

Melby, Karen

From: Oujevolk, Richard M <ROujevolk@dot.nv.gov>
Sent: Wednesday, March 21, 2018 1:06 PM
To: Melby, Karen
Cc: psolaegui@aol.com; scott@christynv.com; Sosa, Amber; Smaltz, Tara M; Pullen, Jae E; Gamez, Shelia; Diem, Paula J; Verre, Kevin F
Subject: RE: The Quarry (NDOT Pre-Permit 207543-18)

Hi Ms. Melby – based on the response provided by Paul Solaugei in his letter dated March 12, 2018; and the commitment by the applicant to providing the improvements as described in the letter (subject to final concurrence by both the City of Sparks and Washoe RTC); and as such that said improvements are to be in the NDOT permit process prior to going beyond the referenced 650 units; NDOT has no further concerns with the proposed development.

If you should have any additional questions, please contact me at your convenience.

OJ

From: psolaegui@aol.com [mailto:psolaegui@aol.com]
Sent: Monday, March 12, 2018 10:34 AM
To: Oujevolk, Richard M <ROujevolk@dot.nv.gov>; scott@christynv.com; asosa@cityofsparks.us
Subject: The Quarry

OJ, Amber & Scott,
Attached is our traffic study addendum letter addressing the Pyramid / Highland Ranch intersection. We delivered the original of this letter to Karen at the City of Sparks.
Thanks
Paul

SOLAEGUI
ENGINEERS

March 12, 2018

RECEIVED-CITY OF SPARKS
MAR 12 2018
COMMUNITY SERVICES
ADMINISTRATION

Karen Melby, AICP
City of Sparks
Community Services Planning Division
431 Prater Way
Sparks, Nevada 89431

RE: The Quarry (NDOT Pre-Permit No. 207543-18)

Dear Karen:

This letter addendum is in response to comments submitted to you by the Nevada Department of Transportation in a letter dated February 22, 2018 regarding the above captioned traffic study. A copy of the letter is attached. The comments generally focus on 1) determining the dwelling unit threshold that would maintain LOS E operation at the Pyramid Highway/Sparks Boulevard/Highland Ranch Parkway intersection without capacity improvements and 2) providing intersection capacity improvement recommendations necessary to maintain LOS E operation for buildout of the full 1,800 single family dwelling units proposed for the development.

In response to comment 1, a total of 650 dwelling units can be constructed while maintaining LOS E operation at the Pyramid Highway/Sparks Boulevard/Highland Ranch Parkway intersection. The AM and PM peak hour capacity analysis worksheets are attached.

In response to comment 2, the improvements discussed in the original traffic study will provide LOS E or better operation at the Pyramid Highway/Sparks Boulevard/Highland Ranch Parkway intersection with the construction of 1,800 dwelling units. These improvements include dual left turn lanes, two through lanes, and one free right turn lane at the east and west approaches and dual left turn lanes at the south approach. The AM and PM peak hour capacity analysis worksheets are attached.

We trust that this information will meet your requirements. Please call if you have any questions or comments.

Very truly yours,
SOLAEGUI ENGINEERS, LTD


Paul W. Solaegui
3-12-18
EXP 6-30-18

Enclosures
Letters/Sparks/The Quarry Addendum



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

District II
310 Galletti Way
Sparks, Nevada 89431
(775) 834-8300 FAX (775) 834-8319

February 22, 2018

BRIAN SANDOVAL
Governor

RUDY MALFABON, P.E., Director

City of Sparks
Department of Planning/Comm. Develop.
1675 E Prater Way #107
Sparks, NV 89434

DA18-0001/AX16-0003/
MPA17-00005/RZ17-0006
Jackling Aggregates, LLC/QK, LLC
The Quarry Development

Attention: Ms. Karen Melby, Planner

Dear Ms. Melby:

The Nevada Department of Transportation (NDOT), District II has reviewed the following administrative review requests:

- (1) DA17-0001 – A request for a Development Agreement between the City of Sparks and Jackling Aggregates, LLC and QK, LLC; and
- (2) AX16-0003 – A request for voluntary annexation into the City of Sparks. Upon annexation the parcel shall convert from Washoe County Designation GR (General Rural) to City of Sparks A40 (Agriculture); and
- (3) MPA 17-0005 – A request to change the land use designations from Open Space (OS), Commercial (C) and Employment Center (EC) to Intermediate Density Residential (IDR) and Commercial (C); and
- (4) RZ17-0006 – A request to rezone the site from A40 (Agriculture) to SR 6 (Single Family Residential – 6,000 square feet lots) and C2 (General Commercial) zoning.

