

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

This Exhibit details the information on actuarial assumptions and methods that, pursuant to Section 6.03 of Revenue Procedure 2017-43, must be described in an application for approval of a proposed benefit suspension. The three parts of this Exhibit correspond to the subsections of Section 6.03 of Revenue Procedure 2017-43.

Part 1 - Actuarial assumptions and methods used for projections.

Provided is information regarding specific actuarial assumptions (per Revenue Procedure 2017-43) used in the cash flow projections included in the application, with the exception of the projections included in Exhibit 3.01, Exhibit 7.10a, and Exhibit 7.10b. The differences in the assumptions used for Exhibit 3.01, Exhibit 7.10a, and Exhibit 7.10b are addressed in Part 3 of this Exhibit.

Investment returns

- Net investment return for deterministic projections:
 - Assumed investment return of 10.3% for the 2017 calendar
 - 6.58% per year during calendar years 2018-2027 and 7.54% per year during calendar years 2028 and later
- Assumptions used for stochastic projections (if applicable): Not applicable

Mortality assumptions

- Healthy Lives: RP-2014 Blue Collar Tables with separate rates for non-annuitants and annuitants and separate rates for males and females. Mortality improvement: MP-2017 projection scale beginning in 2014.
- Disabled Lives: RP-2014 Disabled Mortality Tables with separate rates for males and females. Mortality improvement: MP-2017 projection scale beginning in 2014.

Other demographic assumptions

- The complete list of disability, withdrawal, and retirement decrement rates is included as Exhibit 6.03-1.

Assumptions regarding form and commencement age of benefits

- Form of payment election assumptions for active and terminated vested participants:
 - 35% of all participants elect the straight life annuity
 - 15% of all participants elect the 50% joint and survivor with popup annuity
 - 30% of all participants elect the 100% joint and survivor annuity
 - 20% of all participants elect the 10-year certain and continuous annuity

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

- Assumptions regarding the probability of benefit commencement by age for participants who have terminated with deferred benefits or who are assumed to terminate with deferred benefits in the future:
 - The retirement age and mortality assumptions for current terminated vested participants are the same as those assumed for active participants (see Exhibit 6.03-1).
 - The retirement age for future terminated vested participants is assumed to be age 60.
- Assumptions regarding the probability of benefit commencement by age for participants who have become disabled or who are assumed to become disabled in the future:
 - The Plan does not provide a disability pension benefit for participants with onsets of disability on or after January 1, 2014.
 - The retirement age assumptions for participants with disability onset dates on or after January 1, 2014 (and on or prior to January 1, 2017) are the same as those assumed for active participants (see Exhibit 6.03-1).
 - The retirement age assumptions for participants with disability onset dates after January 1, 2017 is assumed to be age 60.

Assumptions regarding missing or incomplete data

- Assumption regarding terminated vested participants beyond normal retirement age who, because they have not commenced receiving benefit payments, could be considered missing: None. All such participants are included for valuation and cash flow projection purposes.
- Assumptions to fill in other missing data:
 - Spouses of active male/female participants assumed to be 3 years younger/older than the participant.
 - There are no other missing or incomplete data that would be considered material.

New entrant profile

- The following is a description of the composition of the new hire profile, including the weights applicable to each assumed age of entry:
 - The new hire profile is comprised of 25 participants, with each participant assigned an equal weight for purposes of assumed age of entry.
 - The new hire profile is comprised of participants who were first reported as plan participants in the January 1, 2016 or January 1, 2017 valuations
 - The age at hire, the service and accrued benefit as of January 1, 2016 were preserved for participants who were newly active participants in the January 1, 2016 valuation.

Contribution rates

- For projection purposes, an effective hourly contribution rate, reflecting non-reciprocated and net-reciprocated hours, of \$9.50 per hour was used during 2017 and a rate of \$9.56 per hour was used during 2018 and later years. These effective rates are comprised of the following:

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

- An hourly contribution rate for non-reciprocated hours of \$9.70 per hour during the projection period.
- An effective hourly contribution rate for net-reciprocated hours of \$8.95 per hour during 2017, and \$9.18 per hour during 2018 and later years.

Contribution base units

- Contribution base units for projection purposes are equal to hours worked in covered employment, including both non-reciprocated and net reciprocated hours.
- For purposes of calculating future Normal Costs, the assumption regarding number of hours associated with each active participant is the average of hours for the two years prior to the valuation date; however, if there are no hours in the second year preceding the valuation date, then the hours assumption is based on prior year hours only.
 - The average assumption (i.e., average of each active participant’s assumed 2017 hours) reflected in the 2017 Normal Cost is 1,525 hours per participant.
- For purposes of calculating future employer contributions, the assumption regarding the number of contribution base units is as follows:

Year	Non-Reciprocated Hours	Change	Net Reciprocated Hours	Change	Total Hours	Change
2017	261,000		94,000		355,000	
2018	242,730	-7%	87,420	-7%	330,150	-7%
2019	228,166	-6%	82,175	-6%	310,341	-6%
2020+	216,758	-5%	78,066	-5%	294,824	-5%

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

Withdrawal liability payments

There are no current and no assumed future withdrawal liability payments.

