

DS #: 4431

APN: 126-24-410-002

PROJECT: Providence POD 307-Phase 2-Update

SUBMITTAL: 4th

SCANNED BY/DATE: _____

CHECKED BY/DATE: _____



CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM

DATE:

February 23, 2012

TO:

Land Development Services
Department of Public Works

FROM:

Albert Sung, P.E.
Flood Control Project Engineer
Department of Public Works

SUBJECT:

Drainage Study for:

Providence POD 307 – Phase 2 - Update

COPIES TO:

Slater Hanifan Group

Cross Streets:

NWC Centennial Pkwy. & Shaumber Road

Pardee Homes of Nevada

File Number:

F:\Depot\DSMemos\DS4431E.doc

Bart Anderson, P.E., DevCo

Parcel Number:

126-24-410-002

CCRFC

Zoning Action:

TMP-38575 & WVR-38578

FEMA Flood Zone

YES

NO

X

Proposed Storm Drain

YES

NO

X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1 st Submittal	7/15/2010	7/28/2010	Not Approved	\$400.00	148851: \$400
2 nd Submittal	9/10/2010	9/24/2010	Conditional Approval	\$400.00	153300: \$400
CCRFC	10/22/2010	10/26/2010	Concurrence Recv'd	N/C	N/C
3 rd Submittal	10/27/2011	11/3/2011	Approved	\$100.00	264896: \$100
4 th Submittal	2/13/2012	2/23/2012	See Comments Below	\$100.00	274195: \$100
TOTAL FEES (LDDRS):				\$1,000.00	----

REMARKS:

4th Submittal: Update to revise the Finish Floor Elevation of Lot 9 from 2972.6 to 2972.3

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

NOTES: Any proposed public drainage easement(s) within a residential subdivision must also be dedicated as a "COMMON LOT" to be owned and to be privately maintained by the Homeowners Association.

In an effort to increase administrative efficiency, the City of Las Vegas Public Works Department requires all soil reports, drainage studies and traffic impact analysis submittals to be accompanied by an electronic copy of the submittal. Electronic documents must be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output replicating your submittal to be used for archival or display purposes. This may be more than one file if necessary. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats, but provided it is a high quality digitized replication of the submittal, other formats may be acceptable. If figures are in color, they must be scanned in color and saved as a separate file. The new submittal requirement is effective on July 1, 2011. If there are any questions regarding these new requirements, please contact Robert Welch in the Flood Section at (702) 229-2177 or Rick Schroder in Traffic Engineering at (702) 229-6327.

END OF REMARKS
ays

T/R/S: T19S/R59E/24
AREA F-24

TRANSMITTAL

To: Albert Sung, P.E.

Date: February 9, 2012

City of Las Vegas

Project No.: PAR1002.002

333 N. Rancho Drive

Las Vegas, NV 89106

From: Steve Jones, P.E.

Subject: Drainage Study Update for Providence Pod 307 – Phase 2

CC: Kylie Rowbury, SHG

CC: Mark Failla, SHG

CC: James Hackman, SHG

CC: Chelsea Peltier, SHG

CC: _____

CC: _____

Transmitting Via:

- ☐ Mail
☒ Messenger / MDS
☐ Federal Express
☐ Pickup

For:

- ☒ Review & Comment
☐ Per your Request
☐ Information/File

Acknowledgement of Receipt:

- ☐ Not Required
☒ Acknowledgement Required

Received By: _____

Date: _____ Time: _____

Copies	Description
<u>1</u>	<u>Subject Study</u>
<u>1</u>	<u>Update Study's Phase 2 Grading Plan Sheet (bound)</u>
<u>1</u>	<u>Stamped and Signed Standard Form 1 (bound)</u>
<u>1</u>	<u>\$100 Submittal Fee (Check # 02642383)</u>
<u>1</u>	<u>CD containing PDF of submittal documents</u>

Comments:

Enclosed please find the above listed items in support of a revision to Lot 9 of the grading plan that affected the finished floor elevation. This submittal is entitled *Drainage Study Update for Providence Pod 307 - Phase 2*. Please contact us if there are any questions at 702-284-5300. Thanks.

Signed: 
Steve Jones, P.E.
Assistant Project Manager – Flood Control Division

DRAINAGE STUDY UPDATE
Providence Pod 307
Phase 2

City of Las Vegas, Nevada

Job No.: PAR1002.002

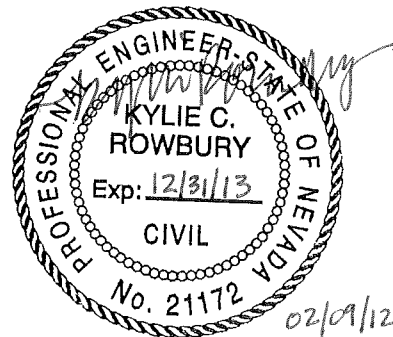
Date: February 2012

Prepared By:

Slater Hanifan Group, Inc.
5740 S. Arville Street, Suite 216
Las Vegas, Nevada 89118
Phone: 702-284-5300 • Fax: 702-284-5399

Prepared For:

Pardee Homes of Nevada
650 White Drive, Suite 100
Las Vegas, Nevada 89119
Phone: 702-614-1400 • Fax: 702-873-6881



Kylie Rowbury, P.E.
NV Professional Engineer No. 21172

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Providence Pod 307 Phase 2 – Update Date: February 2012
 Location of Development: a) Descriptive (Cross Streets): North/South: Shaumber Road
East/West: Centennial Parkway
 b) Section: 24 Township: 19 S Range: 59 E
 c) APN: 126-24-410-002

Name of Owner: Pardee Homes of Nevada
 Telephone No.: (702) 614-1400 Fax No.: (702) 873-6881 E-mail Address: jim.jordano@pardeehomes.com
 Address: 650 White Drive Suite 100, Las Vegas, NV 89119

Contact Person – Name: Kylie Rowbury, P.E. Telephone No.: (702) 284-5300
 *E-mail Address: krowbury@shg-inc.com Fax No.: (702) 284-5399
 Firm: Slater Hanifan Group
 Address: 5740 S. Arville Street, Suite 216, Las Vegas, NV 89131

Type of Land Development/Land Disturbance Process:

☐ Rezoning	☐ Subdivision Map	☐ Clearing and grading Only
☐ Parcel Map	☒ Planned Unit Development	☐ Other (Please specify below)
☐ Large Parcel Map	☐ Building Permit	

