DS #: 4725

APN: 125-19+701-018

PROJECT: Solano Springs by Richmond American Homes

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: April 20, 2015
TO: **Land Development Services** Department of Building & Safety				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Solano Springs by Richmond American Homes**			**COPIES TO:** Advantage Civil Design Group
Cross Streets:	SEC of Deer Springs Way & Tee Pee Lane			Richmond American Homes Nevada
File Number:	F:\Depot\DSMemos\DS4725B.doc			Bart Anderson, P.E., DevCo
Parcel Number:	125-19-701-018			
Zoning Action:	TMP-56664; SDR-56663; WVR-56662 & MOD-56661			
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	3/9/2015	3/23/2015	Not Approved	$400.00	388289: $400
2nd Submittal	4/8/2015	4/20/2015	See Comments Below	$400.00	392346: $400
				$800.00	----

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.

1. Note that offset crown street (***Pleasant Flower Street***) is a deviation from standard. Apply for a deviation meeting with *City Land Development Section* for approval prior to the final acceptance of the improvement plans.

2. Provide a nominal drop inlet and storm drain lateral at the east end of *Echelon Point Drive* to collect nuisance flow from the proposed development. Revise the grading plan and the pertinent plan & profile sheet accordingly.

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 Update 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.

END OF REMARKS

ays

T/R/S: T19S/R60E/19

AREA G-19

****
*** FAX TX REPORT ***
****

TRANSMISSION OK

JOB NO.	0967
DESTINATION ADDRESS	7024362234
PSWD/SUBADDRESS	
DESTINATION ID	
ST. TIME	04/20 14:52
USAGE T	00'36
PGS.	1
RESULT	OK

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: April 20, 2015
TO: Land Development Services Department of Building & Safety				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
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1. Note that offset crown street (***Pleasant Flower Street***) is a deviation from standard. Apply for a deviation meeting with *City Land Development Section* for approval prior to the final acceptance of the improvement plans.

2. Provide a nominal drop inlet and storm drain lateral at the east end of *Echelon Point Drive* to collect nuisance flow from the proposed development. Revise the grading plan and the pertinent plan & profile sheet accordingly.

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 Update 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*

ADDENDUM #1 TO THE TECHNICAL DRAINAGE STUDY FOR SOLANO SPRINGS BY RICHMOND AMERICAN HOMES

CITY OF LAS VEGAS, NEVADA

DS4725

PREPARED FOR:

Richmond American Homes of Nevada
7770 S. Dean Martin Drive, Suite 308
Las Vegas, NV 89139

PREPARED BY:

Advantage Civil Design Group, LLP
2920 N. Green Valley Pkwy. Bldg. 4 Ste.#422
Henderson, Nevada 89014

April 6, 2015

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Addendum #1 to the TDS for Solano Springs Date: 04/06/2015

Location of Development: a) Descriptive (Cross Streets) North/South: Tee Pee Lane

East/West: Deer Springs Way

b) Section: 19 Township: 19 South Range: 60 East

c) APN : 125-19-701-018

Name of Owner: Richmond American Homes of Nevada, Inc.

Telephone No.: (702) 617-8412 Fax No.: (702) 583-5972 E-Mail Address: Brian.Walsh@mdch.com

Address: 7770 S. Dean Martin Drive, Suite 308 Las Vegas, NV 89139

Contact Person-Name: Brandon Doty **Telephone No.:** (702) 432-2234

*** E-Mail Address:** Brandon@advantagecivil-nv.com **Fax No.:** (702) 436-2234

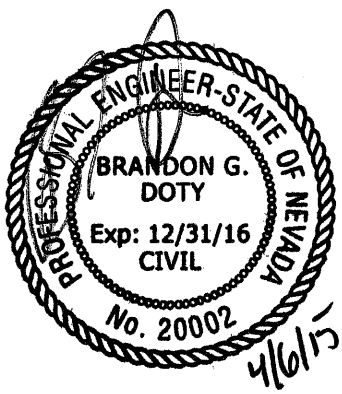
Firm: Advantage Civil Design Group

Address: 2920 N. Green Valley Pkwy. Bldg. 4, Suite #422 Henderson, NV 89014

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: 5+/- Acres Being Developed/Disturbed: 5 +/- Acres
2. Is a portion or all of the subject property located in a designated 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: 60 +/- Acres
6. Has the site drainage been evaluated in the past? ☒ **YES** ☐ **NO** If yes, please identify documentation: Technical Drainage Study for Town Center 44/50 No. 2, Slater Hanifan Group, June 2006, DS4033
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Echelon Point Drive
8. Briefly describe your proposed schedule for the subject project: ASAP



Engineer's Seal

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.

***New Required Field**

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

Revision	Date

Local Entity File No.

REFERENCE:

STANDARD FORM 1

Updated 05/01/2008

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

Project Name: SOLANO SPRINGS	Map ID:
Firm Name: ADVANTAGE CIVIL DESIGN GROUP	Engineer: BRANDON DOTY, P.E.
Address: 2920 N. GREEN VALLEY PKWY BLDG. 4, SUITE #422	
City: HENDERSON State: NV Zip: 89014	
Phone Number: 702-432-2234	Fax Number: 702-436-2234
Property Owner: RICHMOND AMERICAN HOMES OF NEVADA, INC.	
Address: 7770 S. DEAN MARTIN DR. SUITE 308	
City: Las Vegas State: NV Zip: 89139	

Reviewed By:	Date Received:	Date Accepted for Review:

The following checklist is intended as a guide for the engineer preparing a Technical Drainage Study to submit to the local entity and Clark County Regional Flood Control District (if necessary). The listed items are the minimum information required prior to the entity performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the Clark County Regional Flood Control District (CCRFCD) Hydrologic Criteria and Drainage Design Manual (MANUAL).

This document is intended as an aid in preparing Technical Drainage Studies. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT

Yes	No	
X		Design Manual **Standard Form 1** with the engineer's seal and signature.
X		Design Manual **Standard Form 4**.
X		2 copies of the 24" x 36" Drainage Plan.
N/A		A notarized letter from the adjacent property owner(s) allowing off-site grading or discharge.

REFERENCE:	**STANDARD FORM 2**

DRAINAGE SUBMITTAL CHECKLIST

II. MAPS AND EXHIBITS

Yes	No	
X		A copy of a current Flood Insurance Rate Map (FIRM) with the site delineated.
X		A copy of the current CCRFCD Master Plan Update Figure, (F-x), for Flood Control Facilities and Environmental areas with the site delineated.
X		Off-site drainage basin maps for existing, interim and future conditions showing the existing topography, basin boundaries, concentration points, and flows in cfs.
X		On-site drainage basin maps for existing and proposed conditions showing the existing topography, basin boundaries, concentration points, and on-site and off-site flows in cfs.
X		Vicinity Map with local and major cross streets identified and a north arrow.

III. DRAINAGE PLAN

Yes	No	
X		Sheet size: 24" x 36" sealed by a registered engineer in the State of Nevada.
X		Minimum scale: 1" = 60'.
X		Project name.
X		Vicinity Map with local and major cross streets.
X		Revision box.
X		North arrow and bar scale.
X		Engineer's/consultant's address and phone number.
X		Elevation datum and benchmark.
X		Legend for symbols and abbreviations.
X		Cut/fill scarps, where applicable.
X		Street names, grades, widths.
X		Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street.