Administrative expenses

Administrative expenses, expressed as of the beginning of the year, are assumed to be \$490,000 for the 2017 plan year, \$335,000 for the 2018 plan year, and \$320,000 for the 2019 plan year. Starting with 2020, administrative expenses are assumed to increase 2% per year.

Projection methodology

- A description of any approximation or data grouping techniques that were used: None.
- A description of any changes to the cash flow projections that would normally be provided by the actuarial software, including both changes to the programming that affect the results generated by the software and modifications to the results generated by the software: None.

Part 2 - Supporting documentation for selection of certain assumptions.

Investment Returns

- Exhibit 6.03-2 contains the components of the target portfolio used in the projections (expressed in terms of the asset classes used for setting the plan's investment policy) and the allocation of the components of the target portfolio among the asset classes, as listed in Appendix B of Revenue Procedure 2017-43. This information was provided by the Fund's investment consultant, Investment Performance Services, LLC ("IPS").
 - The target portfolio includes an allocation to the Opportunistic and Global Tactical Asset Allocation asset classes, which are not asset classes included on the list in Appendix B.
 - While fundamentally different, the Opportunistic asset class most closely resembles the Core Real Estate asset class on Appendix B, in terms of the expected net return, standard deviation, and correlations.
 - While fundamentally different, the Global Tactical Asset Allocation asset class most closely resembles the Infrastructure asset class on Appendix B, in terms of the expected net return, standard deviation, and correlations.
- Any differences in target and current allocations is due to normal market fluctuations inherent to any investment portfolio.
- Generally, the investment policy of the Plan is to invest the assets of the Plan among several asset classes and within permitted allocation ranges. The Board of Trustees reviews the investment policy and the asset allocation on a regular basis and determines, with input from the investment consultant, whether any changes are warranted based on current market conditions and expectations about the future. The mix of assets will vary over time due to

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

changes to the target allocations, if any, and due to normal market fluctuations. There are no current plans or actions to change the existing target allocation.

- Exhibit 6.03-2 contains the net of fees short term and long term investment return assumptions used for the deterministic projections. The assumptions are, in part, based on the expected returns for the various asset classes. The following information is also provided:
 - The expected geometric and arithmetic expected returns, net of fees, for each asset class;
 - The standard deviation of returns for each asset class; and
 - The correlations for the returns among the asset classes.
 - Please also note:
 - The inflation rate inherent in the net investment returns is 2.50%.
 - The investment-related expense for the 2016 plan year was 0.8%.
- The Plan's investment consultant provided expected annual returns of 6.58% for a short term (10-year) investment horizon and 7.25% for a long term investment horizon, as shown in Exhibit 6.03-2.
 - The expected long term rate of return of 7.25% implies a time-weighted 7.54% annual rate of return starting in year 11 of the extended period, given the 6.58% annual rate of return during the initial 10 year period. These rates result in a dollar-weighted rate of return of 6.92% over the extended period and reflecting the proposed suspensions.
 - The investment consultant, IPS, determined the short term investment return assumptions using Wilshire Compass, the plan's target asset allocation, and the 10-year investment horizon inputs from the Survey of Capital Market Assumptions (2017 Edition) published by Horizon Actuarial Services, LLC. IPS used their own expected returns for the Opportunistic and GTAA strategies as those asset classes were not listed in the Horizon survey. The Horizon survey and IPS expected returns are net of fees index returns.
 - IPS determined the long term investment return assumptions using Wilshire Compass, the plan's target asset allocation, and IPS's capital market expectations. IPS expected returns are net of fees index returns.
- The investment return for the period October 1, 2017 to December 31, 2017 was based on the Plan's preliminary net of fees investment returns during October and November, as provided by IPS, and on the expected investment return during December of 0.53% (based on the 6.58% annual short term assumption).

Demographic experience

- Copies of studies of the plan's demographic experience performed over the last ten years:
 - Attached as Exhibit 6.03-3 are the results of the retirement rates experience study performed in 2015.
 - Attached as Exhibit 6.03-4 are the results of the form of payment experience study performed in 2017.

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

- Any liability gain or loss analysis (by source, if available) performed over the last ten years: Exhibit 6.03-5 includes the results of gain or loss analyses performed over the last ten years. The results are not available by source other than mortality.
- Percentage of the plan population that is married: Marriage data for non-retired pension plan participants is not available since it is not tracked by the plan administrator. However, marriage data is tracked for the Local 16 Health Fund, which includes mostly the same active participants as the pension plan. The health and welfare plan data shows that about 50% of active members are married. Please note that there is no charge for dependents in the Health Fund, so the marriage percentage is representative of the actual marriage experience.
- Distribution of each optional form of benefit selected at retirement for the last five years: Please see Exhibit 6.03-4.
Retirement rates by age for benefit commencements during the last 5 years, separately for active and terminated vested participants: Please see Exhibit 6.03-6.