The Quarry Development traffic impact study was provided by the applicant to support the proposed requests. The Quarry Development is proposed to be annexed into the City of Sparks. The project is located northwest of Highland Ranch Parkway and Pyramid Highway (State Route 445) intersection.

- The project is proposed to contain 1,223 single-family detached homes and a 13-acre mini storage facility. The Kiley Ranch land use assumptions consist of two convenience stores with gas pumps, three fast-food restaurants totaling 10,500 square feet, 30,000 square feet of retail buildings and two automotive service buildings totaling 16,000 square feet, a 4-bay car wash and 8 acres of additional mini-storage.
- The Quarry land use will generate approximately 10,974 daily trips, 900 a.m. and 1,046 p.m. peak hour trips. Based on the land use assumptions used in the study, the Kiley Ranch development will generate 15,936 daily trips, 1,003 a.m. and 1,092 p.m. peak hour trips.

- NDOT officially report Annual Average Daily Traffic (AADT) just north of Highland Ranch Parkway is 36,000 vehicles per day.
- The City's adopted level of service (LOS) standard for Pyramid Highway is a LOS E (arterial with moderate access control).
- NDOT reviewed the traffic impact study submitted on October 10, 2017. A technical review was completed on October 16, 2017 addressing concerns with the technical analyses and the project regional impacts.

NDOT District II has the following comments, specifically for the MPA 17-000- map amendment request:

1. The Quarry Development is classified as a project of regional significance as defined by NRS 278.026 5. (d)(6) and should be evaluated to determine if the project impacts any current programmed significant projects.
2. Based on the submitted traffic impact study, NDOT is requesting an addendum. The study revision should include proposed project phasing and its direct traffic impact to the level of service (LOS) at the intersection of Pyramid Highway and Highland Ranch Parkway.
 - On page 17 through 20 of the traffic study, the LOS for the intersection degrades from an existing LOS D to a LOS F (existing plus project). No traffic failure threshold is presented in the report.
 - The addendum should denote the threshold (number of units) that may trigger the LOS F condition to the intersection.
 - For the intersection, please provide recommendations for capacity improvement necessary to maintain LOS E.
3. The Quarry Development constitutes a new community development not previously account in the RTC Long Range Transportation Plan. The project should provide short term intersection improvements that will mitigate its traffic impact at the Pyramid Highway and Highland Ranch Parkway intersection.
 - NDOT does not have any capacity projects anticipated at this location in the near future. Additionally, the RTC Washoe Long Range Transportation Plan does not appear to have any programmed improvement for this intersection until the year 2027+.
 - The project should provide the necessary 10-year improvements that will maintain LOS E for the intersection.

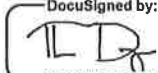
Other comments specific to the future development/ permitting process:

4. An occupancy permit is required for facilities within the NDOT Right-of-Way. Please see the *Terms and Conditions Relating to Right of Way Occupancy Permits* booklet available online at nevadadot.com. Contact the Permit Office at (775) 834-8330 for more information regarding an occupancy permit.
5. The applicant is encouraged to coordinate with the NDOT District Permit Office early for any required standards occupancy permit. NDOT's permit processing time may vary based on project complexity; however, the processing time is approximately 45 working days. This does not include any revision time needed to make necessary changes in the design.

- An effective strategy to minimize delay is taking advantage of the District Permit Office's pre-permit process. Preliminary plans and associated engineering documents may be submitted in advance for NDOT review and comment. This service does not require a processing fee. Please contact the Permit Coordinator, Paula Diem, at (775) 834-8330 for any questions or comments regarding the pre-permit process.
- 6. For any non-permanent activities or temporary traffic control such as placement of cones, static signs, and portable electronic signs within NDOT right-of-way will require a temporary permit. Please submit temporary permit applications at least 4 weeks prior to the scheduled activity or work. Contact the Permit Office, (775) 834-8300 for more information.
- 7. The state defers to municipal government for land use development decisions. Public involvement for project related improvements within the NDOT right-of-way should be considered during the municipal land use development public involvement process. Significant public improvements within the NDOT right-of-way developed after the municipal land use development public involvement process may require additional public involvement. It is the responsibility of the permit applicant to perform such additional public involvement. We would encourage such public involvement to be part of a municipal land use development process.

Thank you for the opportunity to review this community development proposal. NDOT reserves the right to incorporate further changes and/or comments as the design review advances. I look forward to working with you and your team, and completing a successful project. If you have any further questions or comments, please contact the Senior Traffic Engineer, Richard Oujevolk, at (775)834-8300.

Sincerely,

DocuSigned by:

 32CC95D129D1479...

