRUCTION PROGRESS AND COST VALUE CHARTS

Code:	Value:	Percent Complete:	Previous Billings:	Value this Billing:	Balance Remaining:
A.	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.
B.	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	XXX.
1.	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	XX,XXX.
2.	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.
3.	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.
CO #1	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.
CO #2	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.
CO #3	\$XX,XXX.	XXX%	\$XX,XXX.	\$XX,XXX.	\$XX,XXX.

SECTION 00700

GENERAL & SUPPLEMENTAL TERMS & CONDITIONS

Inserted by reference:

Standard Form of Agreement Between Owner and Contractor for a small Project where the basis for payment is a stipulated sum, AIA DOCUMENT A105-1993.

General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.

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SECTION 01001
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT DESCRIPTION

- A. The Work for this Project consists of the complete replacement of all 225 feet of the existing hot asphalt waterproofing detail currently covering the expansion joint gap between pad sections as specified in this Project Manual and shown on project drawings. The new expansion joint detail will extend from the horizontal surface about three (3) feet onto the vertical walls of the reservoir at four (4) separate perimeter edge locations.
- B. All waterproofing membranes shall be securely mechanically attached with the waterproofing manufacturer's 1.25 inch wide by continuous stainless steel termination bar at all its perimeter edges.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract comprises all Work for: The Village of Franklin Park, 9501 Belmont Avenue, Franklin Park, IL 60131, Water Reservoir Expansion Joint Renovation.

1.3 AREAS INCLUDED

- A. The Work shall include the following designated areas:
 - 1. As shown on Sketch WPS-1 and drawing details.
 - 2. Water Reservoir Expansion Joint Renovation, 9501 Belmont Avenue, Franklin Park, IL 60131

1.4 WORK INCLUDED

- A. The Contractor shall furnish all labor, materials, tools, equipment, material handling, transportation, facilities, services, interior protection, legal disposal, coordination and supervision necessary for complete installation of the Work covered by the Contract Documents.

1.5 SUMMARY OF WORK

- A. Temporary installation of interior and exterior protection measures (where necessary) to contain debris and dust to protect building surfaces, components, merchandise, machinery occupants, pedestrians, and operations.
- B. Removal and legal disposal of interior and exterior protection and cleaning of all surfaces. To be performed and modified on a daily basis to allow uninterrupted continuation of office processes and conduct unimpeded business operations.

SECTION 01001
GENERAL REQUIREMENTS

- C. Provide interior protection (where necessary) against falling debris, dust, hot bitumen seepage, and strong odors generated by repair work to the adjacent building interior.
- D. Excavation of a minimum ten foot wide by the length of the expansion joint area in order to perform the Work as specified.
- E. Excavation of a sufficient amount of area at the perimeter edges of the expansion joint detail to install the vertical portion of the Work onto the vertical walls of the reservoir as specified.
- F. Removal and legal disposal of remaining flashing, residual adhesives, sealant, cements, and fasteners.
- G. Removal and legal disposal of all debris, generated by the Work, from the project site including debris containments and transportation.
- H. Remediation of existing concrete pad damage (if necessary) to achieve a suitable substrate, on a time and material basis, not to exceed the unit cost bid.
- I. Provide comprehensive interior cleaning of all equipment, merchandise, and interior spaces under all roof and roof deck replacement areas on a continuous basis.
- J. Miscellaneous demolition and construction required to facilitate the Work, if required for concrete pad remediation, installation and removal of temporary supports and covers, and repair, adjustment, replacement, and restoration of any portions of the facility which are damaged, disturbed, or modified by the Work.
- K. Preparation of the exposed concrete surfaces as specified in Section 07142 to receive the new waterproofing system.
- L. Furnish and install double layer of hot fluid-applied rubberized asphalt waterproofing system as specified, with single-layer of protection membrane over renovated and prepared concrete pad with flashings, finishings, and accessories.
- M. Bore a 12 inch diameter by 16 foot deep hole next to vertical wall expansion joint construction at four (4) locations and squaring the hole next to the wall to expose a 12 inch wide bare surface of concrete.
- N. Fill the 12 diameter hole with a solid packing of sodium bentonite.
- O. Protection and restoration of exterior grades, landscaping, plantings, trees, roadways, pavement, and walkways affected by the Work.
- P. Full compliance with all applicable safety requirements including federal OSHA, state and local requirements.
- Q. Supervision and coordination of the Work with the Owner, Consultant, and all sub-contractors.
- R. Documentation of all unit cost Work performed, including submission of reports indicated in the technical specifications.
- S. Perform duties related to waterproofing construction including, but not necessarily limited to sheet metal, plumbing, mechanical, electrical, masonry, carpentry, painting, and cleaning work.

SECTION 01001
GENERAL REQUIREMENTS

1.6 MEASUREMENT AND PAYMENT

- A. Lump Sum Bid.
- B. Unit Prices:
 - 1. Fixed and inclusive of costs, overhead, and profit.
 - 2. Quantity not fixed.
 - 3. Unit basis:
 - a. Dollars per square foot at installation (pad) plane.
 - b. Dollars per linear foot.
 - c. Dollars per board foot
 - d. Dollars per item.
- C. Time and Materials Price:
 - 1. Repair of conditions not described:
 - a. Amount per man-hour for labor.
 - b. Percent over cost for material furnished.
 - 2. Repair crew:
 - a. Amount per 8 hours for 3 man crew and equipment.
 - b. Percent over cost for materials.
 - 3. Installation:
 - a. Amount per man-hour for labor.
 - 1) Straight Time
 - 2) Overtime
 - b. Percent over cost for material furnished.
- D. Application for payment: General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.
- E. Change Order procedure:
 - 1. As provided in the Standard Form of Agreement Between Owner and Contractor for a small Project where the basis for payment is a stipulated sum, AIA DOCUMENT A105-1993.
 - 2. Consultant will initiate Work Change Directive or Bulletin form at Owner's request.
 - 3. Consultant will initiate Change Order at Owner's request.
 - 4. Changes in the Contract:
 - a. Written only.
 - b. Executed by Owner.

1.7 ADDITIVES

- A. None as of Project publication date.

1.8 ALTERNATES

- A. None as of Project publication date.