Mortality assumptions

- The assumed mortality rates used for Healthy Participants are those from the RP-2014 Blue Collar sex-distinct tables as issued by the Society of Actuaries (available at <https://www.soa.org/experience-studies/2014/research-2014-rp/>).
- Description of the process that was used to construct the mortality rates based on experience study data and the rationale for selecting that process: See the RP-2014 Mortality Tables Report.
- The assumed mortality improvement rates are those published in the SOA MP-2017 improvement scale. These mortality improvement rates are applied to the mortality rates starting with the 2014 year.

New entrant profile

- Information and analysis used in the selection of the new entrant profile is provided below:
 - A distribution of ages of all new active entrants for each of last five years is shown below. A new entrant for purposes of the table below is someone who was an active participant as of the valuation date shown but who was not a plan participant as of the prior valuation date.

Age Range	Percentage of New Entrants				
	1/1/2013	1/1/2014	1/1/2015	1/1/2016	1/1/2017
Below 20	0%	0%	0%	0%	0%
20 – 24	23%	15%	0%	56%	40%
25 – 29	23%	8%	17%	11%	6%
30 – 34	8%	31%	33%	0%	6%
35 – 39	23%	23%	17%	22%	12%
40 – 44	15%	8%	0%	11%	12%

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

45 – 49	0%	15%	17%	0%	12%
50 – 54	0%	0%	0%	0%	12%
55 – 59	0%	0%	17%	0%	0%
60 and over	8%	0%	0%	0%	0%

- A description of the extent to which a material proportion of the new entrants over the last five years have had prior vesting service or benefit service: The portion of new entrants with prior vesting service is not material (3 out of 58, or 5%, with each of the 3 entrants having 3 years of prior service).

Contribution base units and employer withdrawals

- For each year starting with the 2009 plan year, Exhibit 6.03-7 provides a table of employers that contributed 5% or more of the annual contributions to the plan. The exhibit includes the number of contribution base units, the average contribution rate, and the total contribution for each such employer.
- The historical trends experienced by the plan with respect to contribution base units and contribution rates is documented in several sections within the application, including Sections 5.01(II), 5.02(1)(e), 5.02(3), 5.02(4), and 6.04.
- The rationale for the contribution base units (i.e., hours of covered employment) assumption is as follows:
 - The Board of Trustees has determined that the following annual hours assumption is reasonable and is based on all available information at their disposal:

<u>Plan Year</u>	<u>Hours</u>	<u>% Change</u>
2017	355,000	
2018	330,150	-7%
2019	310,341	-6%
2020	294,824	-5%
2021+	294,824	0%

- The Trustees based the hours assumption on information available to them about contributory employers, the Trustees' experience and knowledge of the trade and the local geography, and relationships that they have built with employers, as well as economic and political factors.
- The Trustees also analyzed recent and historic hours experience, including hours for individual employers. For example, 2017 total hours reported through August were approximately 239,000. The Trustees then estimated the Sep-Dec 2017 hours based on the average Jan-Aug 2017 hours, which over the last five years has proven to be a reliable estimation technique.
- The Trustees also considered the average rate of decline in total hours in the recent past. The average rate of decline in total hours over the last 2 to 4 years (through 2017)

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

is 6% to 8%. When eliminating the one-time, recent large decline attributable to the loss of a specific employer in 2015, the average rate of decline in total hours over the last 2 to 4 years is 4% to 6%.

- The merger of Local 16 into Local 5 in 2017 provides some potential for increased work opportunities for the members of Local 5 who work in the Baltimore area and, due to reciprocity agreements, whose contributions are paid to the Ironworkers Local No. 16 Pension Fund. Due to the proximity of Baltimore to Washington, DC and the significant amount of work in the DC area, a substantial amount of contributions has been reciprocated in the past to the Local 16 Pension Fund from DC area work (see Section 5.02(4) of the application). With this merger, the Baltimore members will not only have work opportunities in DC due to their geographic proximity but they will now have first priority due to their membership within the same local union. This factor is expected to provide additional stability in the Local 16 Pension fund hours.
- We have assumed no future employer withdrawals and, therefore, no future withdrawal liability payments. There have been no employer withdrawals during the past five years and none of the current employers have notified the Plan of an upcoming withdrawal.
- The Trustees recognize the significant reductions in hours in the recent past and took such reductions very seriously in determining their expectations going forward, leading to a reduction in the hours assumption in 2018, 2019, and 2020.
- The rationale for the contribution rate assumption is as follows.
 - The Local 16 Pension Plan contribution rate of \$9.70 per hour is expected to remain at this level for the duration of the projection period. Sections 5.02(1)(e) and 5.03(2) of the application explain the rationale for why this rate cannot be increased.
 - The effective contribution rate used for projection purposes is \$9.50 per hour during 2017 and \$9.56 per hour during 2018, and then is assumed to remain at that level for the duration of the projection period. The effective contribution rate reflects the effect of net reciprocated hours and the contribution rates applicable to work performed in geographic areas outside Baltimore. The Local generally has no control over such rates.
- There have not been any employer withdrawals during the last 5 years.

Take-up rate with respect to selection of benefit/contribution schedules

- Description of the plan's experience for take-up of each benefit/contribution schedule made available to bargaining units under the rehabilitation plan: Not applicable as only one schedule is available to employers.