1. Total Owned Land Area: At Site: 17 ± Acres Being Developed/Disturbed: All

2. Is a portion or all of the subject property located in a FEMA Flood Hazard Area? ☐ Yes** ☒ No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No

4. Proposed type of development (Residential, Commercial, Etc.): Residential

5. Approximate upstream land area which drains to the subject site: 160 ± Acres

6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: _____

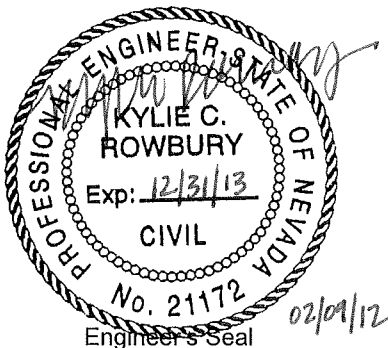
Cliffs Edge Master Drainage Study, Cliffs Edge Infrastructure Phase II

Technical Drainage Study for Providence Pod 307 Phase 1 and Phase 2

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: _____

Centennial Parkway at the southeast corner of the proposed site

8. Briefly describe your proposed schedule for the subject project: ASAP



Submit this form as part of the required drainage study to the local entity which has jurisdiction over The subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

*Newly Required Field

**Review and concurrence of the Clark County Regional Flood Control District is required

Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

Updated 05/01/2008

PAR1002.002

February 9, 2012

Albert Sung, P.E. – Flood Control Project Engineer
City of Las Vegas - Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Update to the Drainage Study for Providence Pod 307 – Phase 2 (DS4431)

Dear Mr. Sung:

This letter is intended to serve as an update letter to the subject study to support a revised finished floor elevation for Lot 9. In order to fit the correct house on Lot 9, as requested by Pardee Homes, the high point of the lot has shifted. As a result the finished floor elevation has been revised from the previously approved 2972.6-ft to 2972.3-ft as shown on the included grading plan. However, the finished floor elevation still meets the minimum criteria as demonstrated in the following table. Note the street flow depth computation from the approved drainage study has been included for reference.

Summary of Lot 9 Finished Floor Evaluation							
Hydraulic Section	TC @ High Side of Lot (ft)	FL (ft)	Flow Depth (ft)	FL FF _{MIN} (ft) ¹	TC + 6" FF _{MIN} (ft) ²	FF _{PROPOSED} (ft)	OK?
17	2971.2	2970.7	0.42	2971.5	2971.7	2972.3	Yes
1 – Minimum allowable finished floor is above twice the depth of flow @ high side of lot.							
2 – CLV requires minimum allowable finished floor is 6-inches above TC @ high side of lot.							

Note that all streets and drainage patterns have remained as shown in the approved drainage study. Therefore, the revision to Lot 9 finished floor elevation is considered acceptable.

If you have any questions or require additional information, please do not hesitate to contact us at 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP



Kylie Rowbury, P.E. – Project Engineer
Flood Control Division

cc: Steve Jones, P.E. - SHG
James Hackman, P.E. - SHG

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		November 3, 2011
TO: Land Development Services Department of Public Works		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: Providence POD 307 – Phase 2	COPIES TO: Slater Hanifan Group
Cross Streets:	NWC Centennial Pkwy. & Shaumber Road	Pardee Homes of Nevada
File Number:	F:\Depot\DSMemos\DS4431D.doc	Bart Anderson, P.E., DevCo
Parcel Number:	126-24-410-002	CCRFC
Zoning Action:	TMP-38575 & WVR-38578	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES NO X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1 st Submittal	7/15/2010	7/28/2010	Not Approved	\$400.00	148851: \$400
2 nd Submittal	9/10/2010	9/24/2010	Conditional Approval	\$400.00	153300: \$400
CCRFC	10/22/2010	10/26/2010	Concurrence Recv'd	N/C	N/C
3 rd Submittal	10/27/2011	11/3/2011	See Comments Below	\$100.00	264896: \$100
TOTAL FEES (LDDRS):				\$900.00	

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Amendment and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

NOTES: Any proposed public drainage easement(s) within a residential subdivision must also be dedicated as a "COMMON LOT" to be owned and to be privately maintained by the Homeowners Association.

In an effort to increase administrative efficiency, the City of Las Vegas Public Works Department requires all soil reports, drainage studies and traffic impact analysis submittals to be accompanied by an electronic copy of the submittal. Electronic documents must be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output replicating your submittal to be used for archival or display purposes. This may be more than one file if necessary. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats, but provided it is a high quality digitized replication of the submittal, other formats may be acceptable. If figures are in color, they must be scanned in color and saved as a separate file. The new submittal requirement is effective on July 1, 2011. If there are any questions regarding these new requirements, please contact Robert Welch in the Flood Section at (702) 229-2177 or Rick Schroder in Traffic Engineering at (702) 229-6327.

END OF REMARKS
ays

T/R/S: T19S/R59E/24
AREA F-24

Post-It® Fax Note	7671	Date	11/3/11	# of pages	2
To	Kylie Rowbury	From	Robert Smith		
Co./Dept.	SHG	Co.	CLV		
Phone #		Phone #	229-2001		
Fax #	284-5399	Fax #			

SECTION 17

Worksheet for Irregular Channel

Project Description	
Worksheet	SECTION 17
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Channel Slope	5.00 %
Discharge	27.0 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.014
Water Surface Elevation	0.42 ft
Elevation Range	0.00 to 0.50
Flow Area	4.1 ft ²
Wetted Perimeter	28.69 ft
Top Width	27.66 ft
Actual Depth	0.42 ft
Critical Elevation	0.57 ft
Critical Slope	0.46 %
Velocity	6.59 ft/s
Velocity Head	0.68 ft
Specific Energy	1.09 ft
Froude Number	3.02
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	0+02.00	0.013
0+02.00	0+35.00	0.016
0+35.00	0+37.00	0.013