REFERENCE:	STANDARD FORM 2

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
X		Existing contours encompassing the site and 100 feet beyond with spot elevations for important locations, where appropriate.
X		Minimum finish floor elevations with top-of-curb elevations at upstream end of lot.
X		Proposed typical street sections.
X		Streets with off-set crowns.
X		Proposed contours or spot elevations in sufficient detail to exhibit intended drainage patterns and slopes.
X		Property lines.
X		Right-of-way lines and widths, existing and proposed.
X		Existing improvements and their elevations.
X		Delineation of proposed on-site drainage basin s indicating area and 10-year and 100-year storm peak flows at basin concentration points.
X		Concentration points and drainage flow direction with Q_{100} and V_{100} and D_{100} in streets.
X		Cumulative flows, velocity, and direction of flow at upstream and downstream ends of site for the 10-year and 100-year flows.
X		Location and cross-section of street capacity calculations.
N/A		Cross-sectional detail for channels, including cutoff wall locations.
X		Existing and proposed drainage facilities, appurtenances, and connections (i.e., sidewalk, ditches, swales, storm drain systems, unimproved and improved channels, and culverts, etc.) stating size, material, shape, and slope with plan and profile and HGL calculations.
X		Existing and proposed drainage easements and widths shown with sufficient detail. A cross sectional detail must be provided that shows appropriate lining and reinforcement.
N/A		Location and detail of existing, proposed, and future block wall openings. Minimum size is 16" x 48". Wrought iron gate is required for flows > 10 cfs.
X		Location and detail of flood walls illustrating depth of flow, proposed grouting height, etc.

REFERENCE:	STANDARD FORM 2

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
X		Perimeter retaining wall locations. All existing and proposed walls (retaining screen and flood) must be shown with adjacent ground elevations. Flood walls with 8-inch concrete masonry unit.
X		Building and/or lot numbers.
X		Alignment of all existing, proposed, or future Regional Facilities adjacent to the site.
X		Limits of existing floodplain based on current FIRM or best available information; limits of proposed floodplains based on best available information.
N/A		For areas in Zone A, AE, AH, and AO, base flood elevations (BFEs) must be shown for each lot; BFEs may be listed on each lot, or in a table. Finish floor elevations must be a minimum of 18 inches above BFE.
X		Appropriately elevated "humps" 6 inches above the 100 year water surface elevation at site accesses where the intent is to protect the site from the Q_{100} flows.
X		Street slopes for perimeter and interior streets. The minimum slope is 0.4 percent.

IV. HYDROLOGIC ANALYSIS

Yes	No	
X		Appropriate soil information and Soils Map for existing and future conditions with subbasins and property delineated.
X		Input and output information for existing conditions from computer models (HEC-1 or TR-55). The flow routing diagram must be provided with HEC-1 models.
X		Input and output information for future conditions from computer models (HEC-1 or TR-55). The flow routing diagram must be provided with HEC-1 models.
X		Use of correct precipitation values in and around the McCarran Airport rainfall area.
X		A discussion in the text of the hydrologic analysis justifying subbasin boundaries and cutoffs, supporting assumptions, and calculations.
X		A summary table of stormwater flows showing basin area, Q_{10} and Q_{100} for both individual basins and combined basin flows, where applicable.
X		Copies of supporting technical information referenced from a previously approved study and a statement accepting these results.
X		On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners in accordance with current Nevada Drainage Law.

REFERENCE:	STANDARD FORM 2

DRAINAGE SUBMITTAL CHECKLIST

V. HYDRAULIC ANALYSIS

Yes	No	
X		Flow split calculations and supporting documentation or reference for the method of flow split calculations used.
X		Normal depth street flow calculations and cross section diagrams for all interior and perimeter streets. Provide "d x v" products for the Q_{100} and Q_{10} flows representing the worst case for interior and all perimeter streets. Q_{100} d x v $\leq$ 8. Q_{10} d x v $\leq$ 6 and 12 foot dry lane for rights-of-way $\geq$ 80 feet. Calculations must be labeled by street name as indicated on the Grading Plan.
X		A summary table of interior and exterior street capacity calculations showing the street name, Q_{100} flow, slope, depth of flow, velocity and depth times velocity product and streets needing to meet 12 foot dry lane criteria.
N/A		Appropriate hydraulic calculations for block wall openings assuming a 50 percent vertical clogging factor. (Assume the lower half of the opening is plugged.)
X		Appropriate hydraulic calculations at drainage easement entrance and discharge locations to set finish floor elevations. Hydraulic calculations must include submerged weir, superelevation and tee intersection losses, where appropriate.
X		Provide necessary freeboard requirements to set the finished floor elevations of all proposed buildings, 2 x depth of flow or depth of flow plus 18 inches of freeboard, whichever is less. The minimum requirement is 6 inches above adjacent upstream top of curb. Buildings adjacent to drainage easements must always be provided with 18 inches of freeboard above the Q_{100} weir height or flow depth, which ever is greater.
N/A		A complete water surface profile analysis (HEC-2, HEC-RAS, etc.) for channel flows and FEMA Zone A flood zones. • Field survey data. • Input and output information. • Plotted cross-sections based on survey with proper encroachments. • A map showing the location of the cross-sections. • Analysis of both sub and super-critical flow segments. • A summary table and a discussion of the results in the text of the report.
X		Provide a 50 percent clogging factor in the capacity calculation for drop inlets.
X		Hydraulic calculations for culverts and storm drains. D-Load calculations must be provided for storm drain pipes in public rights-of-way, including headwater pool inundation.
X		The mitigation of nuisance water, both during construction and in the fully developed condition, must be addressed.

REFERENCE:	STANDARD FORM 2

CITY OF LAS VEGAS

MINIMUM DRAINAGE STUDY CRITERIA
STANDARD FORM 2 CHECKLIST SUPPLEMENT

(Revised 5/18/11)

The following checklist is intended as a supplemental guide for the engineer preparing a Technical Drainage Study submittal to the City of Las Vegas. This supplement focuses on requirements specific to the City of Las Vegas. The requirements presented are in addition to the Clark County Regional Flood Control District (CCRFCD) Manual Standard Form 2. The listed items are the minimum information required prior to the City performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the CCRFCD Hydrologic Criteria and Drainage Design Manual (Design Manual).

An appointment must be made to preview this checklist in conjunction with CCRFCD Standard Form 2 prior to the City accepting a new drainage study for review. The engineer must contact the Flood Control Section at (702) 229-6541 to schedule a submittal appointment.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT		
Yes	No	
N/A		A notarized letter from the adjacent property owner(s) allowing off-site grading. (A copy of the letter must be received prior to final acceptance of the drainage study.)
✓		Copies of all conditions of approval for development related to this property. (e.g. zoning, use permit, tentative map, etc.) Verify compliance with conditions.
✓		An electronic copy of the complete submittal is required to be submitted with one original hard copy of the study. Electronic documents should be on a universal computer-readable digital output device replicating your submittal. An Indexed Portable Document Format (PDF) or Print Ready CAD file formats with a minimum of 300dpi are the desired formats. If figures are in color, they must be scanned in color and saved as a separate file. BD by initial here, the engineer on record acknowledges that the electronic copy is an identical replicate of the original hard copy submitted to the City of Las Vegas.

II. GRADING PLAN INFORMATION		
Yes	No	
✓		(1) 24" X 36" copy of the Grading Plan, (including all Detail Sheets) sealed by the engineer.
✓		Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street. Note: Proposed top of curb elevations must be provided for both sides of roadways even if only half street construction is required.
✓		Label existing topography at a minimum 5 foot elevation interval including adjacent developments, finished floor elevations of existing buildings and top of existing curbs extending 100 feet* around the perimeter of the site. (*Measured from the centerline of the adjacent roadway.)