02/23/2018

Thor A. Dyson, PE
 District Engineer

TAD:rmo

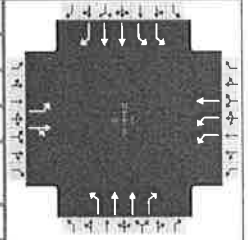
cc: Jae Pullen, Engineering Services
 Richard Oujevolk, Traffic Office
 Paula Diem, Permit Office
 NDOT Planning
 NDOT Engineering
 NDOT Traffic Ops
 RTC Washoe
 Karen Melby, City of Sparks
 File

DS


DS


HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Solaegui Engineers			Duration, h	0.25
Analyst	MSH	Analysis Date	Mar 8, 2018	Area Type	Other
Jurisdiction	City of Sparks	Time Period	AM Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing + Project (650 Lots)	Analysis Period	1> 7:00
Intersection	Pyramid & Sparks	File Name	PySp17aw650.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	273	280	251	23	178		160	514	18	470	1284	443

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	14.0	3.0	50.0	5.0	11.0	17.0				
		Yellow	4.0	0.0	4.0	4.0	0.0	4.0				
		Red	1.0	0.0	1.0	1.0	0.0	1.0				

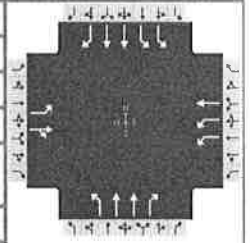
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	21.0	33.0	10.0	22.0	19.0	55.0	22.0	58.0
Change Period, (Y+R _c), s	0.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	2.9	0.0	2.9	0.0
Queue Clearance Time (g _s), s	21.8	30.0	2.8	13.9	13.5		19.0	
Green Extension Time (g _e), s	0.0	0.0	0.0	0.7	0.0	0.0	0.4	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	1.00	1.00	1.00	1.00		0.94	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8		5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	297	550		25	193		174	559	20	511	1396	373
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1712		1730	1870		1781	1781	1556	1730	1781	1538
Queue Service Time (g _s), s	19.8	28.0		0.8	11.9		11.5	13.0	0.9	17.0	43.2	21.4
Cycle Queue Clearance Time (g _c), s	19.8	28.0		0.8	11.9		11.5	13.0	0.9	17.0	43.2	21.4
Green Ratio (g/C)	0.18	0.23		0.04	0.14		0.12	0.42	0.42	0.18	0.44	0.44
Capacity (c), veh/h	312	399		144	265		208	1484	648	634	1573	679
Volume-to-Capacity Ratio (X)	0.952	1.377		0.173	0.730		0.837	0.377	0.030	0.806	0.887	0.549
Back of Queue (Q), ft/ln (95 th percentile)	447.8	1234.9		16.5	255.7		263.3	229.3	14.7	306.6	647.7	314
Back of Queue (Q), veh/ln (95 th percentile)	17.6	48.6		0.7	10.1		10.4	9.0	0.6	12.1	25.5	12.4
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	49.0	46.0		55.5	49.3		51.9	24.2	20.7	47.0	30.8	24.7
Incremental Delay (d ₂), s/veh	37.9	184.8		0.2	8.6		23.5	0.7	0.1	7.0	7.8	3.2
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	86.9	230.8		55.7	57.9		75.4	24.9	20.8	53.9	38.6	27.9
Level of Service (LOS)	F	F		E	E		E	C	C	D	D	C
Approach Delay, s/veh / LOS	180.4		F	57.7		E	36.5		D	40.3		D
Intersection Delay, s/veh / LOS	69.5						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.75	C	2.35	B	1.95	B
Bicycle LOS Score / LOS	1.88	B	0.76	A	1.11	A	2.37	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Solaegui Engineers			Duration, h	0.25
Analyst	MSH	Analysis Date	Mar 8, 2018	Area Type	Other
Jurisdiction	City of Sparks	Time Period	PM Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing + Project (650 Lots)	Analysis Period	1> 7:00
Intersection	Pyramid & Sparks	File Name	PySp17pw650.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	356	299	210	32	345		366	1325	20	252	667	221

Signal Information				Signal Phases									
Cycle, s	130.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
				Green	12.0	10.0	46.0	6.0	15.0	21.0			
				Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	1.0	0.0	1.0	1.0	0.0	1.0			

