



Materials Testing Laboratory
15700 E. 32nd Avenue
Aurora, Colorado 80011
(303)326-8270 Fax (303) 326-8271

**MATERIAL PRE-QUALIFICATION FOR
TYPE S75
APPROVED** For use until June 1, 2019

Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	LIPAN / 62ND Plant
PLANT LOCATION:	5880 Lipan / 690 WEST 62ND AVE

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40187-18	UPPER LIMIT
Percentage of RAP	OK	0	0% RAP
Percent Passing 1" Sieve	100	100	100
Percent Passing 3/4" Sieve	90	94	100
Percent Passing 1/2" Sieve	70	76	82
Percent Passing 3/8" Sieve	67	73	79
Percent Passing No. 4 Sieve	58	63	68
Percent Passing No. 8 Sieve	42	47	52
Percent Passing No. 16 Sieve	30	35	40
Percent Passing No. 30 Sieve	22	26	30
Percent Passing No. 50 Sieve	13	17	21
Percent Passing No. 100 Sieve	6	10	14
Percent Passing No. 200 Sieve (Including 1% Lime)	4	6.0	8.0
Asphaltic Cement Content (%)	4.6	4.9	5.2
Maximum Unit Weight (pcf)		155.4	
Aggregate Bulk Specific Gravity		2.655	
Maximum Specific Gravity, AASHTO T 209		2.49	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	13	14.2	15.4
Hveem Stability	28	47	OK
Voids Filled With Asphalt (%)	65	73	78
Lottman Test (AASHTO T 283)	OK	91	
Dry Tensile Strength (psi)	OK	98	
Fine Aggregate Angularity	OK	46	
Two Fractured Faces	80	94	
L. A. Abrasion	OK	28	
Flat And Elongated (Ration 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	73	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type		PG 64-22	Suncor
Additives	Lime	1%	Pete Lien



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**MATERIAL PRE-QUALIFICATION FOR
TYPE S75 w/20%RAP
APPROVED** For use until June 1, 2019

Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	LIPAN & 62ND PLANT
PLANT LOCATION:	5880 LIPAN STREET/690 WEST 62ND AVE

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40190-18	UPPER LIMIT
Percentage of RAP	OK	20	25% Max
Percent Passing 1" Sieve	100	100	100
Percent Passing 3/4" Sieve	90	95	100
Percent Passing 1/2" Sieve	73	79	85
Percent Passing 3/8" Sieve	70	76	82
Percent Passing No. 4 Sieve	60	65	70
Percent Passing No. 8 Sieve	43	48	53
Percent Passing No. 16 Sieve	30	35	40
Percent Passing No. 30 Sieve	21	25	29
Percent Passing No. 50 Sieve	12	16	20
Percent Passing No. 100 Sieve	6	10	14
Percent Passing No. 200 Sieve (Including 1% Lime)	4.2	6.2	8.2
Asphaltic Cement Content (%)	4.6	4.9	5.2
Maximum Unit Weight (pcf)		154.6	
Aggregate Bulk Specific Gravity		2.638	
Maximum Specific Gravity, AASHTO T 209		2.478	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	12.8	14	16.4
Hveem Stability	28	46	OK
Voids Filled With Asphalt (%)	65	73	78
Lottman Test (AASHTO T 283)	OK	89	
Dry Tensile Strength (psi)	OK	99	
Fine Aggregate Angularity	OK	46	
Two Fractured Faces	80	94	
L. A. Abrasion	OK	28	
Flat And Elongated (Ration 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	73	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type	PG58-28 Required	PG 58-28	Suncor
Additives	Lime	1%	Pete Lien



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**MATERIAL PRE-QUALIFICATION FOR
TYPE SX75 – PRIVATE USE ONLY
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Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	LIPAN/62ND PLANT
PLANT LOCATION:	5880 LIPAN STREET/690 WEST 62ND AVE