SECTION 01001
GENERAL REQUIREMENTS

1.9 SUBSTITUTIONS AND PRODUCT OPTIONS

- A. Follow requirements:
1. INSTRUCTIONS TO BIDDERS, Article entitled BASIS OF THE BID.
 2. General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993

1.10 COORDINATION

- A. Contractor shall have lead responsibility for coordination of construction activities which affect the Work including:
1. Communicating directly with others working on site for the Owner.
 2. Scheduling and performing the Work in concert with others working on site for the Owner.
 3. Notifying the Owner where effective coordination with others working on site for the Owner is insufficient to provide the Work as agreed.
- B. Coordination of the Work:
1. Perform Work in accord with agreed schedules.
 2. Interruption of the Owner's operations will not be acceptable except where agreed in advance.
- C. Mechanical and electrical coordination:
1. Perform Work in accord with agreed schedules.
 2. Interruption of utility service will not be acceptable except where agreed in advance.
 3. Provide reasonable advance notice of shut downs.
 4. Provide disconnections, reconnections and attachment of utility lines.

1.11 REGULATORY REQUIREMENTS

- A. Provide Work in compliance with codes, regulations, and statutes governing construction at the Project location.

1.12 REFERENCE STANDARDS

- A. The edition of a Standard current at the Bid Due Date shall be the applicable reference Standard for this Contract.
- B. American National Standards Institute, ANSI.
- C. American Society for Testing and Materials, ASTM, Annual Book of ASTM Standards, 1996-7.
- D. Asphalt Roofing Manufacturers Association, ARMA.

SECTION 01001
GENERAL REQUIREMENTS

- E. Factory Mutual System, FM, Current Loss Prevention Data and 1998 Approval Guide.
- F. National Institute of Standards and Technology, NIST.
- G. National Roofing Contractors Association, NRCA, NRCA Roofing and Waterproofing Manual and NRCA Technical Bulletins.
- H. Portland Cement Association, PCA.
- I. Sheet Metal and Air Conditioning Contractors National Association, SMACNA, Architectural Sheet Metal Manual, 1993.
- J. Underwriters Laboratories, Inc., UL, Building Materials Directory, 1998.

1.13 PROJECT MEETINGS

- A. Preconstruction conference:
 - 1. Convened by Consultant and Contractor.
 - 2. Schedule: Upon or before material loading.
 - 3. Participants:
 - a. Contractor's Project Manager.
 - b. Contractor's Field Superintendent.
 - c. Contractor's Crew Foreman.
 - d. Owner's Representative.
 - e. Consultant.
- B. Progress meetings:
 - 1. Convened by Consultant and Contractor.
 - 2. Schedule: As requested by Consultant and Owner, or Contractor, and upon Contractor's Notice of Substantial Completion.
 - 3. Participants:
 - a. Contractor's Project Manager.
 - b. Contractor's Field Superintendent.
 - c. Contractor's Crew Foreman.
 - d. Owner's Representative.
 - e. Consultant.

1.14 SUBMITTALS

- A. Construction Progress and Cost Value Chart:
 - 1. Follow format furnished in the Project Manual.
- B. Manufacturers' data, samples, and details:
 - 1. Submit designated product specifications, samples, color charts, and manufacturers' details to Consultant for review at least 5 business days before construction commences.
 - 2. Submittals required: Article 1.4 of Section 07142

SECTION 01001
GENERAL REQUIREMENTS

- C. Shop drawings for Work proposed during construction: Submit to Consultant for review within 2 business days of Owner's request.
- D. Closeout documents: As provided in the General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.

1.15 QUALITY CONTROL

- A. Contractor and subcontractors: Continuous and successful business under current company name and in current practiced trade for the 5 years previous to Contract award.
- B. Contractor's personnel:
- C. Provide Work using personnel skilled in their trades.
- D. Provide electrical, mechanical, and plumbing work by qualified individuals licensed in their practiced trade.
- E. Contractor's execution: Provide Work in accord with the Contract Documents and where a procedure may not be specified in the Contract Documents, provide in accord with the components manufacturers' specifications as submitted to and approved by the Consultant.

1.16 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- A. Mobilization and set-up:
 - 1. Owner will designate adequate space for hoisting, loading, and unloading of materials.
 - 2. Owner will designate parking space for the Contractor's personnel and equipment.
- B. Temporary Utilities: Owner will provide reasonable quantities of water and electricity for construction purposes from existing outlets. Contractor will be responsible for making all connections, disconnections, and for transporting from existing outlets.
- C. Protection:
 - 1. Personal safety:
 - a. Exercise due care to prevent debris and material from contaminating the Work.
 - b. Coordinate and provide the closing, distribution of personal safety equipment, erection and maintenance of barricades, and the restricting of access to areas in and around the building in order that Work shall present no danger to the health, well being, and safety of person and persons.
 - 2. Property protection:
 - a. Provide in accord with the General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.
 - b. Provide necessary equipment, temporary enclosures, devices, and coverings to prevent damage to property including, but not limited to, walls; structures; equipment; windows and skylights; walkways; driveways; landscaping; areas scheduled for, but not immediately subject to, the Work; areas adjacent to, but not part of, the Work.

SECTION 01001
GENERAL REQUIREMENTS

- c. Provide protective coverings around and under kettle and tanker to catch spills.
- d. Provide coverings to protect walls in staging and tear-off areas.
- e. Provide procedures to prevent the ignition or delayed ignition of materials and debris.
- f. Provide a minimum of two (2) hour fire watch after use of open flame torches.
- 3. Security:
 - a. Provide protection against theft of materials and equipment which are part of the Work.
 - b. Provide security to prevent the use of ladders and equipment between work sessions.
- D. Sanitary Facilities:
 - 1. Contractor shall provide and Owner will designate location.
- E. Construction debris:
 - 1. Clean site continually.
 - 2. Owner will have the right to salvage any abandoned equipment and scrap materials.
 - 3. Remove debris from site daily.
 - 4. Securely cover debris boxes during non-work periods.
- F. Building access: Contractor's forces shall not enter into Owner's facilities unless specific provisions are arranged.

1.17 MATERIALS AND EQUIPMENT

- A. Delivery of manufacturers' products:
 - 1. Original, sealed containers and wrappers.
 - 2. Original, intact manufacturers' labels listing brand, weight, and references.
- B. Delivery of bulk materials:
 - 1. Identified by manufacturers' or suppliers' manifests or bills of lading containing the manufacturers' specifications issued.
 - 2. Verification of certification shall be presented upon delivery to the Resident Project Representative.
- C. Delivery of shop fabricated goods: Exempt from requirements of Paragraphs A and B of this Article.
- D. Storage of materials:
 - 1. Ground storage will be acceptable where approved in advance by the Owner and the Consultant.
 - 2. Storage inside the structure will not be acceptable unless approved in advance by the Owner and Consultant.
 - 3. Ground storage will not be acceptable unless:
 - a. Weight shall be distributed in accord with the capacity of the structural deck.