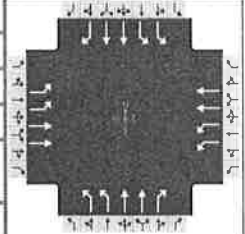
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	26.0	41.0	11.0	26.0	27.0	61.0	17.0	51.0
Change Period, (Y+R _c), s	0.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	2.9	0.0	2.9	0.0
Queue Clearance Time (g _s), s	28.0	38.0	3.3	23.0	29.0		12.1	
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	1.00	1.00	1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4	14	3	8		5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	387	499		35	375		398	1440	22	274	725	197
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1745		1730	1870		1781	1781	1557	1730	1781	1534
Queue Service Time (g _s), s	26.0	36.0		1.3	21.0		27.0	50.2	1.0	10.1	21.5	12.4
Cycle Queue Clearance Time (g _c), s	26.0	36.0		1.3	21.0		27.0	50.2	1.0	10.1	21.5	12.4
Green Ratio (g/C)	0.20	0.28		0.05	0.16		0.21	0.43	0.43	0.09	0.35	0.35
Capacity (c), veh/h	356	483		160	302		370	1534	671	319	1260	543
Volume-to-Capacity Ratio (X)	1.086	1.032		0.218	1.241		1.075	0.939	0.032	0.858	0.575	0.362
Back of Queue (Q), ft/ln (95 th percentile)	684.2	770.1		25.1	793.8		675.9	772.9	17.4	224.7	357.3	207.7
Back of Queue (Q), veh/ln (95 th percentile)	26.9	30.3		1.0	31.3		26.6	30.4	0.7	8.8	14.1	8.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	52.0	47.0		59.7	54.5		51.5	35.4	21.4	58.2	34.1	31.1
Incremental Delay (d ₂), s/veh	72.7	49.5		0.3	133.5		68.3	12.4	0.1	19.3	1.9	1.9
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	124.7	96.5		60.0	188.0		119.8	47.8	21.4	77.5	36.0	33.0
Level of Service (LOS)	F	F		E	F		F	D	C	E	D	C
Approach Delay, s/veh / LOS	108.8		F	177.1		F	62.9		E	45.0		D
Intersection Delay, s/veh / LOS	78.1						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.66	C	2.85	C	2.00	B
Bicycle LOS Score / LOS	1.95	B	0.45	A	2.02	B	1.47	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Solaegui Engineers			Duration, h	0.25
Analyst	MSH	Analysis Date	Mar 8, 2018	Area Type	Other
Jurisdiction	City of Sparks	Time Period	AM Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing + Project (1800 Lots)	Analysis Period	1> 7:00
Intersection	Pyramid & Sparks	File Name			
Project Description	w/Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	364	431		23	229		251	514	18	470	1284	474

Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	16.0	3.0	47.0	10.0	5.0	19.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	1.0	0.0	1.0	1.0	0.0	1.0			

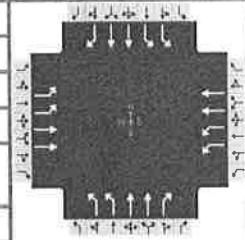
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	20.0	29.0	15.0	24.0	21.0	52.0	24.0	55.0
Change Period, (Y+R _c), s	0.0	5.0	5.0	5.0	5.0	5.0	0.0	5.0
Max Allow Headway (MAH), s	3.1	3.0	3.0	3.0	2.9	0.0	2.9	0.0
Queue Clearance Time (g _s), s	14.9	16.5	2.8	9.6	10.9		18.6	
Green Extension Time (g _e), s	0.5	1.2	0.0	1.3	0.3	0.0	0.6	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.21	0.08	0.00	0.03	0.10		0.17	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4		3	8		5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	396	468		25	249		273	559	20	511	1396	407
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1781		1730	1781		1730	1781	1556	1730	1781	1556
Queue Service Time (g _s), s	12.9	14.5		0.8	7.6		8.9	13.6	0.9	16.6	45.1	24.8
Cycle Queue Clearance Time (g _c), s	12.9	14.5		0.8	7.6		8.9	13.6	0.9	16.6	45.1	24.8
Green Ratio (g/C)	0.17	0.20		0.08	0.16		0.13	0.39	0.39	0.20	0.42	0.42
Capacity (c), veh/h	577	712		288	564		461	1395	609	692	1484	648
Volume-to-Capacity Ratio (X)	0.686	0.658		0.087	0.441		0.592	0.401	0.032	0.738	0.941	0.627
Back of Queue (Q), ft/ln (95 th percentile)	245.4	272.2		15.6	150.4		172.5	239.4	15.5	292.6	705.2	363.6
Back of Queue (Q), veh/ln (95 th percentile)	9.7	10.7		0.6	5.9		6.8	9.4	0.6	11.5	27.8	14.3
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	47.0	44.2		50.8	45.7		48.9	26.3	22.5	45.1	33.6	27.6
Incremental Delay (d ₂), s/veh	2.8	1.8		0.0	0.2		1.4	0.9	0.1	3.7	12.9	4.5
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.9	46.0		50.8	45.9		50.3	27.2	22.6	48.7	46.5	32.2
Level of Service (LOS)	D	D		D	D		D	C	C	D	D	C
Approach Delay, s/veh / LOS	47.8		D	46.4		D	34.5		C	44.5		D
Intersection Delay, s/veh / LOS	43.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.74	C	2.51	C	2.47	B
Bicycle LOS Score / LOS	1.18	A	0.67	A	1.19	A	2.40	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Solaegui Engineers			Duration, h	0.25
Analyst	MSH	Analysis Date	Mar 8, 2018	Area Type	Other
Jurisdiction	City of Sparks	Time Period	PM Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing + Project (1800 Lots)	Analysis Period	1> 7:00
Intersection	Pyramid & Sparks	File Name			
Project Description	w/Improvements				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	404	378		32	479		607	1325	20	252	667	302