II. GRADING PLAN INFORMATION		
Yes	No	
✓		Proposed on-site and off-site storm drains and other flood control facilities with plan and profile sheets for public storm drains showing the class of pipe, (Class III, IV, V, etc.), design hydraulic grade line, (HGL) and 100 year storm flow. A public drainage easement must be provided over on-site storm drains conveying off-site flows. An overflow path must be provided over all storm drains.
✓		All existing and "to be constructed" walls with cross-sections showing wall type, (e.g. block wall, retaining wall, flood wall, etc.), with limits clearly defined, adjacent ground elevations. Wall heights must meet current ordinances and in no case exceed 14 feet above the adjacent property.
✓		Street slopes for both interior and perimeter streets. Note: The minimum slope for a roadway is 0.4 percent, a minimum 18-inch storm drain must be provided where minimum slopes cannot be met.
✓		Back of lot elevations and lot drainage pattern for all lots including common lots.
✓		Sites with a grade difference two feet above or below existing ground are required to have approval from City of Las Vegas Current Planning. Current Planning approval is required prior to final approval of the drainage study.
✓		On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners. (The project must pass flows through the site every 600 feet where the project is blocking flow paths.)
✓		This project uses a solid grouted stem wall (or approved alternate) at the back of sidewalk to provide erosion protection for landscaped areas where the depth of flow in the roadway exceeds the back of walk elevation. A corresponding cross-section detail is included.
✓		Commercial and Common Lot Landscape areas are not allowed to drain over the sidewalk. The grading plans show flow lines with grades and sidewalk under drains for all landscape areas draining to the public ROW.

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
✓		Concrete valley gutters are required in parking lots with slopes less than 1 percent. Slopes through cul-de-sac must be at a 1 percent minimum where flow is drained through the cul-de-sac.
✓		Ten-foot wide public drainage easements to be privately maintained are allowed for flow less than 20 cfs. The depth of flow entering the easement must be checked using the submerged weir calculation.
N/A		The limits of the flood zones and the base flood elevations (BFE) must be shown on all grading plans for all developments within a Special Flood Hazard Zone A, AO, AE, etc.
✓		Minimum finish floor elevation is 6 inches above highest adjacent top of curb. Finish floor calculations must include allowances for super elevations on curves and velocity head for tee intersections.
✓		Finished floor elevations for buildings adjacent to public drainage easements must be a minimum of 18 inches above the Q100 weir of submerged weir elevation, whichever is greater.

III. Local Entity Criteria - City of Las Vegas – Manual Section 1600		
Yes	No	
N/A		Lots with "B and C Type Drainage" that drain from one lot to another through a drainage easement shall be required to install an underground nuisance drainage system or a 2-foot valley gutter. 16" x 24" minimum block wall openings are required for both options.
N/A		Bubblers are required across 80 foot and greater ROW streets. When flows exceed 10 cfs, bubblers larger than 18 inches will be required up to a maximum of 36". Inlets must be sized to match the pipe size provided.

- Contact the Flood Control Section regarding the drainage study review fee. These fees are payable at the time of submittal.
- The Drainage Study must be conditionally approved prior to submitting improvement plans to the Civil and Planning Development of the Department of Building and Safety for review.

This document is intended as an **aid** in preparing Technical Drainage Studies for the City of Las Vegas. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all-inclusive and does not limit the extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

April 6, 2015

Mr. Albert Sung, P.E.
City of Las Vegas Flood Control
333 N. Rancho Drive
Las Vegas, Nevada 89106

RE: Addendum #1 to the Technical Drainage Study for Solano Springs by Richmond American Homes

Mr. Sung:

The purpose of this report is to serve as Addendum #1 to the Technical Drainage Study for Solano Springs by Richmond American Homes for your review and approval. This proposed 5 ± acre development is located near the southeast corner of the intersection of Deer Springs Way and Tee Pee Lane. Comments from the original Submittal are dated March 24, 2015. The comments are shown in bold type, followed by a response.

Comment 1: Note that offset crown street (Pleasant Flower Street) is a deviation from standard. Apply for a deviation meeting with City Land Development Section for approval prior to the final acceptance of the improvement plans.

Response 1: City Land Development deviation approval will be obtained.

Comment 2: Provide preliminary plan and profile sheets for all proposed public streets (Deer Springs Way, Tee Pee Lane, Echelon Point Drive and Pleasant Flower Street). Plan and profile sheets must show existing and proposed grade at centerline, but may be preliminary in all other respects. These plans are necessary to determine the effect of the proposed development on the adjacent properties.

Response 2: Preliminary plan and profile sheets meet all the requirements listed in Standard Form 2 and should therefore be sufficient for the drainage study review.

Comment 3: Detail Sections H/DE1, K/DE1, L/DE1 and M/DE1: Clearly specify the 3-course solid grouted blocks above the adjacent grade must be "8"-CMU" or equivalent.

Response 3: A minimum 8"-CMU solid grouted has been added to the plans.

If there are any questions or additional information that is necessary, please contact our office at (702) 432-2234.

Sincerely,
Advantage Civil Design Group, LLP

Brandon G. Doty, P.E.
Project Manager

CITY OF LAS VEGAS
INTER-OFFICE MEMORANDUM

	DATE: March 24, 2015
TO: **Land Development Services** Department of Building & Safety	**FROM:** Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for: **Solano Springs by Richmond American Homes**	**COPIES TO:** Advantage Civil Design Group
Cross Streets: SEC of Deer Springs Way & Tee Pee Lane	Richmond American Homes Nevada
File Number: F:\Depot\DSMemos\DS4725A.doc	Bart Anderson, P.E., DevCo
Parcel Number: 125-19-701-018	
Zoning Action: TMP-56664; SDR-56663; WVR-56662 & MOD-56661	

FEMA Flood Zone	YES	NO **X**
Proposed Storm Drain	YES	NO **X**

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	3/9/2015	3/23/2015	See Comments Below	$400.00	388289: $400
			TOTAL FEES (LDDRS):	**$400.00**	**----**

REMARKS:

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

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

1. Note that offset crown street (***Pleasant Flower Street***) is a deviation from standard. Apply for a deviation meeting with *City Land Development Section* for approval prior to the final acceptance of the improvement plans.

2. Provide preliminary plan and profile sheets for all proposed public streets (***Deer Springs Way***, ***Tee Pee Lane, Echelon Point Drive*** and ***Pleasant Flower Street***). Plan and profile sheets must show existing and proposed grade at centerline, but may be preliminary in all other respects. These plans are necessary to determine the effect of the proposed development on the adjacent properties.

3. ***Detail Sections H/DE1, K/DE1, L/DE1*** and ***M/DE1***: Clearly specify the 3-course solid grouted blocks above the adjacent grade must be "**8"-CMU**" or equivalent.

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.