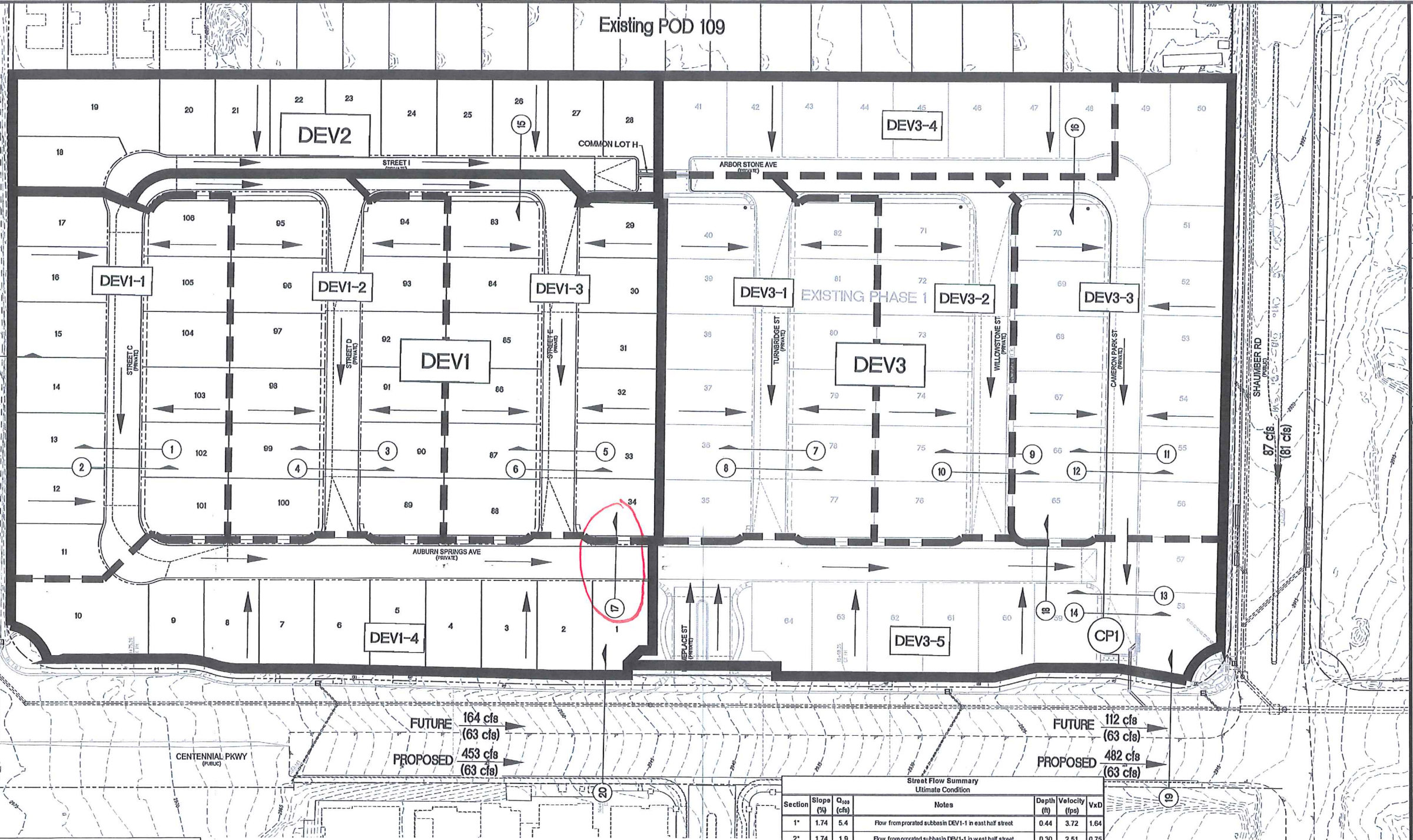
Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	0.50
0+00.50	0.48
0+00.50	0.00
0+02.00	0.13
0+02.00	0.17
0+18.50	0.50
0+35.00	0.17
0+35.00	0.13

SECTION 17
Worksheet for Irregular Channel

Natural Channel Points	
Station (ft)	Elevation (ft)
0+36.50	0.00
0+36.50	0.48
0+37.00	0.50

P:\par1002-002 and 307 ph 3\drainage\update study\figures\exhibit f ultimate drainage map.dwg 10/25/2011 4:02 PM Kyle Ramsey

Offsite flow referenced from Master Drainage Study



SYMBOL KEY

164 cfs (63 cfs) **QROAD, (QSTORM DRAIN)**

DEV1 **DRAINAGE SUBBASIN**

DEV1-1 **SUBBASIN BOUNDARY**

DEV1-1 **PRORATED BASIN**

DEV1-1 **PRORATED BASIN BOUNDARY**

CP1 **COMBINATION POINT**

1 **CROSS SECTION**

Flow Summary
Ultimate Condition

Subbasin ID	Area (ac)	Q ₁₀₀ (cfs)	Q ₁₀ (cfs)
DEV1	7.5	27	14
DEV2	1.5	6	3
DEV3	7.9	28	14
CP1	N/A	61	31

0 50 100
SCALE - 1"=50' FEET

Perimeter Street Flow Summary
Proposed Phase 2 Condition

Storm Frequency	Section	Slope (%)	Q (cfs)	Depth (ft)	Velocity (fps)	VxD	Dry Lane Width (ft)
100-Year	SHAUM-1*	1.82	87	0.69	5.20	3.59	N/A
	19	4.79	482	0.98	11.91	11.67	N/A
	20	6.03	453	0.93	12.74	11.85	N/A
	21	1.45	453	1.09	8.50	9.27	N/A
	19	4.79	127	0.67	8.19	5.49	9.50
10-Year	20	6.03	127	0.65	8.88	5.77	10.50

Perimeter Street Flow Summary
Future Ultimate Condition

Storm Frequency	Section	Slope (%)	Q (cfs)	Depth (ft)	Velocity (fps)	VxD	Dry Lane Width (ft)
100-Year	SHAUM-1*	1.82	87	0.69	5.20	3.59	N/A
	19**	4.79	112	0.78	9.84	7.52	N/A
	20**	6.03	82	0.69	9.57	6.60	N/A
	PUL-1*	2.04	164	0.81	6.49	5.28	N/A