Projection methodology

- Provide information and analysis to support any approximation techniques that were used.
 - For the standard suspension and the "5% lower suspension" runs, an approximation technique was used for two decrements (disability and termination) affecting active participants only.

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

- The approximation technique relates to the calculation of the PBGC guaranteed benefit under all optional forms of payment that may apply to active participants who terminate employment prior to November 2020 and who would be subject to a partial suspension, as outlined on page 4 of the application.
 - This approximation technique does not affect terminated vested or retiree calculations.
 - A separate analysis was performed and it was estimated that an exact technique would change the Actuarial Accrued Liability by less than \$10,000 (or 0.006% of the total Actuarial Accrued Liability). Thus, the effect of this approximation technique was deemed immaterial.
 - This approximation technique was not used for the other two decrements (retirement and death) applicable to active and terminated vested participants. An exact calculation was performed for those two decrements (i.e. the actual PBGC guaranteed benefits were computed directly for all optional forms of payment).
- Provide information and analysis to support any changes to the cash flow projections that would normally be generated by the actuarial software, including both changes to the programming that affect the results generated by the software and modifications to the results generated by the software: No such changes were made.

Part 3 – Additional disclosures relating to use of different assumptions

- Differences in assumptions used for deterministic projections in various illustrations under the revenue procedure:
 - The changes in the assumptions from those used for Exhibit 7.10a (i.e., 2016 actuarial valuation report) to those used for Exhibit 7.10b (i.e., 2017 actuarial report) are listed in Section 1.6 of Exhibit 7.10b. Section 1.7 of Exhibit 7.10a and Section 1.7 of Exhibit 7.10b disclose the assumptions used for projection purposes.
 - The changes in the assumptions from those used for Section 3.01 (i.e., 2017 PPA Certification) to those used for Exhibit 7.10b (i.e., 2017 actuarial valuation report) are as follows:
 - Section 7.10b is based on the demographic assumptions used for the 2017 actuarial valuation whereas Section 3.01 is based on demographic assumptions used for the 2016 actuarial valuation.
 - Differences in cash flow and investment assumptions used for Exhibit 3.01 and those used for Exhibit 7.10b are due to information received subsequent to the filing of the actuarial certification of status for the 2017 Plan Year.
 - Section 7.10b is based on the audited January 1, 2017 market value whereas Section 3.01 is based on the unaudited estimated January 1, 2017 market value.

**APPLICATION FOR APPROVAL OF BENEFIT SUSPENSION FOR
IRON WORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001**

**Exhibit 6.03 (Checklist Item #25)
Information on Actuarial Assumptions and Methods**

- Projected hours assumption: Exhibit 3.01 was prepared in March 2017 and the Trustees set the hours assumption based on information available at that time. Exhibit 7.10b was prepared in November 2017 and the Trustees set the assumption based on currently available information, including actual hours reported through August 2017.
- Section 1.7 of Exhibit 7.10b discloses the assumptions used for projection purposes.
- The changes in the assumptions from those used for Exhibit 7.10b (i.e., 2017 actuarial valuation report) to those used for Section 4.01(1) are as follows:
 - For purposes of Section 4.01(1), the retirement decrements for active grandfathered participants were changed to those of the active non-grandfathered participants. While the assumption used for Exhibit 7.10b remains reasonable for valuation purposes, the revised assumption for Section 4.01(1) is more reasonable for cash-flow projection purposes.
 - The investment return assumption was updated to reflect short term and long term investment rates, as documented in Part 2 of this Exhibit 6.03, which is more reasonable for cash-flow projection purposes.
 - While not an assumption change, there were two census data updates, including a change in status for one participant from a pensioner to an active grandfathered participant and a change in status for one participant from an active non-grandfathered participant to an active grandfathered participant.
- Differences in assumptions used for stochastic projections: Stochastic projections were not used in this application.

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

**Exhibit 6.03-1
 Decrement Tables**

Decrement Tables

Age	Disability Incidence	Withdrawal Incidence	Retirement Incidence	
			< 30 Service	>= 30 Service
17	0.001800	0.088800	-	-
18	0.001800	0.088800	-	-
19	0.001800	0.081900	-	-
20	0.001800	0.076000	-	-
21	0.002000	0.070900	-	-
22	0.002100	0.066500	-	-
23	0.002300	0.062500	-	-
24	0.002400	0.059200	-	-
25	0.002600	0.056000	-	-
26	0.002703	0.053482	-	-
27	0.002844	0.050973	-	-
28	0.002988	0.048590	-	-
29	0.003138	0.046319	-	-
30	0.003300	0.044142	-	-
31	0.003477	0.042051	-	-
32	0.003672	0.040040	-	-
33	0.003891	0.038197	-	-
34	0.004140	0.036217	-	-
35	0.004422	0.034390	-	-
36	0.004749	0.032614	-	-
37	0.005121	0.030878	-	-
38	0.005550	0.029177	-	-
39	0.006042	0.027505	-	-
40	0.006603	0.025857	-	-
41	0.007245	0.024202	-	-
42	0.007974	0.022510	-	-
43	0.008799	0.020783	-	-
44	0.009732	0.019018	-	-
45	0.010785	0.017217	-	-
46	0.011961	0.015378	-	-
47	0.013278	0.013501	-	-
48	0.014745	0.011584	-	-
49	0.016374	0.009625	-	-
50	0.018177	0.007625	-	-
51	0.020169	0.005578	-	-
52	0.022359	0.003484	-	-
53	0.024762	0.001337	-	-
54	0.027396	-	-	-
55	0.030267	-	0.150000	0.500000
56	0.033399	-	0.100000	0.250000
57	0.036801	-	0.100000	0.250000
58	0.040494	-	0.100000	0.250000
59	0.044490	-	0.100000	0.250000
60	0.048807	-	0.200000	1.000000
61	0.053460	-	0.200000	1.000000
62	0.058470	-	0.250000	1.000000
63	0.063855	-	0.250000	1.000000
64	0.069630	-	0.250000	1.000000
65	-	-	1.000000	1.000000