END OF REMARKS

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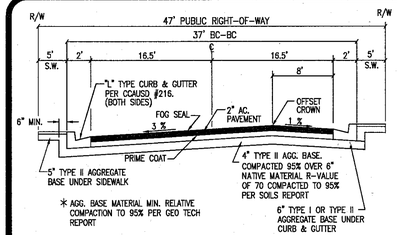
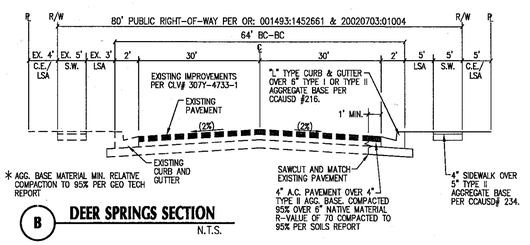
T/R/S: T19S/R60E/19
AREA G-19

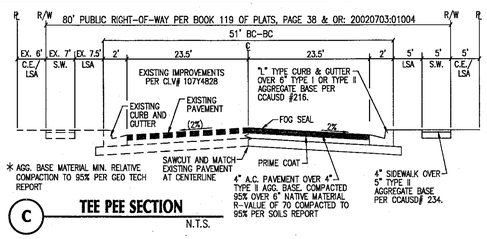
MAR 30 2015



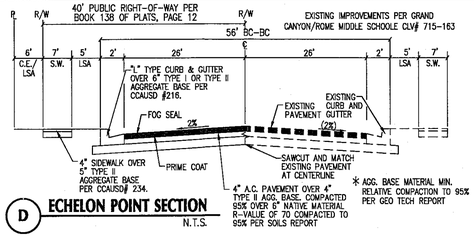
A **47' PUBLIC ONSITE STREET - OFFSET CROWN**
PLEASANT FLOWER STREET N.T.S.



B **DEER SPRINGS SECTION** N.T.S.



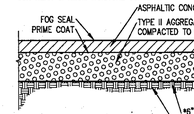
C **TEE PEE SECTION** N.T.S.



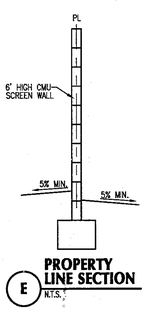
D **ECHELON POINT SECTION** N.T.S.

LOCATION	PAVEMENT	AGG. BASE
ONSITE	2"	4"
OFFSITE	4"	4"

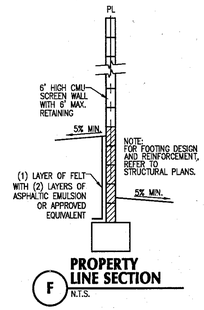
*NOTE (PER SOILS REPORT):
MOST NATIVE MATERIAL ONCE MINED, SCREENED, AND PROCESSED WILL MEET SPECIFICATIONS FOR CLASSIFICATION AS TYPE I AGGREGATE BASE. TYPE I BASE NOT REQUIRED FOR PAVEMENT SECTIONS. TYPE II SHALL BE PLACED ON 6" NATIVE MATERIAL R-VALUE OF 70 COMPACTED TO 95% NEAR OPTIMUM MOISTURE CONTENT.



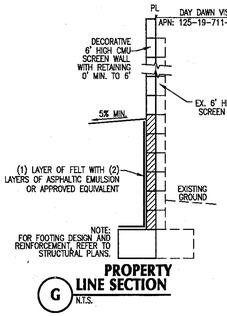
1 **PAVEMENT SECTION** N.T.S.



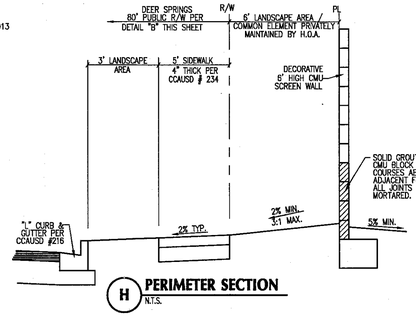
E **PROPERTY LINE SECTION** N.T.S.



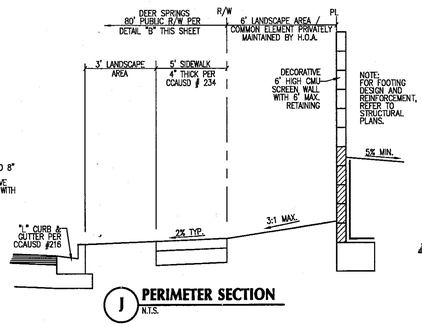
F **PROPERTY LINE SECTION** N.T.S.



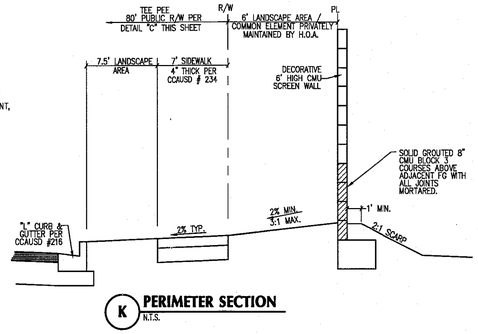
G **PROPERTY LINE SECTION** N.T.S.



H **PERIMETER SECTION** N.T.S.



J **PERIMETER SECTION** N.T.S.

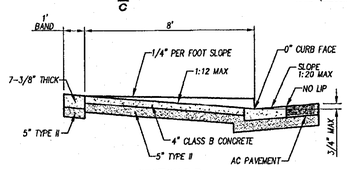


K **PERIMETER SECTION** N.T.S.

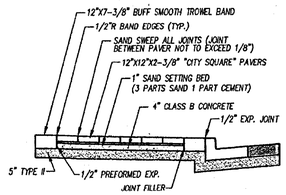
L **PERIMETER SECTION** N.T.S.

M **PERIMETER SECTION** N.T.S.

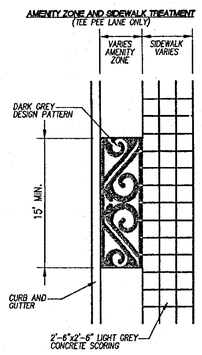
N **PERIMETER SECTION** N.T.S.



SECTION B-B



SECTION C-C



2 **SPECIAL PAVEMENT AND SIDEWALK TREATMENTS** N.T.S.

CIVIL DESIGN GROUP, LLP
2920 N. GREEN VALLEY PKWY.
BLDG 4 STE #422
HENDERSON, NEVADA
89014
Office: 702.452.2294
Fax: 702.446.2294
Email: MAIL@KIMTANGEDVIL.COM
CIVIL ENGINEERING
PLANNING
CONSULTING