Street Flow Summary
Ultimate Condition

Section	Slope (%)	Q ₁₀₀ (cfs)	Notes	Depth (ft)	Velocity (fps)	VxD
1*	1.74	5.4	Flow from prorated subbasin DEV1-1 in east half street	0.44	3.72	1.64
2*	1.74	1.9	Flow from prorated subbasin DEV1-2 in west half street	0.30	2.51	0.75
3*	2.08	4.5	Flow from prorated subbasin DEV1-2 in east half street	0.40	3.82	1.53
4*	2.08	2.1	Flow from prorated subbasin DEV1-2 in west half street	0.30	2.75	0.83
5*	2.20	4.4	Flow from prorated subbasin DEV1-3 in east half street	0.40	3.88	1.55
6*	2.20	2.2	Flow from prorated subbasin DEV1-3 in west half street	0.30	2.82	0.85
7*	2.08	4.3	Flow from prorated subbasin DEV3-1 in east half street	0.40	3.78	1.50
8*	2.08	2.1	Flow from prorated subbasin DEV3-1 in west half street	0.30	2.73	0.82
9*	2.18	2.1	Flow from prorated subbasin DEV3-2 in east half street	0.32	3.27	1.05
10*	2.18	2.2	Flow from prorated subbasin DEV3-2 in west half street	0.30	2.81	0.84
11*	1.55	15.3	Sum of flow from subbasin DEV2 and prorated subbasins DEV3-3 and DEV3-4 in east half street	0.62	4.52	2.80
12*	1.55	1.8	Sum of flow from subbasin DEV2 and prorated subbasins DEV3-3 and DEV3-4 in west half street	0.30	2.37	0.71
13*	1.91	59.0	Total onsite flow at combination point CP1 in east half street	0.95	6.38	6.06
14*	1.55	2.0	Total onsite flow at combination point CP1 in west half street	0.30	2.63	0.79
15*	5.00	6.0	Flow from subbasin DEV2 in north half street	0.35	4.98	1.74
16*	5.00	9.7	Sum of flow from subbasin DEV2 and prorated subbasin DEV3-4 in north half street	0.38	6.28	2.38
17	5.20	27.0	Flow from subbasin DEV1	0.42	6.59	2.77
18	5.20	43.9	Sum of flow from DEV1 and DEV3, minus flow from prorated subbasins DEV3-3 and DEV3-4	0.48	7.15	3.43

Prorated Flow Computations
Ultimate Condition

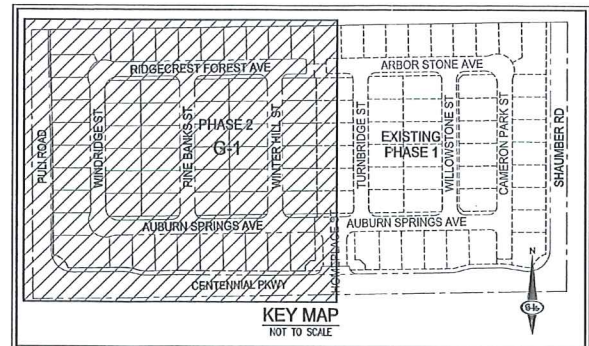
Subbasin	Q ₁₀₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/ac)
DEV1	27	7.5	3.6
DEV3	28	7.9	3.5
Prorated Subbasin	Q₁₀₀ (cfs)	Area (acres)	100-yr Unit Flow (cfs/ac)
DEV1-1	7.3	2.0	3.6
DEV1-2	6.6	1.8	3.6
DEV1-3	6.6	1.9	3.6
DEV1-4	6.5	1.8	3.6
TOTAL	27.0	7.5	
DEV3-1	6.4	1.8	3.5
DEV3-2	4.3	1.2	3.5
DEV3-3	7.4	2.1	3.5
DEV3-4	3.7	1.1	3.5
DEV3-5	6.2	1.8	3.5
TOTAL	28.0	7.9	

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

PARDEE HOMES OF NEVADA
PROVIDENCE POD 307 (PHASE 2)
ULTIMATE CONDITION DRAINAGE MAP

DATE: 10/25/11
DRAFTER: KCR
DESIGNER: KCR
CHECKED: SMJ
PROJECT NO. **PAR1002.002**

EXHIBIT F
SHEET 1 OF 1



S-I-G
SLATER
HANIFAN
GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5369

[illegible]

1. FINAL GRADES ADJUSTED TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2006, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND EXISTING UTILITIES AND REPORT TO GEOTECH REPORT TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWEEP.
4. MAXIMUM ADJUTANT SLOPES AND MINIMUM STREET SECTIONS NOT TO BE FLAT THAT SHOWN ON GEOTECH REPORT TO THE ENGINEER.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE SUBMITTAL AND THAT APPROVAL.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO BE RESPONSIBLE FOR PROTECTING IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER TO BE RESPONSIBLE FOR PROTECTING TO EXISTING FACILITIES PRIOR TO DISPLACEMENT PRIOR TO CONSTRUCTION. CONTRACTOR FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED BY CONTRACTOR OF DISPLACEMENT PRIOR TO CONSTRUCTION.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE EXISTING GROUND SURFACE) OR CURBS EXIST WITHIN THE SIGHT VISIBILITY ZONES.
10. PRIVATE STREETS ARE PUBLIC UTILITY EASEMENTS, PUBLIC RIGHT-OF-WAYS AND ARE SUBJECT TO PUBLIC UTILITY EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

1	CONSTRUCT 2' AC PAVEMENT WITH 4" TYPE II AGGREGATE BASE
2	SAWJOINT AND MATCH EXISTING IMPROVEMENTS PER CAUSD NO. 500
3	CONSTRUCT 1" TYPE CURB AND GUTTER PER CAUSD NO. 216
4	CONSTRUCT RESIDUAL DRIVEWAY PER CAUSD NO. 223 (NOTE: NO SIDEWALK EXISTS THE DRIVEWAY INTO DEPRESSED CURB)
5	CONSTRUCT 6" CROSS GUTTER PER CAUSD NO. 228
6	CONSTRUCT 4' WIDE SIDEWALK PER CAUSD NO. 234
7	CONSTRUCT SIDEWALK RAMP USING AJOIR THE THIRNATED CURB OR EQUIVALENT PER CAUSD NO. 235, CASE 1 & 2
8	PUBLIC DRAINAGE ESMT AND LYVMD ESMT TO BE PRIVATELY MAINTAINED BY HOA
9	INSTALL REMOVABLE BOLLARDS PER DETAL 20 ON SHEET P-2
10	FIELD VERIFY AND TIE INTO EXISTING CURB AND GUTTER
11	INSTALL 3' CONCRETE CHANNEL PER DETAL 14 ON SHEET P-2
12	REMOVE EXISTING RIP RAP PAD

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

PUBLIC DRAINAGE QUANTITIES		
8" WIDE CONCRETE VALLEY GUTTER	SF	1,208
DRAINAGE EASEMENT QUANTITIES		
REMOVABLE BOLLARDS	EA	4
3.0' CONCRETE CHANNEL	SF	81

PARDEE HOMES OF NEVADA _____ DATE _____

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
BENCHMARK NUMBER: 5LV99 26NES
ELEVATION = 908.758 METERS, 2981.48 FEET
RIVET & PLATE IN CONCRETE CYLINDER 13' SOUTHWEST OF MARINAL & CENTENNIAL & 4' WEST
+/- OF PP #359 (PER THE CLV VERTICAL CONTROL: 2008 ADJUSTMENT UPDATED 5/24/2010)