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40199-18	UPPER LIMIT
Percentage of RAP	OK	0	0% RAP
Percent Passing 1" Sieve	100	100	100
Percent Passing 3/4" Sieve	100	100	100
Percent Passing 1/2" Sieve	93	99	100
Percent Passing 3/8" Sieve	83	89	95
Percent Passing No. 4 Sieve	57	62	67
Percent Passing No. 8 Sieve	42	47	52
Percent Passing No. 16 Sieve	31	36	41
Percent Passing No. 30 Sieve	22	26	30
Percent Passing No. 50 Sieve	13	17	21
Percent Passing No. 100 Sieve	6	10	14
Percent Passing No. 200 Sieve (Including 1% Lime)	4.2	6.2	8.2
Asphaltic Cement Content (%)	5.0	5.3	5.6
Maximum Unit Weight (pcf)		153.9	
Aggregate Bulk Specific Gravity		2.652	
Maximum Specific Gravity, AASHTO T 209		2.466	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	14.1	15.3	16.5
Hveem Stability	28	48	OK
Voids Filled With Asphalt (%)	65	75	78
Lottman Test (AASHTO T 283)	OK	91	
Dry Tensile Strength (psi)	OK	105	
Fine Aggregate Angularity	OK	46	
Two Fractured Faces	80	94	
L. A. Abrasion	OK	31	
Flat And Elongated (Ratio 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	74	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type		PG 64-22	Suncor
Additives	Lime	1%	Pete Lien



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**MATERIAL PRE-QUALIFICATION FOR
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Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	LIPAN/62ND PLANT
PLANT LOCATION:	5880 LIPAN STREET/690 WEST 62ND AVE

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40202-18	UPPER LIMIT
Percentage of RAP	OK	20	20% Max
Percent Passing 1" Sieve	100	100	100
Percent Passing 3/4" Sieve	94	100	100
Percent Passing 1/2" Sieve	92	98	100
Percent Passing 3/8" Sieve	81	87	93
Percent Passing No. 4 Sieve	56	61	66
Percent Passing No. 8 Sieve	41	46	51
Percent Passing No. 16 Sieve	30	35	40
Percent Passing No. 30 Sieve	22	26	30
Percent Passing No. 50 Sieve	12	16	20
Percent Passing No. 100 Sieve	6	10	14
Percent Passing No. 200 Sieve (Including 1% Lime)	4.5	6.5	8.5
Asphaltic Cement Content (%)	5	5.3	5.6
Maximum Unit Weight (pcf)		153.8	
Aggregate Bulk Specific Gravity		2.641	
Maximum Specific Gravity, AASHTO T 209		2.464	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	13.8	15	16.2
Hveem Stability	28	46	OK
Voids Filled With Asphalt (%)	65	75	78
Lottman Test (AASHTO T 283)	OK	89	
Dry Tensile Strength (psi)	OK	100	
Fine Aggregate Angularity	OK	46	
Two Fractured Faces	80	94	
L. A. Abrasion	OK	31	
Flat And Elongated (Ratio 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	74	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type	PG58-28 Required	PG 58-28	Suncor
Additives	Lime	1%	Pete Lien



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**MATERIAL PRE-QUALIFICATION FOR
TYPE SG75 W/RAP
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Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	LIPAN & 62ND PLANT
PLANT LOCATION:	5880 LIPAN STREET/690 WEST 62ND AVE

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40206-18	UPPER LIMIT
Percentage of RAP	OK	20	25% Max
Percent Passing 1 1/2" Sieve	100	100	100
Percent Passing 1" Sieve	91	97	100
Percent Passing 3/4" Sieve	82	88	94
Percent Passing 1/2" Sieve	66	72	78
Percent Passing 3/8" Sieve	62	68	74
Percent Passing No. 4 Sieve	53	58	63
Percent Passing No. 8 Sieve	40	45	50
Percent Passing No. 16 Sieve	29	34	39
Percent Passing No. 30 Sieve	21	25	29
Percent Passing No. 50 Sieve	12	16	20
Percent Passing No. 100 Sieve	6	10	14
Percent Passing No. 200 Sieve (Including 1% Lime)	4.1	6.1	8.1
Asphaltic Cement Content (%)	4.1	4.4	4.7
Maximum Unit Weight (pcf)		155.2512	
Aggregate Bulk Specific Gravity		2.665	
Maximum Specific Gravity, AASHTO T 209		2.488	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	12.9	14.1	15.3
Hveem Stability	28	N/A	OK
Voids Filled With Asphalt (%)	65	73	78
Lottman Test (AASHTO T 283)	OK	88	
Dry Tensile Strength (psi)	OK	101	
Fine Aggregate Angularity	OK	47	
Two Fractured Faces	80	95	
L. A. Abrasion	OK	32	
Flat And Elongated (Ration 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	73	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type	PG58-28 Required	PG 58-28	Suncor
Additives	Lime	1%	Pete Lien