Signal Information													
Cycle, s	130.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		15.0	14.0	40.0	6.0	13.0	22.0				
		Yellow		4.0	0.0	4.0	4.0	0.0	4.0				
		Red		1.0	0.0	1.0	1.0	0.0	1.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	5	2	1	6
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	24.0	40.0	11.0	27.0	34.0	59.0	20.0	45.0
Change Period, (Y+R _c), s	0.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	3.1	3.0	3.0	3.0	2.9	0.0	2.9	0.0
Queue Clearance Time (g _s), s	17.4	14.4	3.3	20.5	24.6		11.9	
Green Extension Time (g _e), s	0.7	2.1	0.0	0.5	1.2	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.08	0.00	1.00	1.00	0.02		0.83	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4		3	8		5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	439	411		35	521		660	1440	22	274	725	263
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1781		1730	1781		1730	1781	1556	1730	1781	1553
Queue Service Time (g _s), s	15.4	12.4		1.3	18.5		22.6	51.6	1.1	9.9	23.0	18.4
Cycle Queue Clearance Time (g _c), s	15.4	12.4		1.3	18.5		22.6	51.6	1.1	9.9	23.0	18.4
Green Ratio (g/C)	0.18	0.27		0.05	0.17		0.26	0.42	0.42	0.12	0.31	0.31
Capacity (c), veh/h	639	959		160	603		905	1479	646	399	1096	478
Volume-to-Capacity Ratio (X)	0.688	0.429		0.218	0.864		0.729	0.974	0.034	0.686	0.662	0.551
Back of Queue (Q), ft/ln (95 th percentile)	282.9	234.6		25.1	355.2		371.6	823.8	18	198.3	386.5	296.3
Back of Queue (Q), veh/ln (95 th percentile)	11.1	9.2		1.0	14.0		14.6	32.4	0.7	7.8	15.2	11.7
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	49.5	39.2		59.7	52.5		43.8	37.3	22.5	55.2	39.1	37.5
Incremental Delay (d ₂), s/veh	2.6	0.1		0.3	11.9		2.6	17.9	0.1	4.1	3.1	4.5
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	52.1	39.4		60.0	64.4		46.4	55.2	22.6	59.3	42.3	42.0
Level of Service (LOS)	D	D		E	E		D	E	C	E	D	D
Approach Delay, s/veh / LOS	45.9		D	64.2		E	52.1		D	45.9		D
Intersection Delay, s/veh / LOS	50.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.69	C	3.00	C	2.48	B
Bicycle LOS Score / LOS	1.17	A	0.59	A	2.24	B	1.53	B

Melby, Karen

From: Ornelas Jr, Armando
Sent: Thursday, March 08, 2018 5:17 PM
To: Martini, John; McCormick, Alyson
Cc: Melby, Karen; Ericson, Jon
Subject: FW: The Quarry NDOT meeting

FYI

From: Sosa, Amber
Sent: Thursday, March 08, 2018 4:16 PM
To: Ericson, Jon <jericson@cityofsparks.us>; Ornelas Jr, Armando <aornelas@cityofsparks.us>
Subject: The Quarry NDOT meeting

Jon and Armando,

Paul, Scott, Blake and I met with OJ and Tara at NDOT today to discuss how the Quarry project wants to move forward addressing NDOT's concerns. Paul explained that the intersection only drops below LOS E at about the 650 unit. At that time the developer will need to improve the intersection, as recommended in the TIS. With 1800 units, the LOS of the intersection will not drop below LOS E. OJ was happy to hear that and just asked that we write the condition something like "with the tentative map submittal for unit 651, the applicant will also submit the NDOT encroachment permit application". Basically, his concern was that NDOT does not want the developer to get to unit 651 and be stalled because of the time it takes to get through the NDOT process for the improvements that will be needed at the intersection at that time. Paul is going to issue a letter to Karen to formally answer the letter NDOT gave us and OJ will respond to that within a day or so for acknowledgement.