SOUTH 89°00'28" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN BOOK 118, PAGE 88 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

**CALL BEFORE
YOU DO
OVERHEAD**



1-702-227-2929

Pardee Homes

PROVIDENCE POD 307 PHASE 2 GRADING PLAN

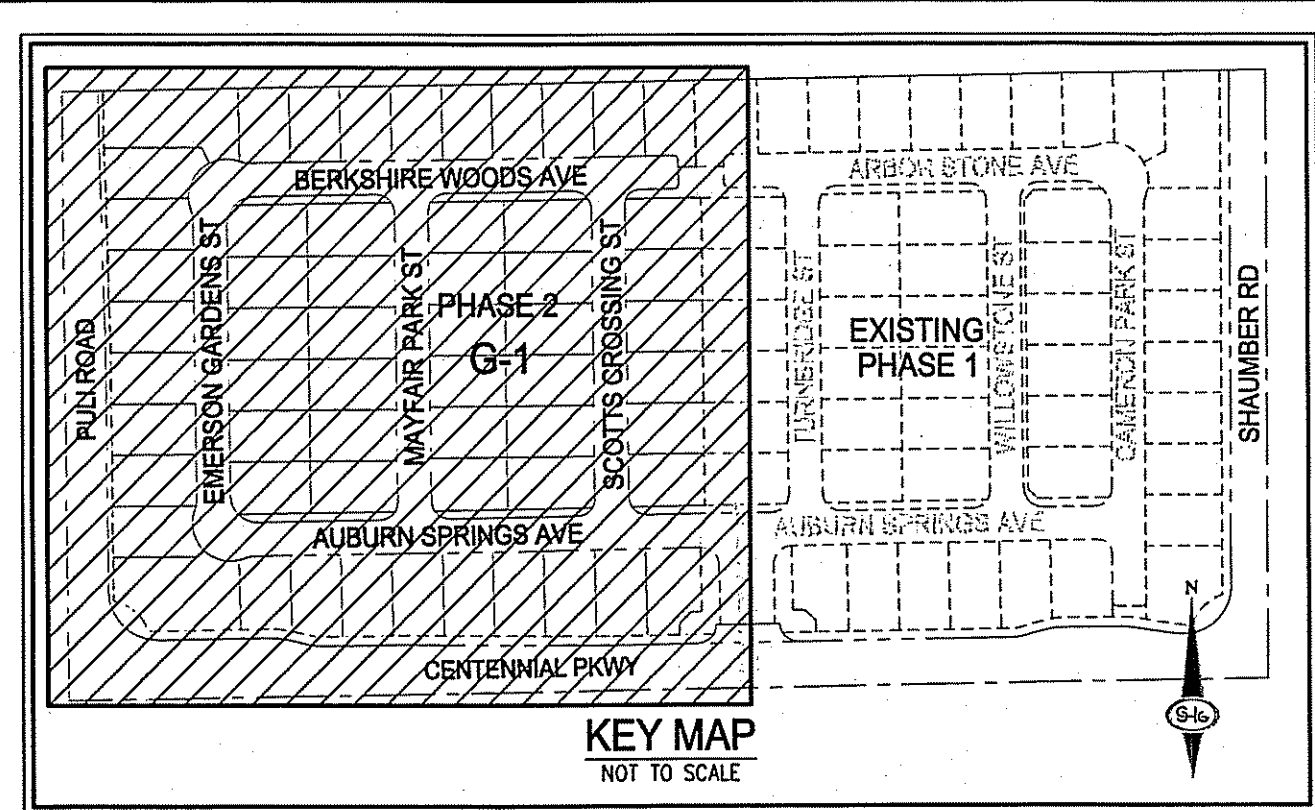
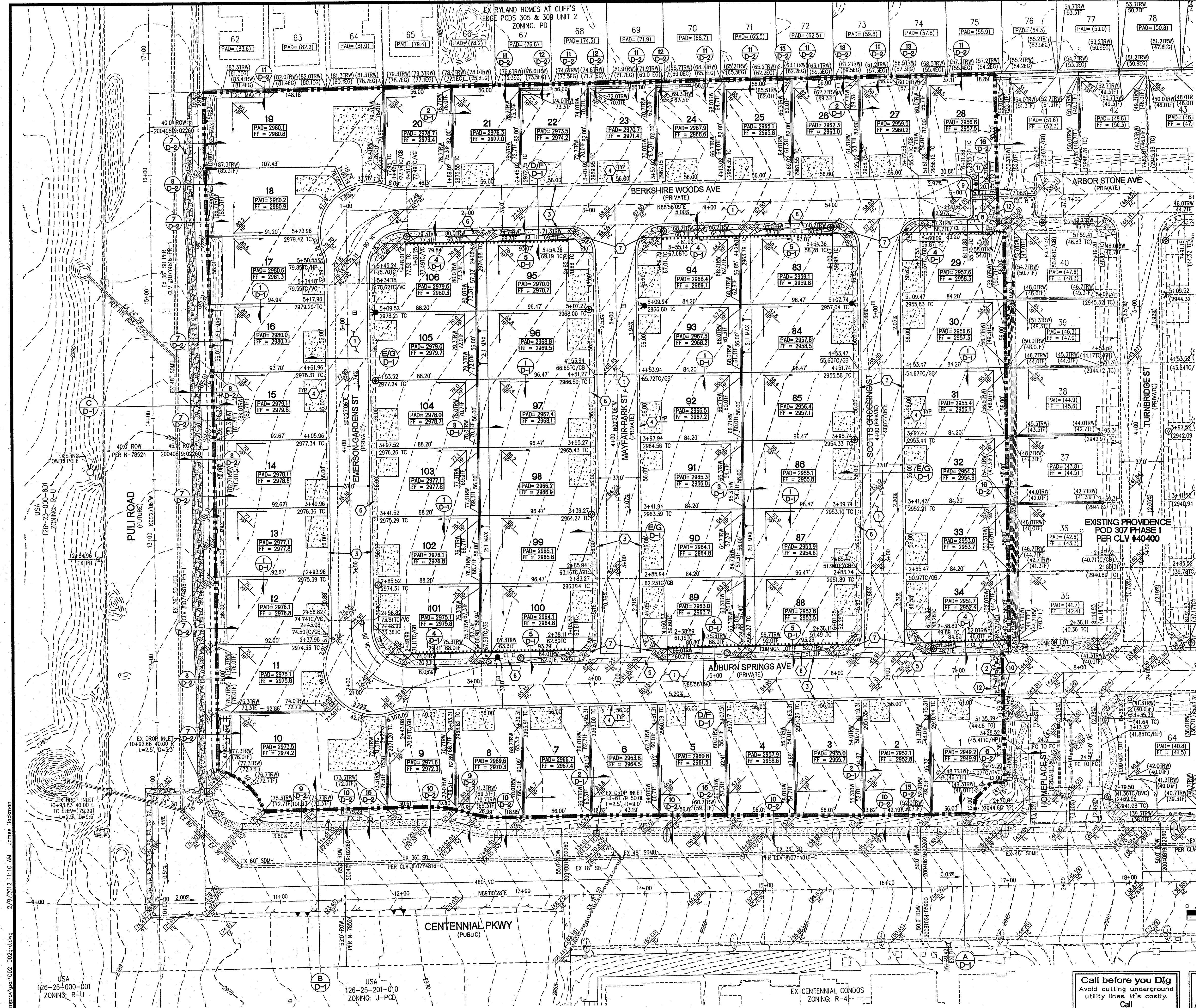
(PREVIOUS PLAN SHEET REVISED BY THIS UPDATE)