SECTION 01001
GENERAL REQUIREMENTS

- b. Materials manufacturers' storage specifications shall be met and approved by the Resident Project Representative.
 - c. Materials shall be stored on pallets a minimum of 4 inches above the surface.
 - d. Materials shall be completely covered with secured and waterproof canvas tarpaulins.
 - e. Manufacturers' pre-shrunk plastic wrappers and polyethylene tarps will not be acceptable as storage covering.
 - f. Rolled goods shall be stored on ends except where specified otherwise by the manufacturer.
- E. Handling: Prevent damage in handling and storage.

1.18 CONTRACT CLOSEOUT

- A. Final Cleaning:
- 1. Comply with Article 1.16, Paragraph E, this Section.
 - 2. Restore property damaged during the Work to its original condition at no cost to the Owner.
 - 3. Remove equipment, debris and materials from the site.
- B. Closeout submittals:
- 1. Comply with the the General Conditions of the Contract for Construction of a Small Project, AIA DOCUMENT A205-1993.
 - 2. Final Waiver of Lien.
 - 3. Final billing.
 - 4. Guarantee agreement and warranty agreements.

1.19 SPECIFICATION TECHNIQUES

- A. Format:
- 1. These specifications are written in imperative and streamlined form and are directed to the Contractor unless specifically noted otherwise.
 - 2. The words "shall be" shall be inferred where a colon (:) is used within phrases or sentences.
- B. Reference: Where an Article is cited for reference and no Section is included in that reference, the Section shall be the Base Bid Section of Division 7.

END OF SECTION 01001

SECTION 01100
SPECIAL REQUIREMENTS

PART 1 - GENERAL

1.1 INTERIOR ACCESS

- A. Contractor shall limit access to the interior of the building to those personnel specifically required to facilitate the Work, correct problems and coordinate the Work.
- B. All personnel accessing the interior of the facility shall be subject to the Owner's security requirements.
- C. Certain areas shall be accessed only with the prior permission of the Owner. Product, parts, components, equipment, and vehicles in whole or part shall not be covered, touched, or moved, without the prior approval of the Owner.

1.2 SITE ACCESS

- A. Contractor shall provide exterior access to all Work areas.

1.3 STAGING AREAS

- A. Contractor shall set up and stage his work from ground areas designated and authorized, in advance, by the Owner.
- B. Contractor shall limit set up areas to the minimum size required to facilitate the Work.
- C. Contractor staging areas and equipment placement shall not block or restrict access, egress, or ingress to entries, gates, doors, dock areas, emergency access routes, roadways, sidewalks, exposed gas valves or meters, hydrants, valve stations, electrical transformers or switch gear, or emergency or fire protection equipment.
- D. Contractor shall utilize care when traversing over underground piping and utilities to prevent damage or collapse.
- E. Contractor shall move or relocate staging areas, temporary sheds and trailers, and stored materials as directed by the Owner.

1.4 SAFETY

- A. The Contractor shall comply with all applicable laws, regulations and rules issued by all governmental agencies having jurisdiction at the Project site including, but not limited to:
 - 1. Federal OSHA and local requirements include all amendments, requirements, and regulations in effect as of the date of execution of the Contract.
- B. The Contractor shall also comply with the safety rules, procedures and recommendations of the Owner.

SECTION 01100
SPECIAL REQUIREMENTS

- C. Where the Work involves deck repair or interior work on protection or fire-proofing occurs, the interior areas below shall be temporarily closed and the Contractor shall provide personnel to monitor the interior area until the structural envelope is re-established and there is no danger of tools, debris, materials, paint, or hot bitumen entering the interior space.
- D. Areas shall receive temporary barricades to prevent accidental access by the employees of the Owner.
- E. Continuous communication shall be maintained between the Work areas and the interior to allow the Work to be halted if dangerous or damaging conditions arise.
- F. Areas shall be closed for the minimum possible time, with work scheduled outside of normal hours, whenever possible.
- G. The Contractor shall engage a qualified individual with a minimum of five (5) years of experience, to establish, monitor and address safety issues on the project site and ensure compliance with applicable regulations.
- H. The Contractor shall be responsible for enforcing required safety procedures for all persons on the project site under his control or supervision.
- I. The Contractor shall be responsible for providing all required safety equipment and devices to all employees under his control and supervision.
- J. The Owner, Consultant and their respective employees, agents, and representatives, including personnel of any testing firms, shall not be responsible for safety on the site and the Contractor shall indemnify them from any liability, lawsuit, penalty, or fine resulting from any unsafe condition or lapse of safety procedures.
- K. The Contractor shall furnish, to the Owner, the manufacturer's most current Material Safety Data Sheets for all materials utilized in the Work or brought onto the site prior to delivery.
- L. All Material Safety Data Sheets shall be less than three years old and shall reflect the current formulation and components of materials used. The Contractor shall provide all data required by the Owner to assure compliance with all employee notification requirements.
- M. The Contractor shall provide suitable safety training for all personnel and shall maintain a project specific safety procedure manual, approved by the Owner, indicating emergency procedures to be followed and listing local emergency numbers.
- N. The Owner shall be immediately notified of any accident, injury, perceived dangerous condition, or violation of applicable safety procedures.

1.5 REGULATORY NOTICE, PERMITS, FEES

- A. The contractor shall notify the State of Illinois Department of Health Services regarding the scope, term , and other requirements of the Project, prior to commencement of Work, if necessary.

SECTION 01100
SPECIAL REQUIREMENTS

1. Additional notice shall immediately be given to the appropriate authority when revisions are made to the Work.
- B. The contractor shall notify the State of Illinois Department of Natural Resources regarding the scope, term, and other requirements of the Project, prior to commencement of Work.
 1. Additional notice shall immediately be given to the appropriate authority when revisions are made to the Work.
- C. The Contractor shall notify the Owner of the disposal site for hazardous and non-hazardous materials, prior to commencement of Work.
 1. Additional notice shall immediately be given to the Owner if it is necessary to change the established disposal site.
- D. The Contractor shall pay, as a portion of the base bid amount, all permits, registration fees and other required fees to Federal, State, and local government authorities prior to commencement of Work.
- E. The Contractor shall notify the Owner when an open flame will be used during the waterproofing Work.
- F. The Contractor shall take precautions and use procedures to limit the generation of dust and airborne debris during the conduct of Work.

END OF SECTION 01100

SECTION DRAWINGS**LIST OF DRAWINGS**

NOTES:

1. The Sketches and Details included in the Contract depict only the concept of the Work.
2. No scale is provided; none shall be inferred or assumed. Component proportions are not necessarily as depicted.
3. Notes on the Sketches and Details are supplemental to the specifications and are a portion of the Work.
4. Structural and connecting conditions may differ from those depicted; Contractor shall verify field conditions.