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Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346

JOB MIX SPECIFICATION LIPAN/62ND PLANTS ONLY

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40207-18	UPPER LIMIT
Percentage of RAP	OK	30	25% Max
Percent Passing 1 1/2" Sieve	100	100	100
Percent Passing 1" Sieve	91	97	100
Percent Passing 3/4" Sieve	81	87	93
Percent Passing 1/2" Sieve	65	71	77
Percent Passing 3/8" Sieve	61	67	73
Percent Passing No. 4 Sieve	52	57	62
Percent Passing No. 8 Sieve	38	43	48
Percent Passing No. 16 Sieve	27	32	37
Percent Passing No. 30 Sieve	20	24	28
Percent Passing No. 50 Sieve	11	15	19
Percent Passing No. 100 Sieve	6	10	14.0
Percent Passing No. 200 Sieve (Including 1% Lime)	4.1	6.1	8.1
Asphaltic Cement Content (%)	4.1	4.4	4.7
Maximum Unit Weight (pcf)		155.7	
Aggregate Bulk Specific Gravity		2.658	
Maximum Specific Gravity, AASHTO T 209		2.495	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	12.5	13.7	14.9
Hveem Stability	28	N/A	OK
Voids Filled With Asphalt (%)	65	72	78
Lottman Test (AASHTO T 283)	OK	86	
Dry Tensile Strength (psi)	OK	103	
Fine Aggregate Angularity	OK	47	
Two Fractured Faces	80	95	
L. A. Abrasion	OK	32	
Flat And Elongated (Ratio 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	73	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type	PG58-28 Required	PG 58-28	Suncor
Additives	Lime	1%	Pete Lien



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**MATERIAL PRE-QUALIFICATION FOR
TYPE S75 w/23.5%RAP & 1.5%RAS
APPROVED** For use until June 1, 2019

Company Name:	Brannan Sand & Gravel Co.
Contact Person:	Doug Wingo (dwingo@brannan1.com)
Mailing Address:	2500 East Brannan Way Denver, Colorado 80229
Telephone No.:	303-853-5346
PLANT NAME:	Lipan ONLY
PLANT LOCATION:	5880 LIPAN STREET

JOB MIX SPECIFICATION

Product Identification Code: (AS FOUND ON DELIVERY TICKET)	LOWER LIMIT	40215-18	UPPER LIMIT
Percentage of RAP	OK	25	25% Max
Percent Passing 1" Sieve	100	100	100
Percent Passing 3/4" Sieve	90	94	100
Percent Passing 1/2" Sieve	69	75	81
Percent Passing 3/8" Sieve	65	71	77
Percent Passing No. 4 Sieve	57	62	67
Percent Passing No. 8 Sieve	43	48	53
Percent Passing No. 16 Sieve	31	36	41
Percent Passing No. 30 Sieve	22	26	30
Percent Passing No. 50 Sieve	11	15	19
Percent Passing No. 100 Sieve	5	9	13
Percent Passing No. 200 Sieve (Including 1% Lime)	4.1	6.1	8.1
Asphaltic Cement Content (%)	4.6	4.9	5.2
Maximum Unit Weight (pcf)		154.4	
Aggregate Bulk Specific Gravity		2.627	
Maximum Specific Gravity, AASHTO T 209		2.475	
Total Air Voids In Mix	3.0	3.8	5.0
Voids In Mineral Aggregate (VMA)	12.6	13.8	16.4
Hveem Stability	28	47	OK
Voids Filled With Asphalt (%)	65	72	78
Lottman Test (AASHTO T 283)	OK	91	
Dry Tensile Strength (psi)	OK	98	
Fine Aggregate Angularity	OK	46	
Two Fractured Faces	80	94	
L. A. Abrasion	OK	28	
Flat And Elongated (Ratio 5:1)%, AASHTO M 283	OK	1	
Adherent Coating (Dry Sieving) ASTM D 5711	OK	0.2	
Additives	OK	73	
Sodium Sulfate Soundness	OK	1	
Asphalt Cement Type	PG58-28 Required	PG 58-28	Suncor
Additives	Lime	1%	Pete Lien