DATE:	10/27/11
DRAFTER:	JDP
DESIGNER:	JDP
CHECKED:	JLH
PROJECT NO.	PAR1002-002

10/27/11

G-1
SHEET 3 OF 5
CLV # — — — —

i:\nost\009-009 end	307 sh !!\dms\impress\ost\009_009ard.dms	18/07/2014	0.24 MB
---------------------	--	------------	---------



LEGEND

- BOUNDARY LINE
- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- PROPERTY LINE
- EASEMENT LINE
- CURB AND GUTTER
- EXISTING CURB AND GUTTER
- FUTURE CURB AND GUTTER
- GRADE BREAK LINE
- FLOWLINE
- EDGE OF PAVEMENT (EP)
- PROPOSED ELEVATION
- EXISTING ELEVATION
- FUTURE ELEVATION
- EXISTING CONTOUR (5-FT)
- EXISTING CONTOUR (1-FT)
- PROPOSED PAD AND FINISHED FLOOR ELEVATION
- EXISTING PAD ELEVATION
- PRIVATE STREETLIGHT
- EXISTING STREETLIGHT
- PROPOSED FIRE HYDRANT ASSEMBLY
- EXISTING FIRE HYDRANT ASSEMBLY
- SIGHT VISIBILITY ZONE
- WROUGHT IRON FENCE
- PONY WALL
- RETAINING WALL
- DECORATIVE PERIMETER WALL
- DECORATIVE PERIMETER WALL

PUBLIC DRAINAGE QUANTITIES

ITEM	QUANTITY
8" WIDE CONCRETE VALLEY GUTTER	SF 1,208
DRAINAGE EASEMENT QUANTITIES	
REMOVABLE BOLLARDS	EA 4
3.0' CONCRETE CHANNEL	SF 81

GENERAL NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2006, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWELL.
- MAXIMUM MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- PRIVATE STREETS ARE PUBLIC UTILITY EASEMENTS. PUBLIC UTILITY EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

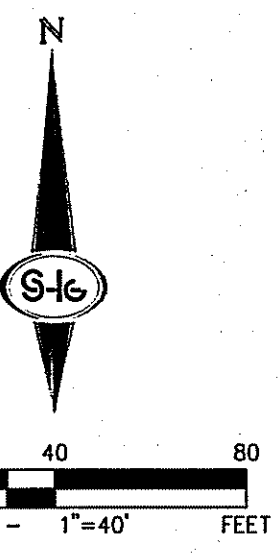
DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

GRADING NOTES

- CONSTRUCT 2" AC PAVEMENT WITH 4" TYPE II AGGREGATE
- SAW CUT AND MATCH EXISTING IMPROVEMENTS PER CAUSD NO. 503AF & 500BT
- CONSTRUCT 1" TYPE CUB AND GUTTER PER CAUSD NO. 216
- CONSTRUCT RESIDENTIAL DRIVEWAY PER CAUSD NO. 223 (WHERE NO SIDEWALK EXISTS THE DRIVEWAY INTO DEPRESSED CURB)
- CONSTRUCT 8" GROSS GUTTER PER CAUSD NO. 228
- CONSTRUCT 4" WIDE SIDEWALK PER CAUSD NO. 234
- CONSTRUCT SIDEWALK RAMPS USING AMOR LITE TRUNCATED DOWNS OR EQUIVALENT PER CAUSD NO. 235, CASE 1 & 235.1
- PUBLIC DRAINAGE ESMT AND LIVING ESMT TO BE PRIVATELY MAINTAINED BY HOA
- INSTALL REMOVABLE BOLLARDS PER DETAIL 20 ON SHEET
- FIELD VERIFY AND TIE INTO EXISTING CURB AND GUTTER
- INSTALL 3.0' CONCRETE CHANNEL PER DETAIL 14 ON SHEET
- REMOVE EXISTING RIP RAP PAD

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES



RELEASED FOR:

PARDEE HOMES OF NEVADA

DATE: _____

BY: _____

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCHMARK NUMBER: 51V93 26N6S

ELEVATION = 908.756 METERS, 2981.46 FEET

RIVET & PLATE IN CONCRETE CYPINDER 13" SOUTHWEST OF MAINWALK & CENTENNIAL & 4" WEST +/- OF RP #359 (PER THE CLV TRAFFIC CONTROL: 2008 ADJUSTMENT UPDATED 5/24/2010)

BASIS OF BEARING

SOUTH 89°00'28" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN BOOK 118, PAGE 88 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED FLOOD STUDY OF _____ ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JAMES L. HACKMAN, P.E. 16658 _____ DATE: _____

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X AND SHADDED ZONE X (AREA OUTSIDE THE 500-YEAR FLOOD PLAIN AND AREA OF 2% ANNUAL CHANCE FLOOD). PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

Call before you Dig

Avoid cutting underground utility lines. It's costly.

Call 811

1-800-227-2600

CLARK COUNTY TRAFFIC OPERATIONS

1-702-455-7544

Call before you do Underground

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.