WATERPROOFING SKETCH:

WPS-1 Waterproofing Sketch

DETAIL DRAWINGS:

- A. Drawing Callout Key - Page A
1. Expansion Joint Detail

END OF SECTION

SECTION 03930
CONCRETE REHABILITATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies repair of cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes, for noncritical applications of concrete and for projects using small quantities of concrete.

1.3 SUBMITTALS

- A. General: In addition to the following, comply with submittal requirements in ACI 301.
- B. Product Data: For each type of product indicated.
- C. Design Mixtures: For each concrete mixture.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
- C. Comply with ACI 301, "Specification for Structural Concrete," including the following sections, unless modified by requirements in the Contract Documents:
 - 1. "General Requirements."
 - 2. "Formwork and Formwork Accessories."
 - 3. "Reinforcement and Reinforcement Supports."
 - 4. "Concrete Mixtures."
 - 5. "Handling, Placing, and Constructing."
- D. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

SECTION 03930
CONCRETE REHABILITATION

PART 2 - PRODUCTS

2.1 FORMWORK

- A. Furnish formwork and formwork accessories according to ACI 301.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- B. Plain-Steel Wire: ASTM A 82, as drawn.
- C. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I
- B. Normal-Weight Aggregate: ASTM C 33, graded, 1-1/2-inch (38-mm) nominal maximum aggregate size.
- C. Water: ASTM C 94/C 94M; potable.

2.4 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.5 RELATED MATERIALS

- A. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- F. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.
- G. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 CONCRETE MIXTURES

- A. Comply with ACI 301 requirements for concrete mixtures.
- B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301, as follows:
 - 1. Minimum Compressive Strength: 4500 psi (31 MPa at 28 days).
 - 2. Maximum Water-Cementitious Materials Ratio: 0.50.
 - 3. Slump Limit: 4 inches (100 mm) for concrete with verified slump of 2 to 4 inches (50 to 100 mm) before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch (25 mm).
- C. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor

2.8 CONCRETE MIXING

- A. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

SECTION 03930
CONCRETE REHABILITATION

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, construct, erect, brace, and maintain formwork according to ACI 301.

3.2 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.3 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Locate and install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Consultant.

3.4 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.

3.5 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

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CONCRETE REHABILITATION

- a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
-
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.6 REPAIRS

- A. Remove and replace concrete that does not comply with requirements in this Section.

END OF SECTION 03301

SECTION 07142
HOT FLUID-APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Unreinforced waterproofing membrane.
 - 2. Reinforced waterproofing membrane.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide waterproofing that prevents the passage of water and complies with physical requirements in CAN/CGSB-37.50, "Hot Applied, Rubberized Asphalt for Roofing and Waterproofing."

1.4 SUBMITTALS

- A. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate, technical data, and tested physical and performance properties.
- B. Shop Drawings: Show locations and extent of waterproofing. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins to adjoining waterproofing, and other termination conditions.
- C. Samples: For the following products:
 - 1. 12-by-12-inch (300-by-300-mm) square of flashing sheet.
 - 2. 12-by-12-inch (300-by-300-mm) square of protection membrane.
 - 3. 12 inch length of stainless steel termination bar.
 - 4. 3 termination bar fasteners.
 - 5. 1 tube of termination bar edge sealant.
 - 6. 12-inch (300-mm) length of insulation (foam tube).
- D. Installer Certificates: Signed by manufacturers certifying that installers comply with requirements.
- E. Product Test Reports: From a qualified independent testing agency indicating and interpreting test results of waterproofing for compliance with requirements, based on comprehensive testing of current waterproofing formulations.
- F. Sample Warranty: Copy of special waterproofing manufacturer's and Installer's warranty stating obligations, remedies, limitations, and exclusions before starting waterproofing.

HOT FLUID-APPLIED WATERPROOFING

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who is authorized, approved, or licensed to install waterproofing manufacturer's products; and who is eligible to receive waterproofing warranty specified.
- B. Source Limitations: Obtain waterproofing materials, sheet flashings, protection course, and accessories through one source from a single manufacturer.
- C. Mockups: Apply waterproofing to 10 lineal feet of deck to demonstrate surface preparation, crack and joint treatment, corner treatment, thickness, texture, and execution quality.
 - 1. If Consultant determines mockups do not comply with requirements, reapply waterproofing system until mockups are approved.
 - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review requirements for waterproofing, including surface preparation specified under other Sections, substrate condition and pretreatment, minimum curing period, forecasted weather conditions, special details and sheet flashings, installation procedures, testing and inspection procedures, and protection and repairs.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver liquid materials to Project site in original containers with seals unbroken, labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by waterproofing manufacturer.
- C. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- D. Protect stored materials from direct sunlight.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate, or when temperature is below 0 deg F (minus 18 deg C).
 - 1. Do not apply waterproofing in snow, rain, fog, or mist.
- B. Maintain adequate ventilation during application and curing of waterproofing materials.

1.8 WARRANTY

- A. Special Manufacturer's Warranty: Written warranty, signed by waterproofing manufacturer agreeing to repair or replace waterproofing and sheet flashings that do not comply with requirements or that do not remain watertight within specified warranty period.

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HOT FLUID-APPLIED WATERPROOFING

1. Warranty does not include failure of waterproofing due to failure of substrate prepared and treated according to requirements or formation of new joints and cracks in substrate that exceed 1/8 inch (3 mm) in width.
 2. Warranty Period: Fifteen (15) years after date of Substantial Completion.
 3. Warranty includes exposing affected area by removing overburden materials, repairing and/or replacing defective manufacturer supplied waterproofing materials, recovering repair area with original earth and new sod to existing elevation.
- B. Special Installer's Warranty: Written waterproofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, for warranty period of two (2) years.
1. Warranty includes exposing affected area by removing overburden materials, repairing and/or replacing defective manufacturer supplied waterproofing materials, recovering repair area with original earth and new sod to existing elevation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the following products:
1. American Hydrotech, Inc.; Monolithic Membrane 6125.
 2. Barrett Company; Ram-Tough 250.