Exhibit 6.03-2
 Investment Information

10 – 20 Years Annualized Expectations

Equity Asset Class	Return	Risk
U.S. Large Cap	7.25%	16.00
U.S. Mid Cap	7.50%	18.00
U.S. Smid Cap	7.50%	21.00
U.S. Small Cap	7.75%	24.00
International Large Cap	7.75%	18.00
International Small Cap	8.25%	22.00
Emerging Markets	9.75%	25.00
Global Equity	7.50%	17.50

Fixed Income Asset Class	Return	Risk
Cash Equivalents	2.00%	0.50
Short-term Gov /Credit	2.50%	2.50
Intermediate Investment Grade	3.00%	4.00
Core Investment Grade	3.25%	5.00
Mortgages	4.00%	4.00
Short Duration High Quality High Yield	5.50%	6.00
High Quality High Yield	6.00%	9.00
Multi-Sector Fixed Income	4.50%	6.00
Short Duration Global Bonds	3.50%	5.50
Core Plus Bonds	3.75%	5.80

Alternatives Asset Class	Return	Risk
Multi-Strategy Hedge Fund of Funds	4.50%	6.00
Opportunistic Strategies	8.00%	8.50
Long Short Equity Hedge Fund of Funds	6.00%	10.00
Global Tactical Asset Allocation	7.00%	12.50
Core Real Estate	7.75%	7.50
Value -Add Real Estate	9.00%	9.50
REITS	7.75%	21.00
Private Equity FOF	10.00%	16.00
Private Equity Secondaries	10.00%	14.00
Infrastructure	7.00%	13.50
Risk Parity	6.50%	16.00
Commodities	3.75%	18.50

- IPS Investment Committee Jan 2017.
- Inflation expectation 2.50%.
- The above chart represents an annualized return forecast for different asset classes using index returns (net of fees). These forecasts are forward-looking assumptions based on reasonable beliefs of the IPS Investment Committee, but are not a guarantee of future performance. Actual results may differ from the forecast above.

Exhibit 6.03-2
 Investment Information

Investment Performance Services, LLC
 Asset Class Correlations

Assumption table:

	Large Stocks	Mid Stocks	Smid Stocks	Small Stocks	REIT	Intern'l	Global Stocks	Emerg	Intern'l Sma	T-BILL	ST Gvt/Credit	Intern Inv Grd	Core Inv Grd	SD HY	HY	Mult Fx Inc	SD Global Bond	RE	VA	PE	HfOf Multi	Opp	HfOf LS	GTAA	Risk Parity	Comm	Infra	
Return	7.25	7.50	7.50	7.75	7.75	7.75	7.50	9.75	8.25	2.00	2.50	3.00	3.25	5.50	6.00	4.50	3.50	7.75	9.00	10.00	4.50	8.00	6.00	7.00	6.50	3.75	7.00	
Risk	16.00	18.00	21.00	24.00	21.00	18.00	17.50	25.00	22.00	0.50	2.50	4.00	5.00	6.00	9.00	6.00	5.50	7.50	9.50	14.00	6.00	8.50	10.00	12.50	16.00	18.50	13.50	
Correlations																												
Large Stocks	1.00																											
Mid Stocks	0.94	1.00																										
Smid Stocks	0.93	0.96	1.00																									
Small Stocks	0.91	0.94	0.97	1.00																								
REITS	0.73	0.77	0.76	0.74	1.00																							
International Stocks	0.88	0.87	0.82	0.78	0.66	1.00																						
Global Stocks	0.94	0.93	0.90	0.86	0.71	0.96	1.00																					
Emerging Markets	0.77	0.79	0.74	0.70	0.58	0.87	0.89	1.00																				
International Small Cap Stocks	0.83	0.84	0.81	0.76	0.63	0.94	0.93	0.86	1.00																			
T-Bill	-0.16	-0.17	-0.16	-0.15	-0.12	-0.12	-0.13	-0.06	-0.18	1.00																		
Short Term Gvt/Credit	-0.08	-0.07	-0.11	-0.14	0.04	0.07	0.01	0.12	0.06	0.42	1.00																	
Intermediate Investment Grade	0.03	0.05	-0.01	-0.05	0.25	0.15	0.11	0.20	0.15	0.12	0.78	1.00																
Core Investment Grade	0.02	0.03	-0.02	-0.07	0.26	0.13	0.09	0.18	0.13	0.07	0.71	0.96	1.00															
Short Duration HQ High Yield	0.60	0.67	0.62	0.55	0.55	0.65	0.66	0.67	0.69	-0.16	0.20	0.32	0.29	1.00														
High Quality High Yield	0.68	0.74	0.70	0.65	0.67	0.73	0.74	0.72	0.73	-0.17	0.10	0.27	0.25	0.92	1.00													
Multi Strategy Fixed Income	0.29	0.27	0.22	0.18	0.36	0.46	0.41	0.47	0.46	0.11	0.66	0.75	0.73	0.35	0.35	1.00												
Short Duration Global Bonds	0.32	0.31	0.26	0.22	0.39	0.50	0.45	0.51	0.50	0.10	0.65	0.74	0.72	0.39	0.40	0.98	1.00											
Core Real Estate	0.12	0.09	0.08	0.09	0.11	0.05	0.07	-0.03	0.02	0.09	-0.24	-0.16	-0.13	-0.16	-0.08	-0.08	-0.08	1.00										
Value-Add Real Estate	0.14	0.10	0.10	0.11	0.13	0.07	0.08	-0.02	0.03	0.09	-0.23	-0.15	-0.12	-0.17	-0.08	-0.07	-0.07	0.98	1.00									
Private Equity	0.91	0.94	0.97	0.98	0.74	0.78	0.86	0.70	0.76	-0.15	-0.14	-0.05	-0.07	0.55	0.65	0.18	0.22	0.09	0.11	1.00								
Multi Strategy HFoF	0.71	0.74	0.68	0.63	0.39	0.77	0.78	0.75	0.80	-0.11	-0.06	-0.01	-0.03	0.62	0.65	0.18	0.22	0.12	0.13	0.63	1.00							
Opportunistic Strategies	0.72	0.78	0.74	0.69	0.71	0.76	0.78	0.75	0.76	-0.19	0.09	0.25	0.23	0.90	0.97	0.36	0.40	-0.10	-0.10	0.69	0.65	1.00						
Long/Short Equity HFOF	0.86	0.89	0.86	0.81	0.56	0.89	0.92	0.89	0.90	-0.14	-0.03	0.00	-0.03	0.69	0.73	0.28	0.32	0.03	0.04	0.81	0.91	0.76	1.00					
GTAA	0.92	0.89	0.86	0.81	0.72	0.95	0.96	0.86	0.92	-0.09	0.14	0.24	0.22	0.64	0.71	0.56	0.60	0.07	0.08	0.81	0.72	0.75	0.87	1.00				
Risk Parity	0.55	0.52	0.47	0.43	0.53	0.69	0.66	0.67	0.67	0.07	0.52	0.61	0.59	0.45	0.48	0.94	0.94	-0.02	0.00	0.43	0.38	0.50	0.52	0.78	1.00			
Commodities	0.49	0.51	0.47	0.42	0.31	0.58	0.59	0.65	0.58	0.04	0.16	0.11	0.07	0.49	0.50	0.42	0.45	0.12	0.13	0.42	0.60	0.51	0.65	0.60	0.53	1.00		
Infrastructure	0.78	0.73	0.68	0.63	0.60	0.84	0.83	0.73	0.77	-0.06	0.11	0.27	0.29	0.52	0.60	0.53	0.56	0.11	0.13	0.63	0.63	0.62	0.71	0.86	0.71	0.50	1.00	

A Correlation of 1.00 indicates two series move perfectly together while a -1.00 shows they move perfectly opposite one another.

Exhibit 6.03-2
Investment Information

Investment Performance Services, LLC
10 – 20 Years Annualized Expectations

<u>Asset Class</u>	<u>Geometric (Compound) Annual Return</u>	<u>Risk (Standard Deviation)</u>	<u>Arithmetic Mean Return</u>
Large Stocks	7.25%	16.00%	8.41%
Mid Stocks	7.50%	18.00%	8.96%
Smid Stocks	7.50%	21.00%	9.46%
Small stocks	7.75%	24.00%	10.27%
International Stocks	7.75%	18.00%	9.20%
Bonds	3.25%	5.00%	3.37%
Bonds Intermediate	3.00%	4.00%	3.08%
Bonds HQ HY	6.00%	9.00%	6.38%
Cash Equivalents	2.00%	0.50%	2.00%
Core RE	7.75%	7.50%	8.01%
GTAA	7.00%	12.50%	7.66%
HF of F	4.50%	6.00%	4.67%
Private Equity	10.00%	16.00%	11.13%

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

**Exhibit 6.03-2
 Investment Information**

	% Asset Class -- Target													
	US LC Equity	Smid Cap Equity	Internat'l Eq	Fixed Income Interm	Short Duration HY	High Yield	Real Estate	Value Add	HFoF-Multi Strategy	Opp	GTAA	Cash	Expected Return	Comments
Iron Workers Local No. 16 Pension Fund Short Term Return Expectations	22.5	10.0	7.5	10.0	0.0	10.0	20.0	0.0	0.0	10.0	10.0	0.0	6.58%	Short Term Returns using 2017 Horizon survey return assumptions in conjunction with IPS return assumptions
Iron Workers Local No. 16 Pension Fund Long Term Return Expectations	22.5	10.0	7.5	10.0	0.0	10.0	20.0	0.0	0.0	10.0	10.0	0.0	7.25%	Long Term Returns using IPS Return assumptions