Please let me know if you have any other questions or concerns.

Amber Sosa, P.E.
Transportation Manager
City of Sparks, Community Services
Engineering Division
Office:775.353.7863
Cell:775.762.6337
asosa@cityofsparks.us



Melby, Karen

From: King, Bob
Sent: Monday, February 26, 2018 9:59 AM
To: Melby, Karen
Subject: Feb 28 Plan Review Meeting

Karen,

Just a reminder that I will not be able to attend the February 28 plan review meeting. I sent you my comments for the Quarry Project, but thought I would attach them here as well. If they have any additional questions for Fire, please have them contact me.

1. The developer only provides **one way in and out of the development**. He is proposing a two-lane road (20' wide each) off of Highland Parkway with a 10' wide median. This was just verbal discussion, I have not seen a proposed diagram yet.
 - Fire department will require a letter of justification/clarification from the developer regarding their access proposal to be reviewed and approved by the Fire Marshal.
 - Fire department will require another means of access/egress from this development. The timing of that means of access/egress will need to be discussed and approved by the fire department prior to approval of this project.
 - Fire department is requesting that Highland Parkway be widened from Pyramid Highway up to the entrance into this development, prior to the construction of homes. This will allow for better emergency responders access to the development entrance.
 - Fire department will accept the 20' traffic lanes with a 10' median with the following provisions.
 - Emergency pull out areas are to be constructed to the approval of the Fire Marshal every 750' on each side of the roadway (see attachment).
 - Emergency median cross-overs are also to be constructed to the approval of the Fire Marshal every 750' (see attachment).
 - Fire hydrants shall be located along this road at distances determined by the Fire Marshal.
 - All homes within this development will be required to install residential fire sprinklers.
 - All Cull-de-sacs within this development will have a 50 foot radius/100 foot diameter bulb.
 - The grade of fire apparatus access road shall not be in excess of 12%. The maximum run for a 12% street grade is two hundred fifty (250) feet.

Bob King, EFO
DC/Fire Marshal
1605 Victorian Ave.
Sparks, NV 89431
O - 775-353-2261
C – 775-527-3712
F – 775-353-2396



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

District II
310 Galletti Way
Sparks, Nevada 89431
(775) 834-8300 FAX (775) 834-8319

February 22, 2018

BRIAN SANDOVAL
Governor

RUDY MALFABON, P.E., Director

City of Sparks
Department of Planning/Comm. Develop.
1675 E Prater Way #107
Sparks, NV 89434

DA18-0001/AX16-0003/
MPA17-00005/RZ17-0006
Jackling Aggregates, LLC/QK, LLC
The Quarry Development

Attention: Ms. Karen Melby, Planner

Dear Ms. Melby:

The Nevada Department of Transportation (NDOT), District II has reviewed the following administrative review requests:

- (1) DA17-0001 – A request for a Development Agreement between the City of Sparks and Jackling Aggregates, LLC and QK, LLC; and
- (2) AX16-0003 – A request for voluntary annexation into the City of Sparks. Upon annexation the parcel shall convert from Washoe County Designation GR (General Rural) to City of Sparks A40 (Agriculture); and
- (3) MPA 17-0005 – A request to change the land use designations from Open Space (OS), Commercial (C) and Employment Center (EC) to Intermediate Density Residential (IDR) and Commercial (C); and
- (4) RZ17-0006 – A request to rezone the site from A40 (Agriculture) to SR 6 (Single Family Residential – 6,000 square feet lots) and C2 (General Commercial) zoning.

The Quarry Development traffic impact study was provided by the applicant to support the proposed requests. The Quarry Development is proposed to be annexed into the City of Sparks. The project is located northwest of Highland Ranch Parkway and Pyramid Highway (State Route 445) intersection.

- The project is proposed to contain 1,223 single-family detached homes and a 13-acre mini storage facility. The Kiley Ranch land use assumptions consist of two convenience stores with gas pumps, three fast-food restaurants totaling 10,500 square feet, 30,000 square feet of retail buildings and two automotive service buildings totaling 16,000 square feet, a 4-bay car wash and 8 acres of additional mini-storage.
- The Quarry land use will generate approximately 10,974 daily trips, 900 a.m. and 1,046 p.m. peak hour trips. Based on the land use assumptions used in the study, the Kiley Ranch development will generate 15,936 daily trips, 1,003 a.m. and 1,092 p.m. peak hour trips.