STATE OF NEVADA — REGISTERED PROFESSIONAL ENGINEER — BRANDON G. DOTY — EXP. 12/31/16 — CIVIL

DETAIL SHEET 1

SOLANO SPRINGS
RICHMOND AMERICAN HOMES OF NEVADA

REVISIONS

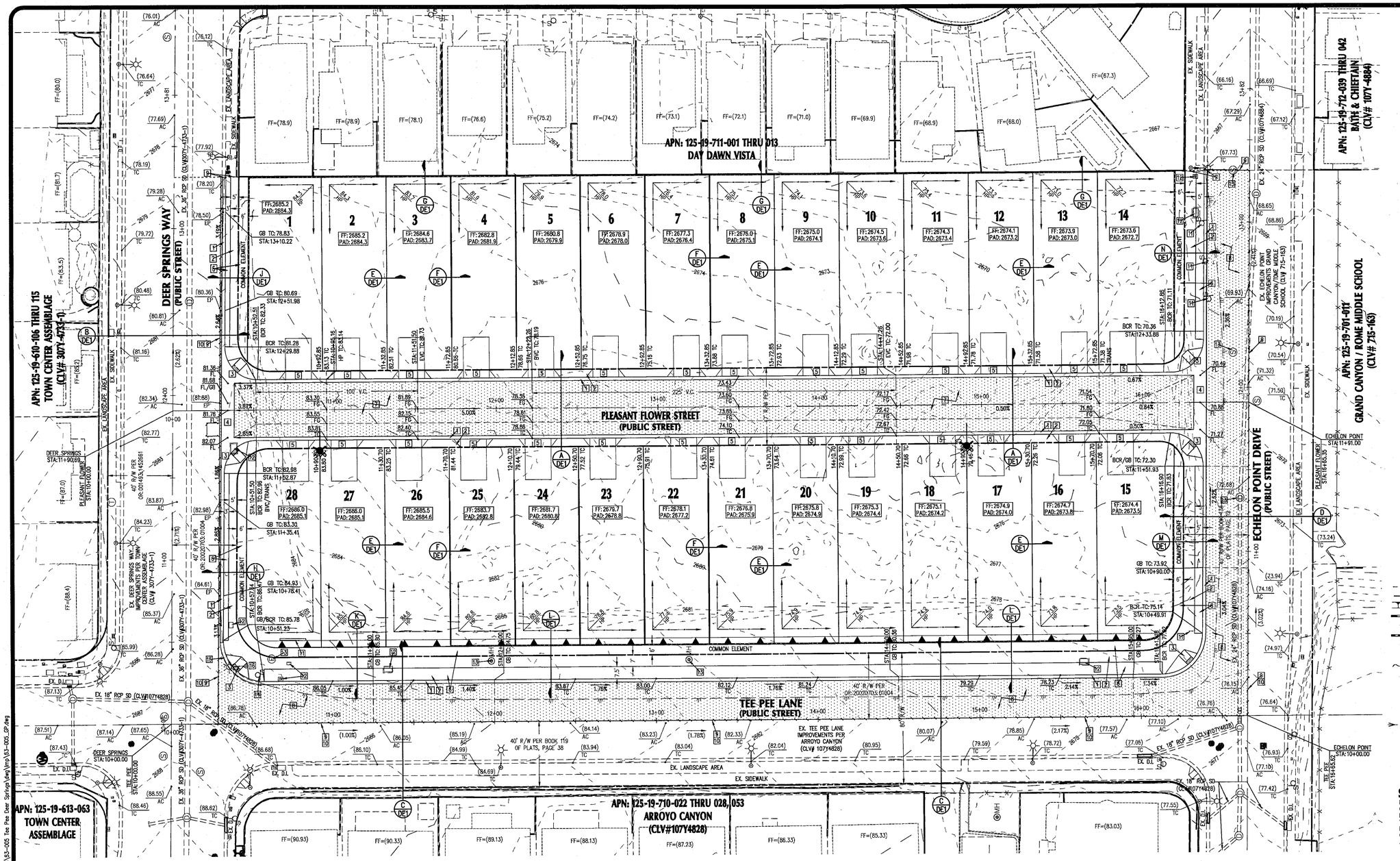
NO.	DATE	DESCRIPTION	BY

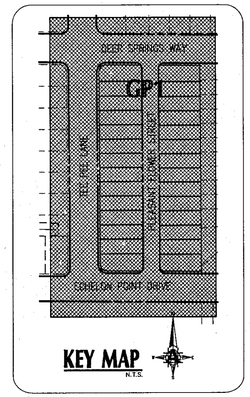
JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

DE1 3/15

##########

tholleman on PLOT DATE: 04-09-15 PLOT TIME: 16:08:18 DWG PATH: N:\Richmond\63-005 Tee Pee Deer Springs\dwg\dwg\063-005_GP.dwg





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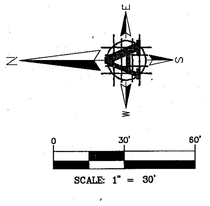
PLANNING
CONSULTING
CIVIL ENGINEERING

BRANDON G. DOTY
No. 20002
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEVADA
CIVIL
DATE: 12/31/15

GRADING PLAN 1

SOLANO SPRINGS

RICHMOND AMERICAN HOMES OF NEVADA



LEGEND

EXISTING PAVEMENT	HERCP ELLIPTICAL REINFORCED CONCRETE PIPE
PROPERTY LINE	RCP REINFORCED ELLIPTICAL CONCRETE PIPE
SCARP	HP LOT HIGH POINT
RETAINING WALL	EVC END VERTICAL CURVE
FLOW RATE/DIRECTION	EX. EXISTING
BLOCK WALL	FF FINISH FLOOR
LOT NUMBER	FG FINISH GRADE
BLOCK NUMBER	FL FLOW LINE
NAT. GRND CONTOUR	GB GRADE BREAK
BC BACK OF CURB	TF TOP OF FOOTING
BCR BACK OF CURB RETURN	TRW TOP OF RETAINING WALL
BVC BEGIN VERTICAL CURVE	PL PROPERTY LINE
CL CENTERLINE	TC TOP OF CURB
R/W RIGHT OF WAY	VG VALLEY GUTTER
V-DITCH/SWALE	P.S. PRIVATE STREET
	P.U.E. PUBLIC UTILITY EASEMENT
	C&G CURB AND GUTTER
	EP EDGE OF PAVEMENT
	AC ASPHALTIC CONCRETE
	SVZ SIGHT VISIBILITY ZONE
	BL BOUNDARY LINE
	TFW TOP OF FLOOD WALL
	GRND NATIVE GROUND

SIGHT VISIBILITY NOTE:

NO WALLS, FENCES, TREES, SHRUBS UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTING, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE.

DRAINAGE CERTIFICATION

BRANDON G. DOTY, P.E. # 20002

I CERTIFY THIS GRADING PLAN IS IN CONFORMANCE WITH THE CITY OF LAS VEGAS DRAINAGE REQUIREMENTS. #---###

NO.	DATE	DESCRIPTION	BY

REVISIONS

JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

GP1 | 4 | 15

NOTE:

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SOILS NOTE:

FOR SOILS INFORMATION, REFERENCE SOILS STUDY
BY: ANGLE ENGINEERING
PROJECT NUMBER: 26174-1
DATED: 10/16/14

GENERAL NOTES

1. SEE FINAL MAP FOR EXACT BEARINGS AND DISTANCES.
2. CONTRACTORS SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. ALL GRADING WORK TO CONFORM TO SOILS REPORT AS PREPARED FOR THIS PROPERTY.
4. CONTRACTOR SHALL REMOVE EXCESS DEBRIS AND VERIFY WALL FOOTING ELEVATION PRIOR TO CONSTRUCTION, REPORT DISCREPANCIES TO ENGINEER IMMEDIATELY.
5. CONTRACTOR TO MAINTAIN MIN. DEPTH OF COVER ABOVE PAD FOOTINGS AND ADJACENT WALL FOOTINGS WHERE DEEP SWALES OCCUR.
6. ADD 2600' TO ELEVATION TAGS SHOWN ON THIS GRADING PLAN.
7. DRIVEWAY SLOPES CANNOT EXCEED MAXIMUM SLOPE OF 12.5%

CONSTRUCTION NOTES

1. INSTALL "L" TYPE CURB & GUTTER PER CCAUSD #216.
2. INSTALL 4" THICK SIDEWALK PER CCAUSD #234.
3. CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS CASE 2, AND DETAIL "2" SHEET DE1.
4. INSTALL 8' CONCRETE VALLEY GUTTER PER CCAUSD #228.
5. RESIDENTIAL DRIVEWAY APPROACH PER CCAUSD #223.
6. LANDSCAPE AREA
7. 2" A.C. OVER 4" TYPE II AC PAVEMENT PER DETAIL "1" SHEET DE1.
8. 4" A.C. OVER 4" TYPE II AC PAVEMENT PER DETAIL "1" SHEET DE1.
9. MATCH EXISTING CURB, GUTTER, SIDEWALK AND/OR A.C. PAVEMENT. CONTRACTOR TO VERIFY ELEVATION.
10. SAWCUT CLEAN EDGE TO MATCH & REMOVE EXISTING A.C.
11. EXISTING SIGN TO BE REMOVED.
12. EXISTING ELEC, TELEPHONE, CABLE OR FIBER OPTIC VAULT TO BE RAISED TO GRADE OR RELOCATED BY CONTRACTOR AS NECESSARY.
13. EXISTING MANHOLE OR VALVE BOX TO BE RAISED TO GRADE OR RELOCATED BY CONTRACTOR AS NECESSARY.
14. EXISTING SIGN TO BE RELOCATED BY CONTRACTOR AS NECESSARY.
15. REMOVE EXISTING CURB AND GUTTER.
16. EXISTING STREETLIGHT/TRAFFIC SIGNAL. PROTECT IN PLACE.