2.2 MEMBRANE

- A. Single-component; 100 percent solids; hot fluid-applied, rubberized asphalt with the following properties measured per applicable test methods in CAN/CGSB-37.50:
1. Flash Point: Not less than 260 deg C or not less than 25 deg C above manufacturer's maximum recommended application temperature.
 2. Cone Penetration: 110 maximum at 25 deg C, and 200 maximum at 50 deg C.
 3. Flow: 3 mm maximum at 60 deg C.
 4. Toughness: Not less than 5.5 J
 5. Ratio of Toughness to Peak Load: Not less than 0.040.
 6. Adhesion Rating: Pass.
 7. Water-Vapor Permeance: 1.7 ng/Pa x s x sq. m.
 8. Water Absorption: 0.35-g maximum mass gain, or 0.18-g maximum mass loss.
 9. Pinholing: Not more than one pinhole.
 10. Low-Temperature Flexibility: No cracking.
 11. Crack Bridging Capability: No cracking, splitting, or loss of adhesion.
 12. Heat Stability: Comply with requirements for penetration, flow, low-temperature flexibility, and viscosity when heated for five hours at manufacturer's recommended application temperature.
 13. Viscosity Test: 2 to 15 seconds.

2.3 AUXILIARY MATERIALS

- A. Primer: ASTM D 41, asphaltic primer.

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HOT FLUID-APPLIED WATERPROOFING

- B. Elastomeric Flashing Sheet: 50-mil- (1.3-mm-) minimum, non-staining, uncured sheet neoprene with manufacturer's recommended contact adhesives and predrilled metal termination bars and anchors, with the following physical properties as measured per standard test methods referenced:
 - 1. Tensile Strength: 1400 psi (9.6 MPa) minimum; ASTM D 412, Die C.
 - 2. Elongation: 300 percent minimum; ASTM D 412.
 - 3. Tear Resistance: 125 psi (860 kPa) minimum; ASTM D 624, Die C.
 - 4. Brittleness: Does not break at minus 30 deg F (34 deg C); ASTM D 2137.
- C. Modified-Bituminous Flashing Sheet: SBS-modified bituminous sheet, 160-mil- (4-mm-) thick, woven or nonwoven polyester or glass-fiber reinforced; suitable for application method specified; granular surfaced.
- D. Sealants and Accessories: Waterproofing manufacturer's recommended sealants and accessories.
- E. Reinforcing Fabric: Manufacturer's recommended spun-bonded polyester fabric.
- F. Protection Course: Semi-rigid sheets of fiberglass or mineral-reinforced-asphaltic core, pressure laminated between two asphalt-saturated fibrous liners and as follows:
 - 1. Thickness: 1/8 inch (3 mm), nominal.
 - 2. Thickness: 1/8 inch (3 mm), nominal, for vertical applications.
 - 3. Adhesive: Rubber-based solvent type recommended by waterproofing manufacturer for type of protection course.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
 - 1. Verify that concrete has cured and aged for minimum time period recommended by waterproofing manufacturer.
 - 2. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Excavate overburden materials to adequately expose the Work area.
- B. Clean and prepare substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for waterproofing application.
- C. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.
- D. Close off deck drains and other deck penetrations to prevent spillage and migration of waterproofing fluids.

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- E. Remove grease, oil, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
 - 1. Abrasive blast clean (shot blast) concrete surfaces uniformly to expose top surface of fine aggregate according to ASTM D 4259 with a self-contained, recirculating, blast-cleaning apparatus. Remove material to provide a sound surface free of laitance, glaze, efflorescence, curing compounds, concrete hardeners, or form-release agents. Remove remaining loose material and clean surfaces according to ASTM D 4258.
- F. Remove fins, ridges, and other projections and fill honeycomb, aggregate pockets, and other voids.

3.3 JOINTS, CRACKS, AND TERMINATIONS

- A. Prepare and treat substrates to receive waterproofing membrane, including joints and cracks, deck drains, corners, and penetrations according to CAN/CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Roofing and Waterproofing," and waterproofing system manufacturer's written instructions.
 - 1. Grout and fill joints and cracks in substrate. Before filling, remove dust and dirt according to ASTM D 4258.
 - 2. Adhere elastomeric flashing sheet to substrate in a layer of hot, rubberized asphalt. Extend elastomeric flashing sheet a minimum of 12 inches (300 mm) on each side of joints and cracks and beyond deck drains, corners, and penetrations.
 - 3. Apply waterproofing materials over expansion joint opening as shown in Consultant drawing details.
 - 4. Embed reinforcing fabric into a layer of hot, rubberized asphalt. Extend reinforcing fabric a minimum of 12 inches (300 mm) on each side of joints and cracks and beyond deck drains, corners, and penetrations.
- B. At expansion joints and discontinuous deck-to-wall or deck-to-deck joints, bridge joints with elastomeric flashing sheet extended a minimum of 12 inches (300 mm) on each side of joints and adhere to substrates in a layer of hot, rubberized asphalt and terminated as shown in Consultant drawing details.

3.4 FLASHING INSTALLATION

- A. Prime substrate with asphalt primer.
- B. Install elastomeric flashing sheet and adhere to deck and wall substrates in a layer of hot, rubberized asphalt.
- C. Install modified-bituminous flashing sheet and adhere to substrate in a layer of hot, rubberized asphalt.
- D. Install termination bars and mechanically fasten to edges of flashing and protection sheets at terminations and perimeter of waterproofing.

3.5 MEMBRANE APPLICATION

- A. Apply rubberized asphalt according to CAN/CGSB-37.51, "Application of Rubberized Asphalt, Hot-Applied, for Roofing and Waterproofing," and manufacturer's written instructions.

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- B. Heat rubberized asphalt in an oil- or air-jacketed melter with mechanical agitator specifically designed for heating rubberized-asphalt waterproofing.
- C. Start application with manufacturer's technical representative present.
- D. Apply primer, at manufacturer's recommended rate, over prepared substrate and allow to dry.
- E. Unreinforced Membrane: Apply waterproofing to substrates and adjoining surfaces indicated. Spread hot fluid-applied, rubberized asphalt to provide a uniform, unreinforced, seamless membrane 180 mils (4.5 mm) thick.
- F. Reinforced Membrane: Apply waterproofing to substrates and adjoining surfaces indicated. Spread hot fluid-applied, rubberized asphalt to a thickness of 90 mils (2.3 mm); embed reinforcing fabric, overlapping sheets 2 inches (50 mm); and spread another 125-mil- (3.2-mm-) thick layer to provide a uniform, reinforced, seamless membrane 215 mils (5.5 mm) thick.
- G. Apply waterproofing over prepared joints and up wall terminations and vertical surfaces to heights indicated or required by Consultant and manufacturer.
- H. Install protection course with overlapped joints over waterproofing system.