- NDOT officially report Annual Average Daily Traffic (AADT) just north of Highland Ranch Parkway is 36,000 vehicles per day.
- The City's adopted level of service (LOS) standard for Pyramid Highway is a LOS E (arterial with moderate access control).
- NDOT reviewed the traffic impact study submitted on October 10, 2017. A technical review was completed on October 16, 2017 addressing concerns with the technical analyses and the project regional impacts.

NDOT District II has the following comments, specifically for the MPA 17-000- map amendment request:

1. The Quarry Development is classified as a project of regional significance as defined by NRS 278.026 5. (d)(6) and should be evaluated to determine if the project impacts any current programmed significant projects.
2. Based on the submitted traffic impact study, NDOT is requesting an addendum. The study revision should include proposed project phasing and its direct traffic impact to the level of service (LOS) at the intersection of Pyramid Highway and Highland Ranch Parkway.
 - On page 17 through 20 of the traffic study, the LOS for the intersection degrades from an existing LOS D to a LOS F (existing plus project). No traffic failure threshold is presented in the report.
 - The addendum should denote the threshold (number of units) that may trigger the LOS F condition to the intersection.
 - For the intersection, please provide recommendations for capacity improvement necessary to maintain LOS E.
3. The Quarry Development constitutes a new community development not previously account in the RTC Long Range Transportation Plan. The project should provide short term intersection improvements that will mitigate its traffic impact at the Pyramid Highway and Highland Ranch Parkway intersection.
 - NDOT does not have any capacity projects anticipated at this location in the near future. Additionally, the RTC Washoe Long Range Transportation Plan does not appear to have any programmed improvement for this intersection until the year 2027+.
 - The project should provide the necessary 10-year improvements that will maintain LOS E for the intersection.

Other comments specific to the future development/ permitting process:

4. An occupancy permit is required for facilities within the NDOT Right-of-Way. Please see the *Terms and Conditions Relating to Right of Way Occupancy Permits* booklet available online at nevadadot.com. Contact the Permit Office at (775) 834-8330 for more information regarding an occupancy permit.
5. The applicant is encouraged to coordinate with the NDOT District Permit Office early for any required standards occupancy permit. NDOT's permit processing time may vary based on project complexity; however, the processing time is approximately 45 working days. This does not include any revision time needed to make necessary changes in the design.

- An effective strategy to minimize delay is taking advantage of the District Permit Office's pre-permit process. Preliminary plans and associated engineering documents may be submitted in advance for NDOT review and comment. This service does not require a processing fee. Please contact the Permit Coordinator, Paula Diem, at (775) 834-8330 for any questions or comments regarding the pre-permit process.
- 6. For any non-permanent activities or temporary traffic control such as placement of cones, static signs, and portable electronic signs within NDOT right-of-way will require a temporary permit. Please submit temporary permit applications at least 4 weeks prior to the scheduled activity or work. Contact the Permit Office, (775) 834-8300 for more information.
- 7. The state defers to municipal government for land use development decisions. Public involvement for project related improvements within the NDOT right-of-way should be considered during the municipal land use development public involvement process. Significant public improvements within the NDOT right-of-way developed after the municipal land use development public involvement process may require additional public involvement. It is the responsibility of the permit applicant to perform such additional public involvement. We would encourage such public involvement to be part of a municipal land use development process.

Thank you for the opportunity to review this community development proposal. NDOT reserves the right to incorporate further changes and/or comments as the design review advances. I look forward to working with you and your team, and completing a successful project. If you have any further questions or comments, please contact the Senior Traffic Engineer, Richard Oujevolk, at (775)834-8300.

Sincerely,

DocuSigned by:

32CC95D129D1479...

02/23/2018

Thor A. Dyson, PE

District Engineer

TAD:rmo

cc: Jae Pullen, Engineering Services
Richard Oujevolk, Traffic Office
Paula Diem, Permit Office
NDOT Planning
NDOT Engineering
NDOT Traffic Ops
RTC Washoe
Karen Melby, City of Sparks
File

DS


DS


Melby, Karen

From: Boster, Mike <MBoster@washoeschools.net>
Sent: Thursday, February 15, 2018 2:30 PM
To: Melby, Karen
Subject: PCN16-0050 (Quarry)

Hi Karen,

This property is currently zoned for:

Hall Elementary School
Shaw Middle School
Spanish Springs High School

These could change to other schools depending on the zoning areas for the new schools we will have built over the next few years.