FLOOD NOTE:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM), COMMUNITY PANNEL NUMBERS 32003C1745 E, EFFECTIVE SEPTEMBER 27, 2002, THE SITE IS LOCATED WITHIN ZONE X. ZONE X IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

STORMWATER MANAGEMENT NOTES:

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY AS A RESULT OF CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SYSTEM.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORSEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND THE *LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL*.

3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.

4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENETION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

##########

EARTHWORK VOLUMES:

RAW CUT	6100 CY
RAW FILL	10400 CY
RAW IMPORT	4300 CY

THIS OPINION OF THE CUT AND FILL QUANTITIES IS PROVIDED AS REQUIRED BY COUNTY OF CLARK REQUIREMENTS. THIS INFORMATION SHOULD NOT BE USED FOR BIDDING PURPOSES. ALL CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN QUANTITIES.

BASIS OF BEARINGS

SOUTH 89°29'14" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 128 OF PLATS, AT PAGE 23.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: SLV90 19E6

RIVET & PLATE IN TOP OF CURB @ NE CORNER OF TEE PEE & DEER SPRINGS.

ELEVATION=818.515 Meters (NAVD'88 2008 ADJUSTMENT)
ELEVATION=2685.74 FEET (NAVD'88 2008 ADJUSTMENT)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

FAST

Call before you UnderGround

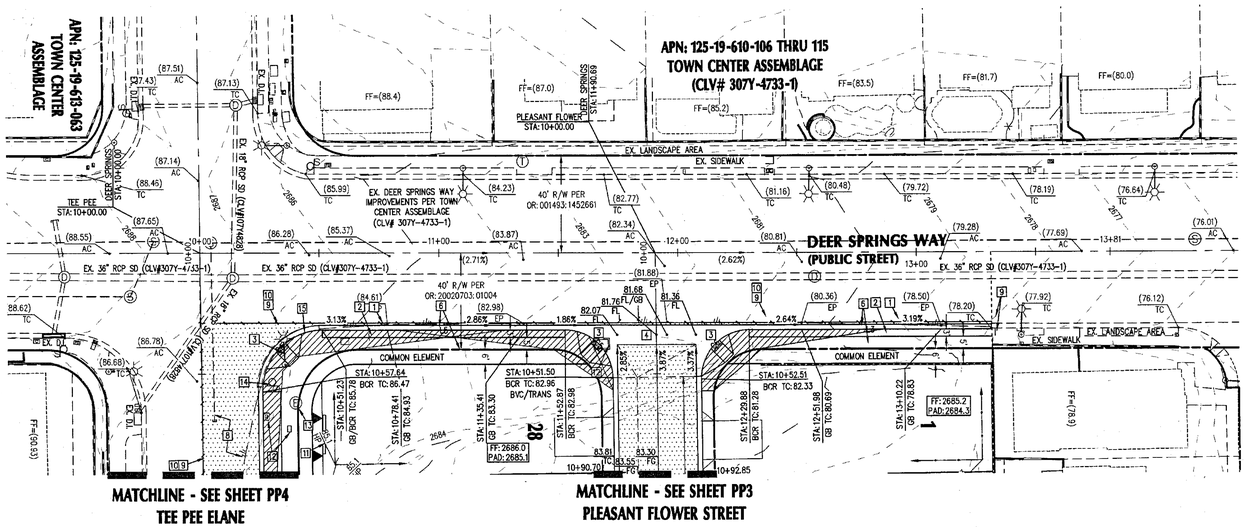
1-702-432-5300

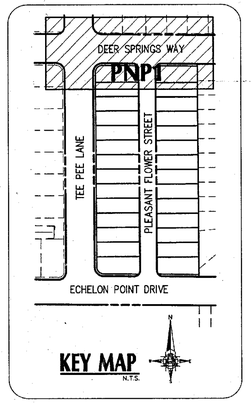
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call 811 OR 1-800-227-2600

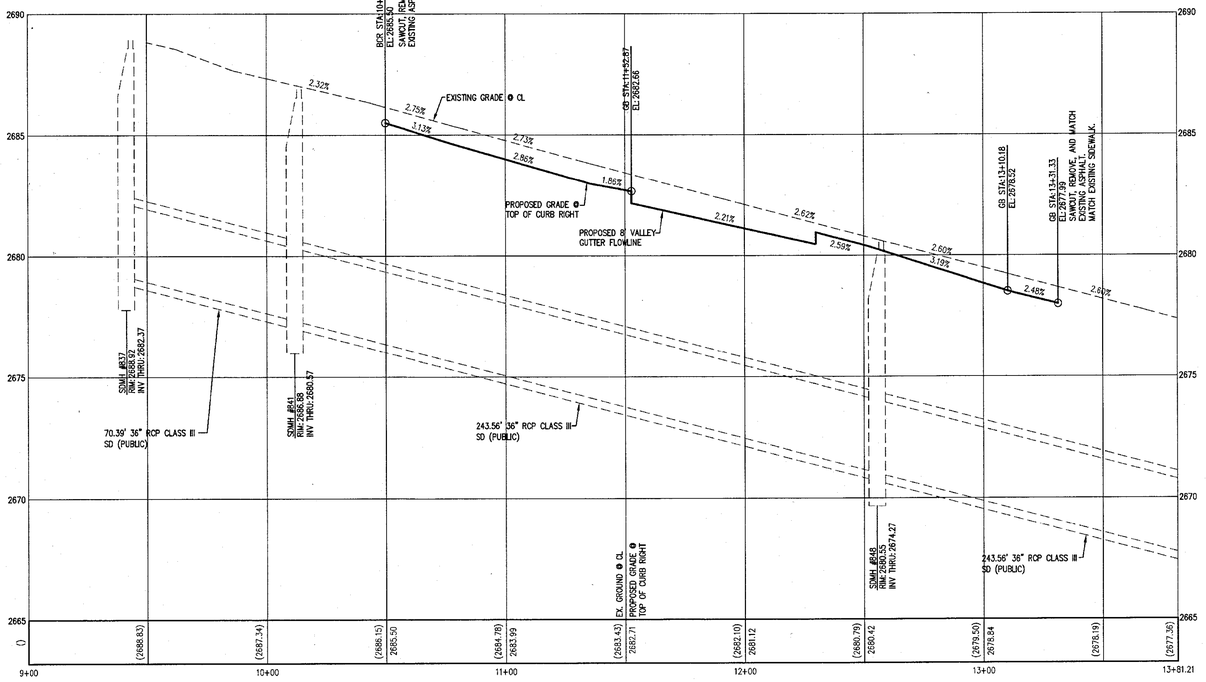
PLOT DATE: 04-06-15 PLOT TIME: 16:06:32 DWG PATH: N:\Richmond\63-005 Tee Pee Dwn Springs\dwg\mp\63-005_GP.dwg





DEER SPRINGS WAY (PUBLIC) - PLAN VIEW

REFER TO DETAIL "B" SHEET DE1 FOR STREET SECTION.
SCALE: 1"=30'