3.6 FIELD QUALITY CONTROL

- A. Flood Testing: Flood test each deck area for leaks, according to recommendations in ASTM D 5957, after completing waterproofing but before overlying construction is placed. Install temporary containment assemblies, plug or dam drains, and flood with potable water.
 - 1. Flood to an average depth of 2-1/2 inches (65 mm) with a minimum depth of 1 inch (25 mm) and not exceeding a depth of 4 inches (100 mm). Maintain 2 inches (50 mm) of clearance from top of sheet flashings.
 - 2. Flood each area for **72** hours.
 - 3. After flood testing, repair leaks, repeat flood tests, and make further repairs until waterproofing installation is watertight.
- B. Owner will engage an independent testing agency to observe flood testing and examine underside of decks and terminations for evidence of leaks during flood testing.

3.7 CURING, PROTECTING, AND CLEANING

- A. Cure waterproofing according to manufacturer's written recommendations, taking care to prevent contamination and damage during application stages and curing.
 - 1. Do not permit foot or vehicular traffic on unprotected membrane.
- B. Protect waterproofing from damage and wear during remainder of construction period.
- C. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.8 WATERPROOFING INSTALLER'S WARRANTY

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HOT FLUID-APPLIED WATERPROOFING

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Waterproofing Installer," has performed waterproofing and associated work ("work") on the following project:
1. Owner: <Insert name of Owner.>
 2. Address: <Insert address.>
 3. Building Name/Type: <Insert information.>
 4. Address: <Insert address.>
 5. Area of Work: <Insert information.>
 6. Acceptance Date: <Insert date.>
 7. Warranty Period: 2 Years
 8. Expiration Date: <Insert date.>
- B. AND WHEREAS Waterproofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Waterproofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;
 - b. fire;
 - c. failure of waterproofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - d. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - e. vapor condensation on bottom of waterproofing; and
 - f. activity on waterproofing membrane by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Waterproofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 3. Waterproofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 4. During Warranty Period, if Owner allows alteration of work by anyone other than Waterproofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Waterproofing Installer to perform said alterations, Warranty shall not become null and void unless Waterproofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

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5. Owner shall promptly notify Waterproofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Waterproofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
 6. This Warranty is recognized to be the only warranty of Waterproofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Waterproofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.
- E. IN WITNESS THEREOF, this instrument has been duly executed this **<Insert day>** day of **<Insert month>**, **<Insert year>**.

END OF SECTION 07142

SECTION 07170
BENTONITE WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes bentonite waterproofing.
- B. Related Sections include the following:
 - 1. Division 7 Hot Fluid-Applied.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide waterproofing that prevents the passage of water according to the following criteria:
 - 1. Permeability: 1 by 10⁻⁹ cm/sec. according to ASTM D 5084.
 - 2. Grab Tensile Strength: 95 lbf (422 N) according to ASTM D 4632.
 - 3. Elongation: 75 percent according to ASTM D 4632.
 - 4. Puncture Resistance: 120 psi (828 kPa) according to ASTM D 4833.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include product specifications and manufacturer's written installation instructions.
- B. Shop Drawings: Show installation details for interface with other work.
- C. Samples: For each of the following products, in sizes indicated:
 - 1. Waterproofing: 12 inches (300 mm) square.
- D. Material Certificates: For each type of bentonite waterproofing, signed by manufacturers.
- E. Preconstruction Test Reports: For water samples taken at Project site along with recommendations resulting from these tests.
- F. Field quality-control test reports.
- G. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for bentonite waterproofing.
- H. Warranty: Special warranty specified in this Section.

SECTION 07170

BENTONITE WATERPROOFING

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain bentonite waterproofing system through one source from a single manufacturer. Obtain accessory products used with bentonite waterproofing from sources acceptable to bentonite waterproofing manufacturer.
- B. Mockups: Build mockups to set quality standards for fabrication and installation.
 - 1. Approval of mockups is also for other material and construction qualities specifically approved by Consultant in writing.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Consultant in writing.
- C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original unopened and undamaged containers.
- B. Store materials in a dry, well-ventilated space.
- C. Remove and replace bentonite materials that have been prematurely exposed to moisture.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit bentonite waterproofing to be installed according to manufacturers' written instructions and warranty requirements.
 - 1. Do not apply waterproofing materials to surfaces where ice or frost is visible. Do not apply bentonite waterproofing materials in areas with standing water.
 - 2. Placing of bentonite clay products in panel or composite form on damp surfaces is allowed if approved in writing by manufacturer.

1.8 WARRANTY

- A. Special Warranty: Standard form found in Section 07142 in which Installer agrees to repair or replace components of bentonite waterproofing system that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Water penetrating the building or structure resulting from substrate cracking of up to 1/8 inch (3 mm).
 - b. Deteriorated or displaced waterproofing materials.
 - 2. Warranty Period: Two years from date of Substantial Completion.

SECTION 07170
BENTONITE WATERPROOFING

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

- A. Granular Bentonite: Sodium bentonite clay containing a minimum of 90 percent montmorillonite (hydrated aluminum silicate), with a minimum of 90 percent passing a No. 20 (0.85-mm) sieve.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrate preparations affecting performance of bentonite waterproofing.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of bentonite waterproofing.
 - 2. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Verify that substrate is complete and that all work that will penetrate waterproofing is complete and rigidly installed. Verify locations of waterproofing termination.

3.2 PREPARATION

- A. Coordinate work in the vicinity of waterproofing to ensure proper conditions for installing the waterproofing system and to prevent damage to waterproofing after installation.
- B. Excavation Support and Protection or Stable Excavation: If water is seeping, use plastic sheets or other suitable means to prevent wetting the bentonite waterproofing. Fill minor gaps and spaces 1/8 inch (3 mm) wide or wider with wood, metal, concrete, or other appropriate filling material. Cover or fill large voids and crevices with cement mortar according to manufacturer's written instructions.
- C. Bore 12 inch diameter hole next to vertical wall at expansion joints at four (4) locations. The wall shall be exposed 6 inches minimum on each side of the vertical wall expansion joint.
- D. Square wall side of 12 diameter hole to expose bare concrete walls surface the entire length of the hole to the base of the floor.

3.3 INSTALLATION, GENERAL

- A. Install waterproofing and accessories according to manufacturer's written instructions, standard details, and recommended practices.

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BENTONITE WATERPROOFING

1. Apply linear joint-sealing tubes, bentonite mastic, or both at changes of plane, construction joints in substrate, projections, and penetrations.
 2. Apply granular bentonite around penetrations in horizontal surfaces according to manufacturer's written instructions.
- B. Apply granular bentonite continuously at base of wall waterproofing (on footing, against wall) according to manufacturer's written instructions.
1. Protect waterproofing from damage and wetting before and during subsequent construction operations.