We'd likely get about 275 new ES kids, 55 new MS kids, and 111 new HS kids. With the new middle school in Kiley North (Sky Ranch MS) and very likely a new elementary school right next door, WCSD will have no immediate capacity issues for this project. On the high school side, WCSD tentatively plans to have the Wildcreek high school opened by 2022, which will greatly relieve Spanish Springs High by changing some of the Sun Valley attendance zones to the new school.

Once the applicant has a tentative map submitted, we will provide a more formal letter with the student generation numbers etc.

Hope this is helpful initially, let me know if you need more on this project!

Mike Boster
Capital Projects
Washoe County School District
775.789.3810
mboster@washoeschools.net

Melby, Karen

From: King, Bob
Sent: Tuesday, February 13, 2018 7:44 AM
To: Ornelas Jr, Armando; Melby, Karen
Cc: Maples, Chris; Reid, Jim; Marvitz, Frank
Subject: Proposed Quarry Residential Development
Attachments: Sparks FD Emergency Pull Out and Emergency Median.pdf; Sparks FD Emergency Pull Out Dimensions.pdf; Quarry-LUM.pdf; Draft Time Schedule for The Quarry Project.docx

Armando and Karen,

I already have a staff meeting scheduled for this day and time, so I will not be able to make the meeting.

I met with the developer last week, and will be attending the site visit today. Here are some of my initial concerns and requirements for this development. This is a very preliminary review of a draft site plan provided by the developer. Additional fire and life safety provisions may be required upon review of development handbook and site plans.

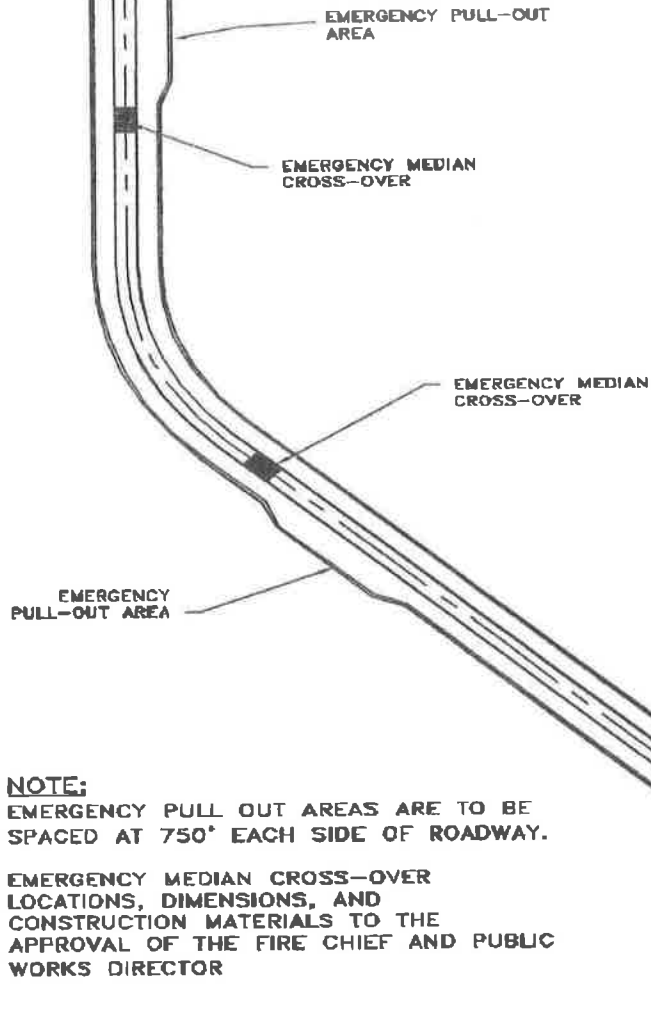
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 - Fire department will require another means of access/egress from this development. The timing of that means of access/egress will need to be discussed and approved by the fire department prior to approval of the development handbook.
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If you have any questions, please don't hesitate to contact me.

Sincerely,

Bob King, EFO
DC/Fire Marshal
1605 Victorian Ave.
Sparks, NV 89431

ATTACHMENT A (1)



NOTE:
EMERGENCY PULL OUT AREAS ARE TO BE SPACED AT 750' EACH SIDE OF ROADWAY.
EMERGENCY MEDIAN CROSS-OVER LOCATIONS, DIMENSIONS, AND CONSTRUCTION MATERIALS TO THE APPROVAL OF THE FIRE CHIEF AND PUBLIC WORKS DIRECTOR

CITY OF SPARKS
SITE DEVELOPMENT FIRE PREVENTION POLICY GUIDE
2 LANE, MEDIAN SEPARATED, ROADWAY

SHEET 1 OF 2
JANUARY, 2004