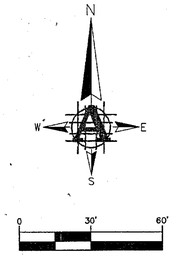


DEER SPRINGS WAY (PUBLIC) - PROFILE VIEW

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

LINE TABLE		
TAG	LENGTH	BEARING
L1	92.81'	N89°34'05"W
L2	565.29'	S00°14'20"E
L3	101.75'	S89°29'14"E
L4	565.40'	S00°14'20"E
L5	101.65'	S89°29'14"E
L6	555.54'	S00°12'44"E
L7	102.03'	S89°34'05"E

CURVE TABLE				
TAG	RADIUS	LENGTH	TANGENT	DELTA
C1	20.00	31.18	19.77	89°19'45"
C2	20.00	31.65	20.24	90°40'15"
C3	25.00	38.99	24.72	89°21'21"
C4	25.00	39.59	25.32	90°43'30"
C5	20.00	31.15	19.74	89°14'55"
C6	20.00	31.68	20.26	90°45'05"



LEGEND

- EXISTING PAVEMENT
- PROPERTY LINE
- SCARP
- RETAINING WALL
- FLOW RATE/DIRECTION
- BLOCK WALL
- 3 LOT NUMBER
- 2 BLOCK NUMBER
- 2090 NAT. GRND CONTOUR
- BC BACK OF CURB
- BCR BACK OF CURB RETURN
- BVC BEGIN VERTICAL CURVE
- CL CENTERLINE
- R/W RIGHT OF WAY
- V-DITCH/SWALE
- HERCP ELLIPTICAL REINFORCED CONCRETE PIPE
- RCP REINFORCED CONCRETE PIPE
- HP LOT HIGH POINT
- EVC END VERTICAL CURVE
- EX. EXISTING
- FF FINISH FLOOR
- FG FINISH GRADE
- FL FLOW LINE
- GB GRADE BREAK
- TF TOP OF FOOTING
- TRW TOP OF RETAINING WALL
- PL PROPERTY LINE
- TC TOP OF CURB
- VG VALLEY GUTTER
- P.S. PRIVATE STREET
- P.U.E. PUBLIC UTILITY EASEMENT
- C&G CURB AND GUTTER
- EP EDGE OF PAVEMENT
- AC ASPHALTIC CONCRETE
- SVZ SIGHT VISIBILITY ZONE
- BL BOUNDARY LINE
- TFW TOP OF FLOOD WALL
- GRND NATIVE GROUND

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FAST
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SOILS NOTE:

FOR SOILS INFORMATION, REFERENCE SOILS STUDY
BY: ANGLE ENGINEERING
PROJECT NUMBER: 26174-1
DATED: 10/16/14

BASIS OF BEARINGS

SOUTH 89°29'14" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 128 OF PLATS, AT PAGE 23.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 5LV90 19E6

RIVET & PLATE IN TOP OF CURB @ NE CORNER OF TEE PEE & DEER SPRINGS.

ELEVATION=818.015 Meters (NAVD'88 2008 ADJUSTMENT)
ELEVATION=2685.74 FEET (NAVD'88 2008 ADJUSTMENT)

GENERAL NOTES

1. SEE FINAL MAP FOR EXACT BEARINGS AND DISTANCES.
2. CONTRACTORS SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. ALL GRADING WORK TO CONFORM TO SOILS REPORT AS PREPARED FOR THIS PROPERTY.
4. CONTRACTOR SHALL REMOVE EXCESS DEBRIS AND VERIFY WALL FOOTING ELEVATION PRIOR TO CONSTRUCTION, REPORT DISCREPANCIES TO ENGINEER IMMEDIATELY.
5. CONTRACTOR TO MAINTAIN MIN. DEPTH OF COVER ABOVE PAD FOOTINGS AND ADJACENT WALL FOOTINGS WHERE DEEP SWALES OCCUR.
6. ADD 2600' TO ELEVATION TAGS SHOWN ON THIS GRADING PLAN.
7. DRIVEWAY SLOPES CANNOT EXCEED MAXIMUM SLOPE OF 12.5%

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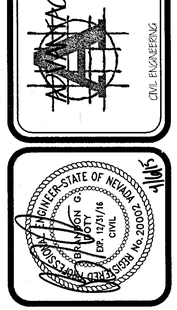
FAX: 702.436.2754
EMAIL: MAIL@ADVANTAGECIVIL.NV.COM
PLANNING
CONSULTING
CIVIL ENGINEERING



PLAN & PROFILE - DEER SPRINGS WAY (PUBLIC)