3.4 FIELD QUALITY CONTROL

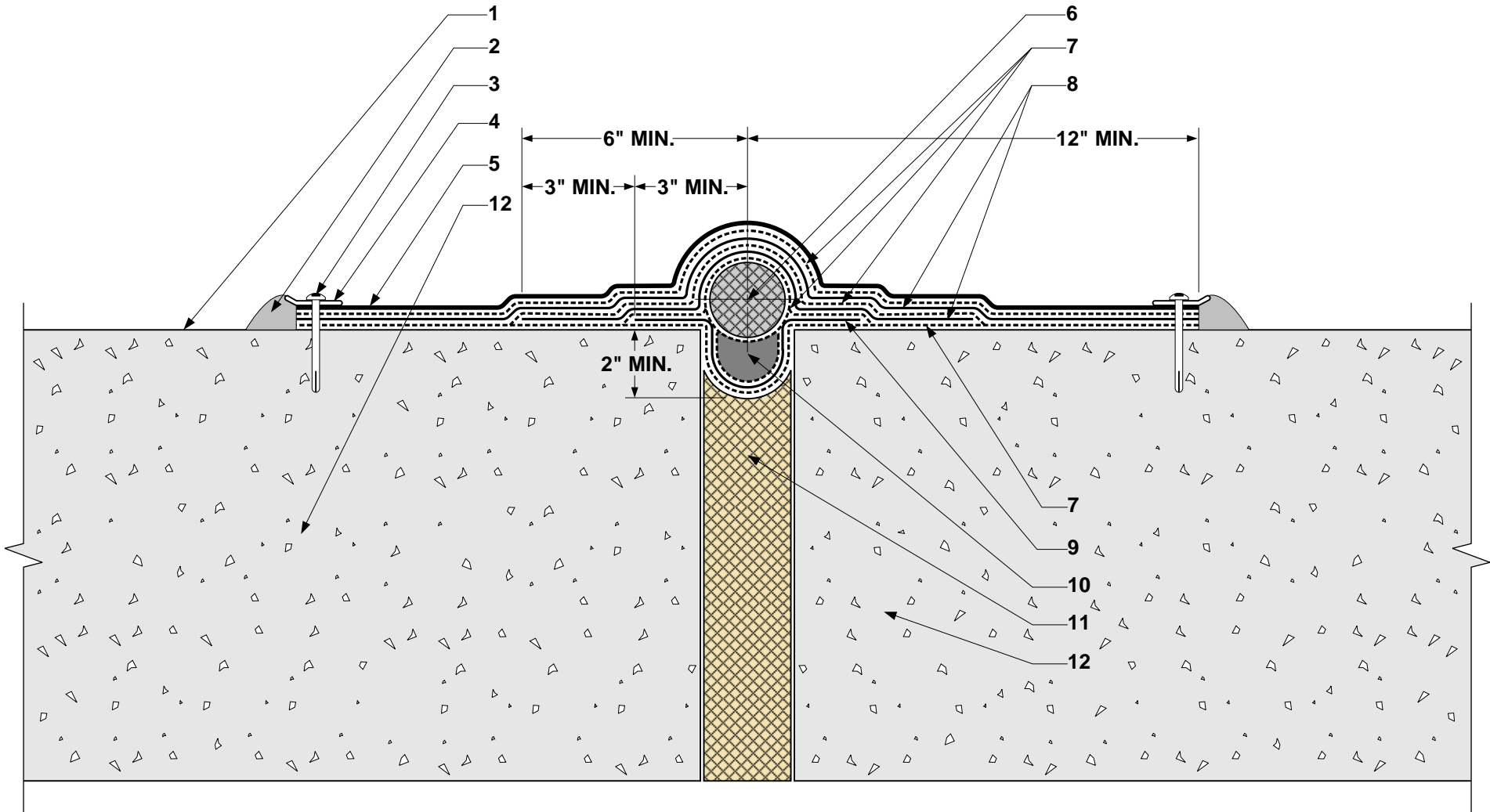
- A. Inspection: Arrange for manufacturer's representative to inspect completed installation and provide written report that installation complies with manufacturer's written instructions.
1. Remove and replace applications of bentonite waterproofing where inspection indicates that it does not comply with specified requirements.
- B. Flood Testing: Flood test each deck area for leaks, according to recommendations in ASTM D 5957, after completing waterproofing but before overlaying construction is placed. Install temporary containment assemblies, plug or dam drains, and flood with potable water.
1. Flood to an average depth of 2-1/2 inches (64 mm) with a minimum depth of 1 inch (25 mm) but not exceeding a depth of 4 inches (100 mm). Maintain 2 inches (50 mm) of clearance from top of membrane flashings.
 2. Flood each area for 48 hours.
 3. After flood testing, repair leaks, repeat flood test, and make further repairs until waterproofing installation is watertight.
- C. Perform additional testing and inspecting, at Contractor's expense, to determine compliance of replaced or additional work with specified requirements.

END OF SECTION 07170

1. SURFACE PREPARATION: REMOVE ALL RESIDUAL WATERPROOFING MATERIALS; REPAIR CONCRETE SURFACE DEFECTS; PREPARE CONCRETE SURFACE WITH ABRASIVE BLAST CLEAN (SHOT BLAST) PER ASTM D 4259, SURFACE APPLICATION OF ASTM D 41, ASPHALTIC PRIMER.
2. TERMINATION MASTIC: WATERPROOFING MANUFACTURER'S CONTINUOUS ELASTOMERIC SEALANT.
3. APPROVED FASTENER: 1/4" DIA. X 2.5" LONG APPROVED DRIVE PIN FASTENER, SET 6" O.C. MAX.
4. TERMINATION BAR: 1/8" X 1.13" X CONTINUOUS STAINLESS STEEL BAR, ATTACHED WITH APPROVED FASTENERS SET AT 6" O.C. MAX., PROFILE AS SHOWN.
5. PROTECTION COURSE: SEMI-RIGID SHEETS OF FIBERGLASS OR MINERAL-REINFORCED-ASPHALTIC CORE, PRESSURE LAMINATED BETWEEN TWO ASPHALT-SATURATED FIBROUS LINERS.
6. FOAM EXPANSION ROD: 2" MINIMUM SOLID CORE FOAM EXPANSION ROD, SET IN BED OF WATERPROOFING MANUFACTURER'S HOT FLUID-APPLIED, RUBBERIZED ASPHALT.
7. WATERPROOFING MEMBRANE: SINGLE-COMPONENT; 100 PERCENT SOLIDS; HOT FLUID-APPLIED, RUBBERIZED ASPHALT.
8. ELASTOMERIC FLASHING SHEET: 50-MIL MINIMUM, NON-STAINING, UNCURED SHEET NEOPRENE.
9. EXPANSION ROD RETAINING LOOP: 50-MIL MINIMUM, NON-STAINING, UNCURED SHEET NEOPRENE.
10. JOINT FILLER: SOLID FILL OF SINGLE-COMPONENT; 100 PERCENT SOLIDS; HOT FLUID-APPLIED, RUBBERIZED ASPHALT.
11. EXISTING JOINT FILL: ASPHALT IMPREGNATED WOOD FIBERBOARD.
12. EXISTING 12" THICK REINFORCED CONCRETE PAD (CEILING), SUPPORTED BY COLUMNS ON INTERIOR OF RESERVOIR..