Call 1-702-455-7511

CLARK COUNTY TRAFFIC OPERATIONS

1-702-432-5300

COMPUTERIZED TRAFFIC SYSTEM

CALL BEFORE YOU DO OVERHEAD

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

1-702-227-2929

SLATER HANFAN GROUP

CONSULTING ENGINEERS & PLANNERS

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5390 FAX (702) 284-5399

Pardee Homes

PROVIDENCE POD 307 PHASE 2

GRADING PLAN

DATE: 2/9/12

DRAWN: JDP

DESIGNED: JDP

CHECKED: JHP

PROJECT NO. PAR1002-002

JAMES L. HACKMAN

Exp. 06/20/13

CIVIL

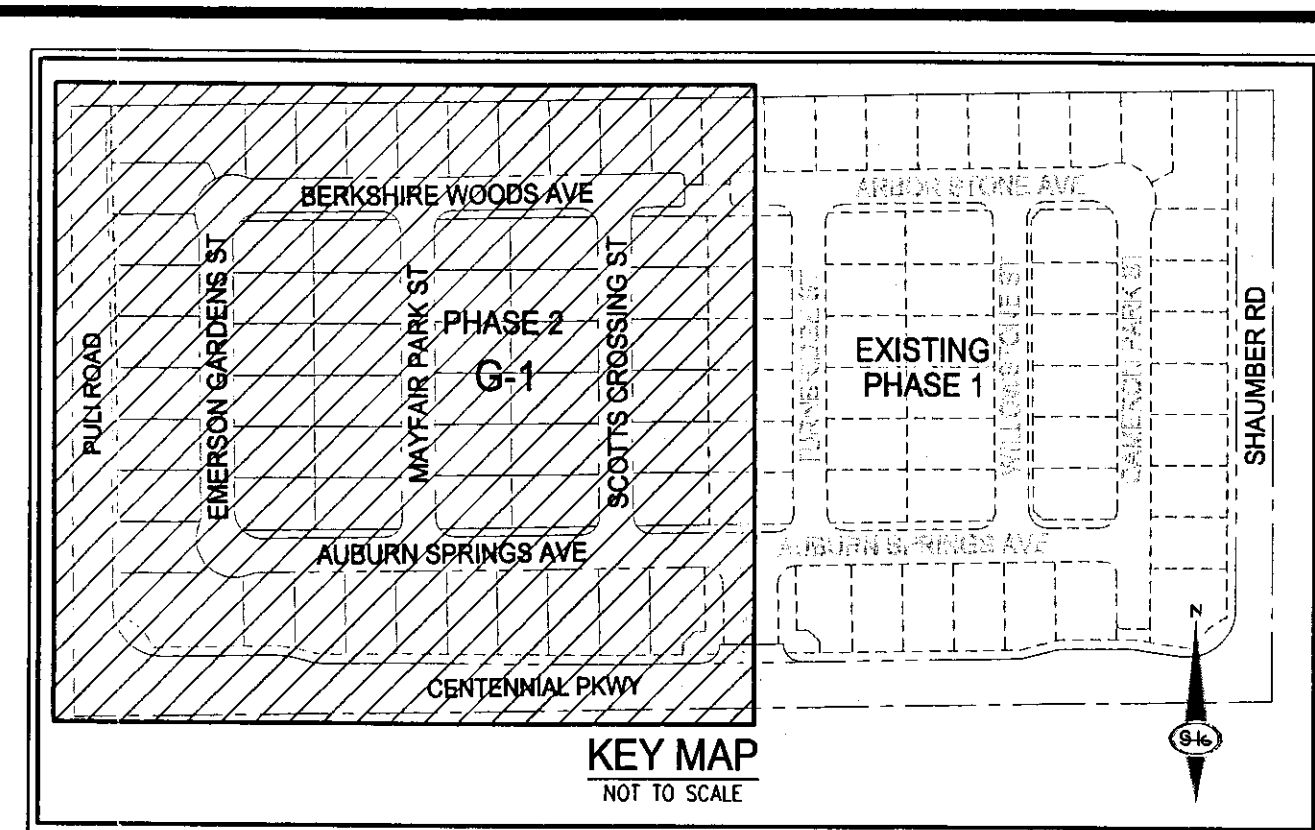
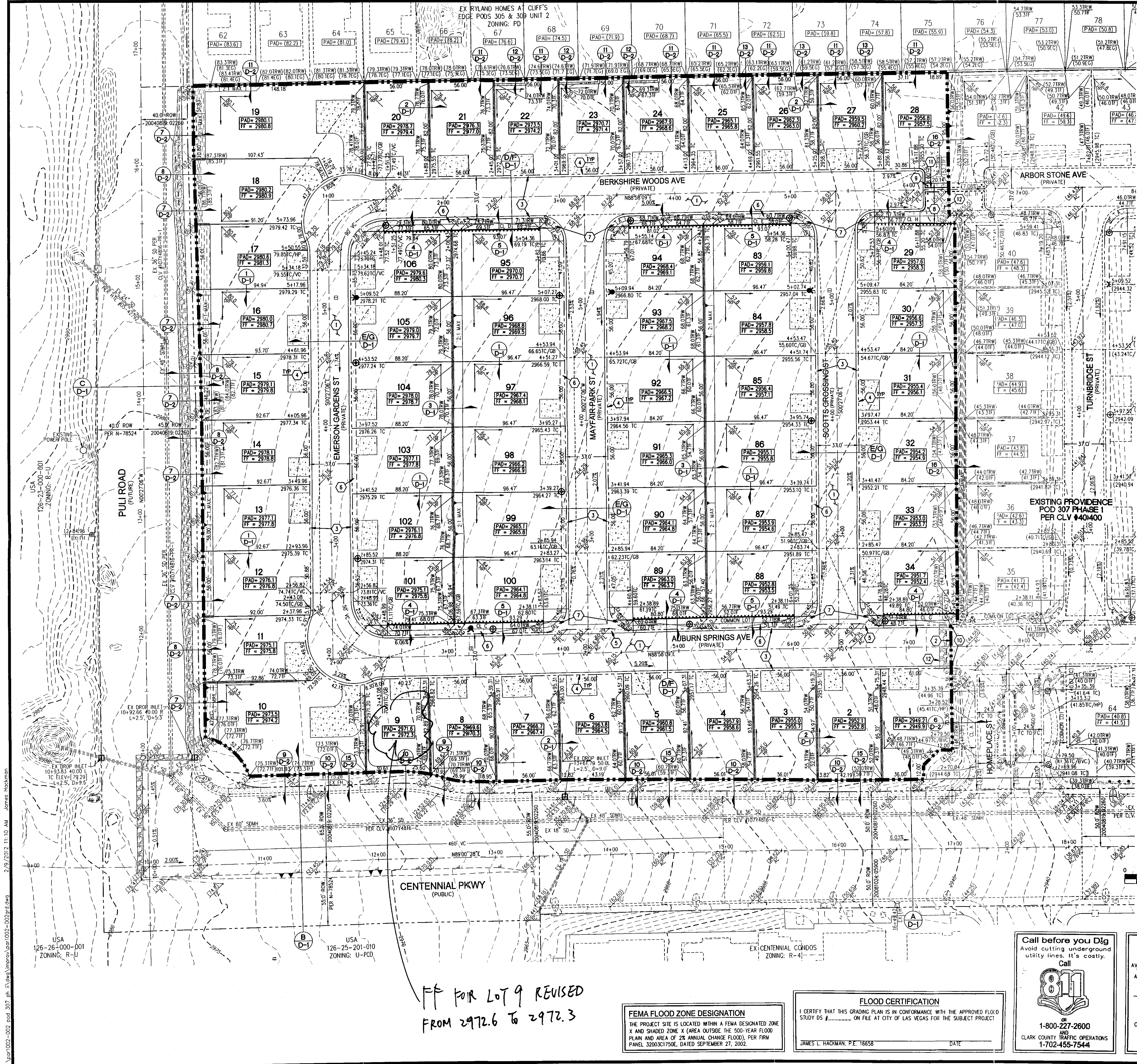
Professional Seal No. 15658