	% Asset Class -- Actual as of September 30, 2017													
	US LC Equity	Smid Cap Equity	Internat'l Eq	Fixed Income Interm	Short Duration HY	High Yield	Real Estate	Value Add	HFoF-Multi Strategy	Opp	GTAA	Cash	Expected Return	Comments
Iron Workers Local No. 16 Pension Fund	21.0	8.5	8.0	6.5	0.0	10.5	20.5	0.0	0.0	14.5	10.5	0.0		Actual Allocation as of September 30, 2017

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
IRONWORKERS LOCAL UNION 16 PENSION FUND
EIN/PN: 52-6148924 / 001

Ironworkers Local 16 Pension Plan

Exhibit 6.03-3: Review of 2009-2013 Retirement Experience for Active Participants

Early Retirement Pension					Service Pension														
(Service < 25 Years)					(Service < 30 Years)					(Service >= 25 Years)					(Service >= 30 Years)				
Exposures		Actual Experience			New Rate	Exposures		Actual Experience *			New Rate								
Age	Count	Count	Observed Rate	Effective 1/1/15	Age	Count	Count	Observed Rate	Effective 1/1/15										
55	19	2	11%	15%	55	12	1	8%	50%										
56	16	3	19%	10%	56	10	5	50%	25%										
57	11	5	45%	10%	57	6	3	50%	25%										
58	3	0	0%	10%	58	6	1	17%	25%										
59	3	0	0%	10%	59	5	3	60%	25%										
60	10	1	10%	20%	60	2	0	0%	100%										
61	5	2	40%	20%	61	4	2	50%	100%										
62	5	2	40%	25%	62	2	1	50%	100%										
63	4	1	25%	25%	63	0	0	0%	100%										
64	5	0	0%	25%	64	0	0	0%	100%										
65	3	2	67%	100%	65	1	0	0%	100%										
66	1	1	100%	100%	66	1	0	0%	100%										
67	0	0	0%	100%	67	1	0	0%	100%										
68	0	0	0%	100%	68	3	2	67%	100%										
69	0	0	0%	100%	69	1	0	0%	100%										
70	0	0	0%	100%	70	1	1	100%	100%										

* Note that actual past retirement experience for the Service Pension is not as credible for predicting future retirement experience due to the plan design changes noted below.

Plan Provision Notes:

1. Eligibility for Early Retirement Pension is 55/10
2. Eligibility for Service Pension was 25 years for retirements prior to June 1, 2012
3. Eligibility for Service Pension is 30 years (and attainment of age 55) for retirements on or after June 1, 2012
4. Service Pension is reduced by 6% per year that retirement precedes age 60, for retirements after June 30, 2014

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

Ironworkers Local 16 Pension Plan
Exhibit 6.03-4: Form of Payment
Experience from 1/1/2011 - 1/1/2016

Form of Payment	Number Electing	Percentage Electing	Election Assumption
Normal Form	37	36%	35% *
Life Only	1	1%	0%
60 Month Certain	2	2%	0%
60 Month Certain w/100% Lump Sum	2	2%	0%
120 Month Certain	7	7%	20% **
120 Month Certain w/100% Lump Sum	1	1%	0%
180 Month Certain	6	6%	0%
50% Joint & Survivor	13	13%	15% ***
50% Joint & Survivor w/100% Lump Sum	1	1%	0%
75% Joint & Survivor	3	3%	0%
75% Joint & Survivor w/100% Lump Sum	1	1%	0%
100% Joint & Survivor	24	24%	30%
100% Joint & Survivor w/100% Lump Sum	3	3%	0%
Total	101	100%	100%

* Before 6/1/2012 the normal form was 60-month certain; after 6/1/2012 it is life annuity only.

** 18% of participants elect some form of certain and continuous option. The average certain period is 120 months.

*** Includes pop-up feature for those retiring on or after January 1, 1996.

N:\1080\2017\Benefit Suspensions\Asmp - Marriage & FOP\IW 16 Retirees Over 10 Years_received 5.24.17 - CSH analysis v2.xlsx\Exhibit

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

Ironworkers Local 16 Pension Plan
Exhibit 6.03-5: Gain Loss Analysis

Year	Actuarial Accrued Liab G/(L)		
	Ret Mort*	Other**	Total
2007	2.2%	-3.1%	-0.9%
2008	0.6%	-2.1%	-1.5%
2009	4.2%***	-4.0%	0.2%
2010	1.0%	0.0%	1.0%
2011	1.4%	-1.0%	0.4%
2012	0.8%	-1.7%	-0.9%
2013	-0.2%	-0.5%	-0.7%
2014	1.0%	-0.5%	0.5%
2015	0.4%	-0.7%	-0.3%
2016	-0.1%	0.0%	-0.1%

Note: Healthy mortality rates over the period shown above are based on the 1983 gender-distinct GAM table.