PROJECT:	VILLAGE OF FRANKLIN PARK 9501 BELMONT AVENUE FRANKLIN PARK, IL 60131	PROJ. #:	13-501
	TITLE:	DRAWING CALLOUT KEY - PAGE A	DATE:
		SCALE:	NTS
		DETAIL:	KEY-A

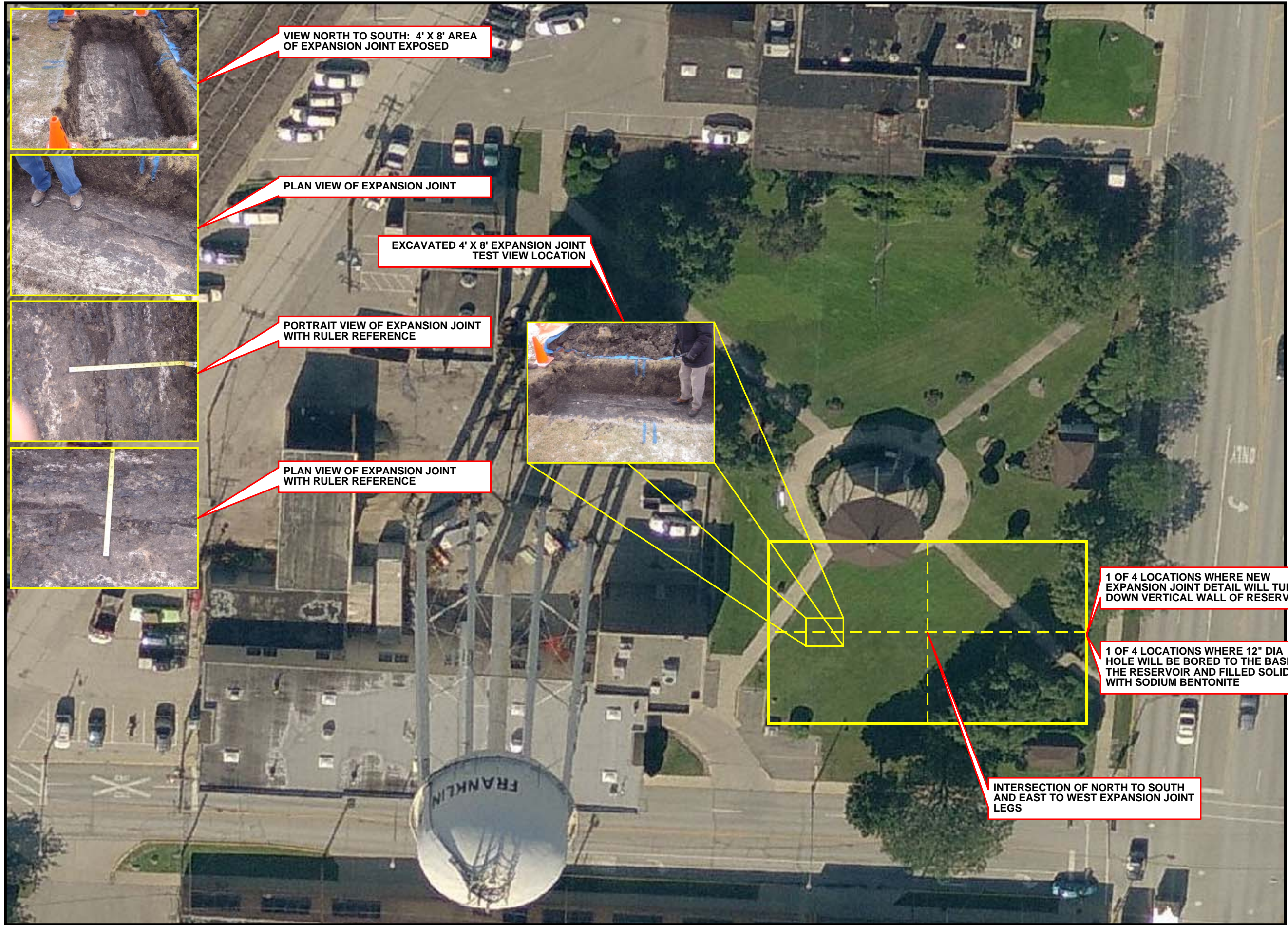


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PROJECT: VILLAGE OF FRANKLIN PARK
 9501 BELMONT AVENUE
 FRANKLIN PARK, IL 60131

TITLE: EXPANSION JOINT DETAIL

PROJ. #: 13-501
 DATE: 03/18/13
 SCALE: NTS
 DETAIL: 1



VIEW NORTH TO SOUTH: 4' X 8' AREA OF EXPANSION JOINT EXPOSED

PLAN VIEW OF EXPANSION JOINT

EXCAVATED 4' X 8' EXPANSION JOINT TEST VIEW LOCATION

PORTRAIT VIEW OF EXPANSION JOINT WITH RULER REFERENCE

PLAN VIEW OF EXPANSION JOINT WITH RULER REFERENCE

1 OF 4 LOCATIONS WHERE NEW EXPANSION JOINT DETAIL WILL TURN 3' DOWN VERTICAL WALL OF RESERVOIR

1 OF 4 LOCATIONS WHERE 12" DIA HOLE WILL BE BORED TO THE BASE OF THE RESERVOIR AND FILLED SOLID WITH SODIUM BENTONITE

INTERSECTION OF NORTH TO SOUTH AND EAST TO WEST EXPANSION JOINT LEGS



LEGEND

- ⊕ DRAIN
- ∇ VENT
- ⊕ FLUE
- ⊕ HATCH
- ⊗ R.T.U.
- ⊕ PORTAL
- ⊕ SKYLIGHT
- ⊕ TEST CUT
- ⊕ PHOTO

TITLE: WATERPROOFING SKETCH

PROJECT: VILLAGE OF FRANKLIN PARK
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DRAWING: WPS-1

SCALE: N.T.S

DATE: 03/18/13

PROJECT #: 13-501