02/09/12

G-1

SHEET 3 OF 10

CLV # _____



- LEGEND**
- BOUNDARY LINE
 - ROADWAY CENTERLINE
 - RIGHT-OF-WAY
 - PROPERTY LINE
 - EASEMENT LINE
 - CURB AND GUTTER
 - EXISTING CURB AND GUTTER
 - FUTURE CURB AND GUTTER
 - GRADE BREAK LINE
 - FLOUNDER
 - EDGE OF PAVEMENT (EP)
 - PROPOSED ELEVATION
 - EXISTING ELEVATION
 - FUTURE ELEVATION
 - EXISTING CONTOUR (5-FT)
 - EXISTING CONTOUR (1-FT)
 - PROPOSED PAD AND FINISHED FLOOR ELEVATION
 - EXISTING PAD ELEVATION
 - PRIVATE STREETLIGHT
 - EXISTING STREETLIGHT
 - PROPOSED FIRE HYDRANT ASSEMBLY
 - EXISTING FIRE HYDRANT ASSEMBLY
 - SIGHT VISIBILITY ZONE
 - WROUGHT IRON FENCE
 - PONY WALL
 - RETAINING WALL
 - DECORATIVE PERIMETER WALL
 - DECORATIVE PERIMETER
 - RETAINING WALL

- GENERAL NOTES**
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2006, SECTION 2304.11.2.2.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND UNDERSTANDINGS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
 3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
 4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
 5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
 6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
 7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL.
 8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
 9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONE.
 10. PRIVATE STREETS ARE PUBLIC UTILITY EASEMENTS. PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY THE HOA.

DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

- GRADING NOTES**
1. CONSTRUCT 2" AC PAVEMENT WITH 4" TYPE II AGGREGATE BASE.
 2. SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 503AF & 508T.
 3. CONSTRUCT 1" TYPE CURB AND GUTTER PER CCAUSD NO. 516.
 4. CONSTRUCT RESIDENTIAL DRIVEWAY PER CCAUSD NO. 223. WHERE NO SIDEWALK EXISTS THE DRIVEWAY INTO DEPRESSED CURB.
 5. CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228.
 6. CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234.
 7. CONSTRUCT SIDEWALK RAMP USING AMOR THE TRUNCATED CONES OR EQUIVALENT PER CCAUSD NO. 235, CASE 1 & 2.
 8. PUBLIC DRAINAGE ESMT AND LYVMD ESMT TO BE PRIVATELY MAINTAINED BY HOA.
 9. INSTALL REMOVABLE BOLLARDS PER DETAIL 20 ON SHEET D-2.
 10. FIELD VERIFY AND TIE INTO EXISTING CURB AND GUTTER.
 11. INSTALL 3.0" CONCRETE CHANNEL PER DETAIL 14 ON SHEET D-2.
 12. REMOVE EXISTING RIP RAP PAD.
- SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

PUBLIC DRAINAGE QUANTITIES

8" WIDE CONCRETE VALLEY GUTTER	SF	1,208
DRAINAGE EASEMENT QUANTITIES		
REMOVABLE BOLLARDS	EA	4
3.0" CONCRETE CHANNEL	SF	81

RELEASED FOR:

PARDEE HOMES OF NEVADA	DATE	
------------------------	------	--

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCHMARK NUMBER: 5199 26N5

ELEVATION = 908.758 METERS, 2981.48 FEET

RIVET & PLATE IN CONCRETE CYLINDER 134' SOUTHWEST OF MAINWAY & CENTENNIAL & 4' WEST 1/4- OF PP #359 (PER THE CLV VERTICAL CONTROL: 2008 ADJUSTMENT UPDATED 5/24/2010)

BASIS OF BEARING

SOUTH 89°00'28" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREON ON FILE IN BOOK 118, PAGE 88 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

Call before you Dig

Avoid cutting underground utility lines. It's costly.

Call 811

1-800-227-2600

CLARK COUNTY TRAFFIC OPERATIONS

1-702-455-7544

Call before you do UnderGround

Avoid hitting underground and street light systems and conduits. It's costly.

Call 1-702-455-7511

CLARK COUNTY TRAFFIC OPERATIONS

1-702-432-5300

LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

Call before you do Overhead

Avoid hitting overhead power lines. It's costly.

Call 1-702-227-2929

FEMA FLOOD ZONE DESIGNATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X AND SHADDED ZONE X (AREA OUTSIDE THE 500-YEAR FLOOD PLAIN AND AREA OF 2% ANNUAL CHANCE FLOOD). PER FIRM PANEL 32003C1750E, DATED SEPTEMBER 27, 2002.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED FLOOD STUDY D-1 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT

JAMES L. HACKMAN, P.E. 16658

DATE

This grading plan is part of drainage study #4931-2 which was reviewed on 2/13/12 and Approved on 2/23/12. Page 1 of 1

SLATER HANFAN GROUP

CONSULTING ENGINEERS & PLANNERS

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

CITY OF LAS VEGAS, NV

Pardee Homes

PROVIDENCE POD 307 PHASE 2

GRADING PLAN

DATE: 2/9/12

DRAFTER: JDP

DESIGNER: JDP

CHECKED: JLH

PROJECT NO. PAR1002-002

JAMES L. HACKMAN

Exp. 06/30/13

CIVIL

02/09/12

SHEET 3 OF 10

CLV#