* Represents the actuarial gain/(loss) for healthy retirees and survivors due to mortality experience as well as due to effects resulting from data corrections, if any.

** Equal to total gain/(loss) less retiree mortality gain/(loss).

*** Gain distorted by data corrections.

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

Ironworkers Local 16 Pension Plan

Exhibit 6.03-6: Retirement experience for the period 1/1/2012 through 12/31/2016

Age	Total Active	Total		Count of Active to Retired	Count of		Percent of Actives Retiring	Percent of	
		Terminated Vested	Vested		Terminated Vested	Terminated Vested			
44	0	0	0	0	0	0	0%	0%	
45	0	0	0	0	0	0	0%	0%	
46	3	0	0	0	0	0	0%	0%	
47	6	0	0	0	0	0	0%	0%	
48	6	0	2	2	0	33%	0%	0%	
49	4	0	2	2	0	50%	0%	0%	
50	3	0	0	0	0	0%	0%	0%	
51	5	0	0	0	0	0%	0%	0%	
52	5	0	0	0	0	0%	0%	0%	
53	5	0	1	1	0	20%	0%	0%	
54	7	0	1	1	0	14%	0%	0%	
55	17	53	1	1	6%	2%			
56	28	55	2	3	7%	5%			
57	21	46	1	4	5%	9%			
58	19	48	3	1	16%	2%			
59	11	39	1	2	9%	5%			
60	8	37	2	3	25%	8%			
61	6	31	1	1	17%	3%			
62	5	28	2	3	40%	11%			
63	5	26	0	4	0%	15%			
64	6	19	3	0	50%	0%			
65	5	16	3	5	60%	31%			
66	2	12	1	6	50%	50%			
67	1	5	0	0	0%	0%			
68	2	3	2	0	100%	0%			
69	0	2	0	0	0%	0%			
70	0	4	0	0	0%	0%			

Note: Counts above include only retirement-eligible participants

APPLICATION FOR APPROVAL OF A PROPOSED SUSPENSION OF BENEFITS UNDER
 IRONWORKERS LOCAL UNION 16 PENSION FUND
 EIN/PN: 52-6148924 / 001

Ironworkers Local 16 Pension Plan
Exhibit 6.03-7: 5% Employers

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2009			
A C Dellovade Inc	41,961	\$ 5.46	228,998
ACM Erectors	57,746	\$ 5.37	310,160
American Bridge	47,580	\$ 5.34	254,050
C. A. Murren & Sons Mid-Atlantic	52,123	\$ 5.27	274,639
Washington Group Intl	106,203	\$ 5.24	556,944
Whiting-Turner	73,140	\$ 5.40	395,174

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2010			
ACM Erectors	35,440	\$ 6.41	227,239
Genesis Steel Service	35,893	\$ 6.53	234,277
Quality Industrial Contracting	34,114	\$ 6.36	217,083
TSI Exterior Wall Systems	31,961	\$ 6.35	202,820
Whiting-Turner	55,973	\$ 6.53	365,736

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2011			
ACM Erectors	45,125	\$ 7.10	320,551
Genesis Steel Service	34,808	\$ 7.10	247,015
Stone & Webster Construction	69,821	\$ 7.04	491,375
TSI Exterior Wall Systems	21,332	\$ 7.12	151,981
Whiting-Turner	44,472	\$ 7.10	315,836

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2012			
ACM Erectors	75,834	\$ 7.96	603,408
Genesis Steel Service	23,432	\$ 8.06	188,829
Quality Industrial Contracting	20,888	\$ 7.68	160,419
Whiting-Turner	42,063	\$ 7.96	334,902

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2013			
BSE Erectors	82,383	\$ 8.55	704,496
Genesis Steel Service	51,558	\$ 8.65	445,760
Kiewit Infrastructure	32,403	\$ 8.62	279,194
Stone & Webster Construction	21,142	\$ 8.66	183,144
Whiting-Turner	38,907	\$ 8.58	333,760

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2014			
BSE Erectors	45,896	\$ 8.94	410,191
Genesis Steel Service	62,421	\$ 9.00	561,925
Kiewit Infrastructure	49,631	\$ 9.06	449,866
Stone & Webster Construction	24,575	\$ 9.11	223,874
Whiting-Turner	41,976	\$ 8.91	373,827

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2015			
American Ironworks	19,355	\$ 9.69	187,523
BSE Erectors	14,310	\$ 9.49	135,761
Kiewit Infrastructure	22,589	\$ 9.54	215,521
Stone & Webster Construction	32,120	\$ 9.65	309,894
Tuscarora Rigging Inc	23,136	\$ 9.52	220,179
UCR	19,937	\$ 9.60	191,446

Employer	Number of CBU's	Average Contribution Rate	Total Contributions
2016			
Ashlar Pond	24,077	\$ 9.70	233,547
Pioneer Cladding	23,406	\$ 9.70	227,033
TSI Exterior Wall Systems	30,796	\$ 9.70	298,716
Tuscarora Rigging Inc	36,655	\$ 9.70	355,549
UCR	21,734	\$ 9.70	210,815