SOLANO SPRINGS
RICHMOND AMERICAN HOMES OF NEVADA

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

PP1 | 5/15

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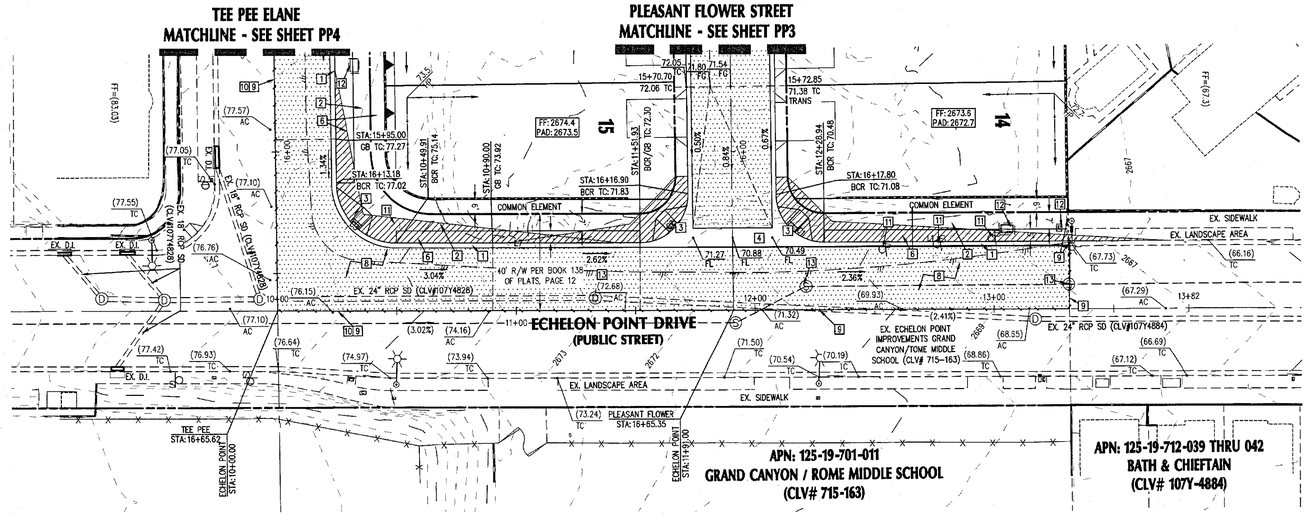
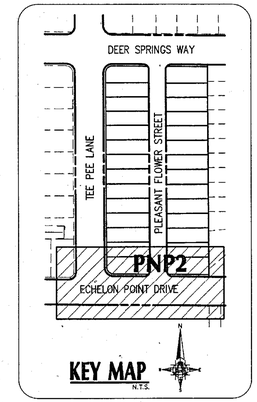
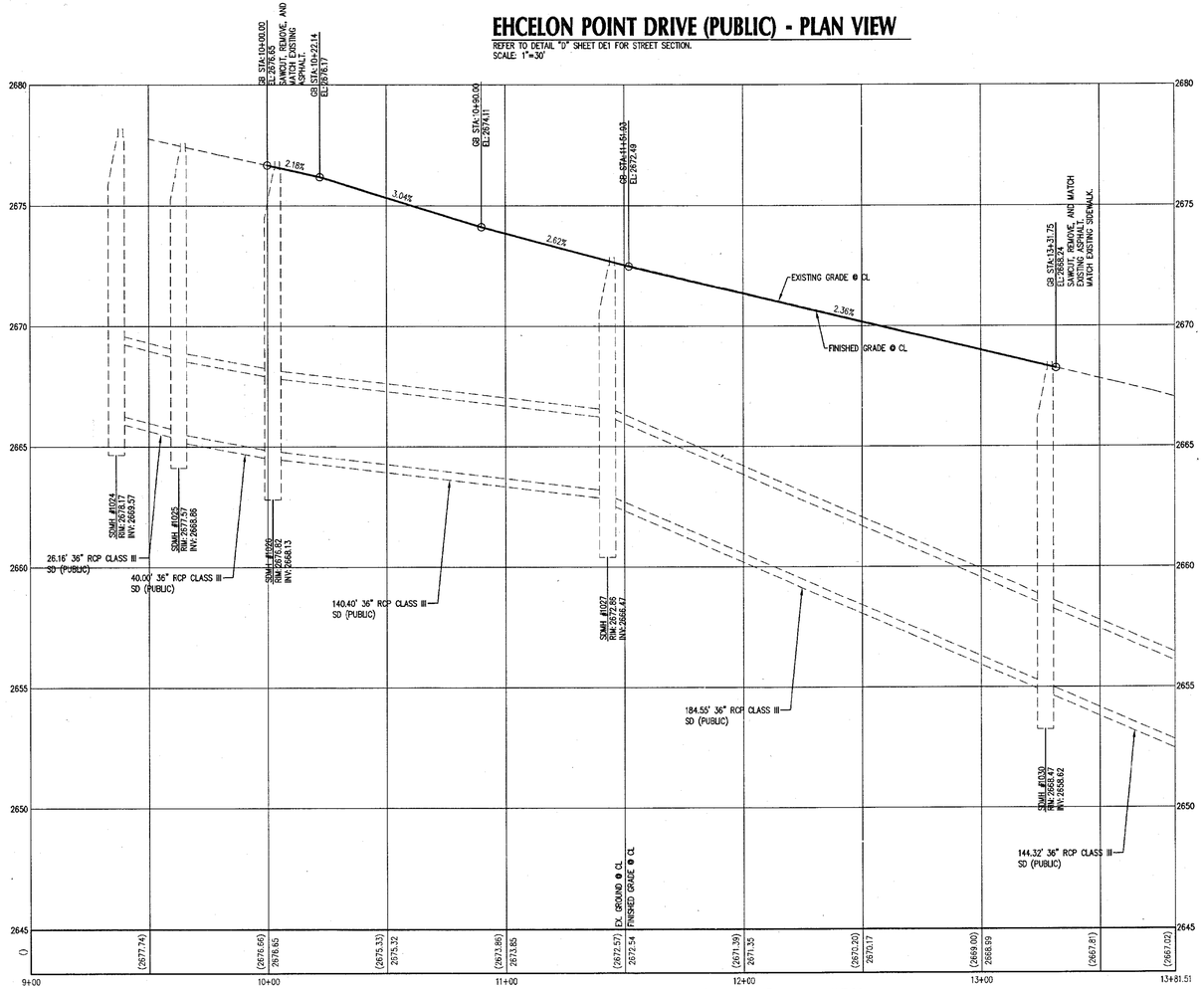
cstaffin PLOT DATE: 04-06-15 PLOT TIME: 15:31:30 DWG PATH: C:\Users\cstaffin\appdata\local\temp\AcPublish_5541\63-005_PMP.dwg





EHCELON POINT DRIVE (PUBLIC) - PLAN VIEW

REFER TO DETAIL "D" SHEET DE1 FOR STREET SECTION.
SCALE: 1"=30'



ECHELON POINT DRIVE (PUBLIC) - PROFILE VIEW

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

BASIS OF BEARINGS

SOUTH 89°29'14" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 128 OF PLATS, AT PAGE 23.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: SLV90 19E6

RIVET & PLATE IN TOP OF CURB @ NE CORNER OF TEE PEE & DEER SPRINGS.

ELEVATION=818.615 Meters (NAVD'88 2008 ADJUSTMENT)
ELEVATION=2685.74 FEET (NAVD'88 2008 ADJUSTMENT)

SOILS NOTE:

FOR SOILS INFORMATION, REFERENCE
SOILS STUDY
BY: ANGLE ENGINEERING
PROJECT NUMBER: 26174-1
DATED: 10/16/14

NOTE:

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FAST
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Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY
Call 811
OR
1-800-227-2600

NOTE:
SEE SHEET PNP1 FOR LINE AND CURVE TABLES.

CONSTRUCTION NOTES

1. INSTALL "L" TYPE CURB & GUTTER PER CCAUSD #216.
2. INSTALL 4" THICK SIDEWALK PER CCAUSD #234.
3. CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS CASE 2, AND DETAIL "2" SHEET DE1.
4. INSTALL 8' CONCRETE VALLEY GUTTER PER CCAUSD #228.
5. RESIDENTIAL DRIVEWAY APPROACH PER CCAUSD #223.
6. LANDSCAPE AREA
7. 2" A.C. OVER 4" TYPE II AC PAVEMENT PER DETAIL "1" SHEET DE1.
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11. EXISTING SIGN TO BE REMOVED.
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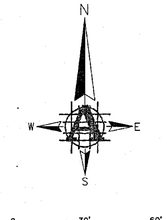
15. REMOVE EXISTING CURB AND GUTTER.
16. EXISTING STREETLIGHT/TRAFFIC SIGNAL. PROTECT IN PLACE.



SCALE: 1" = 30'

LEGEND

EXISTING PAVEMENT		HERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
PROPERTY LINE		RCP	REINFORCED ELLIPTICAL CONCRETE PIPE
SCARP		HP	LOT HIGH POINT
RETAINING WALL		EVC	END VERTICAL CURVE
FLOW RATE/DIRECTION		EX.	EXISTING
BLOCK WALL		FF	FINISH FLOOR
3 LOT NUMBER		FG	FINISH GRADE
2 BLOCK NUMBER		FL	FLOW LINE
2090 NAT. GRND CONTOUR		GB	GRADE BREAK
BC	BACK OF CURB	TF	TOP OF FOOTING
BCR	BACK OF CURB RETURN	TRW	TOP OF RETAINING WALL
BVC	BEGIN VERTICAL CURVE	PL	PROPERTY LINE
CL	CENTERLINE	TC	TOP OF CURB
R/W	RIGHT OF WAY	VG	VALLEY GUTTER
V-DITCH/SWALE		P.S.	PRIVATE STREET
		P.U.E.	PUBLIC UTILITY EASEMENT
		C&G	CURB AND GUTTER
		EP	EDGE OF PAVEMENT
		AC	ASPHALTIC CONCRETE
		SVZ	SIGHT VISIBILITY ZONE
		BL	BOUNDARY LINE
		TFW	TOP OF FLOOD WALL
		GRND	NATIVE GROUND

GENERAL NOTES

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SIGHT VISIBILITY NOTE:

NO WALLS, FENCES, TREES, SHRUBS UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTING, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE.

##########

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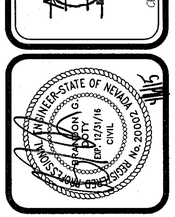


PLAN & PROFILE - ECHELON POINT

SOLANO SPRINGS

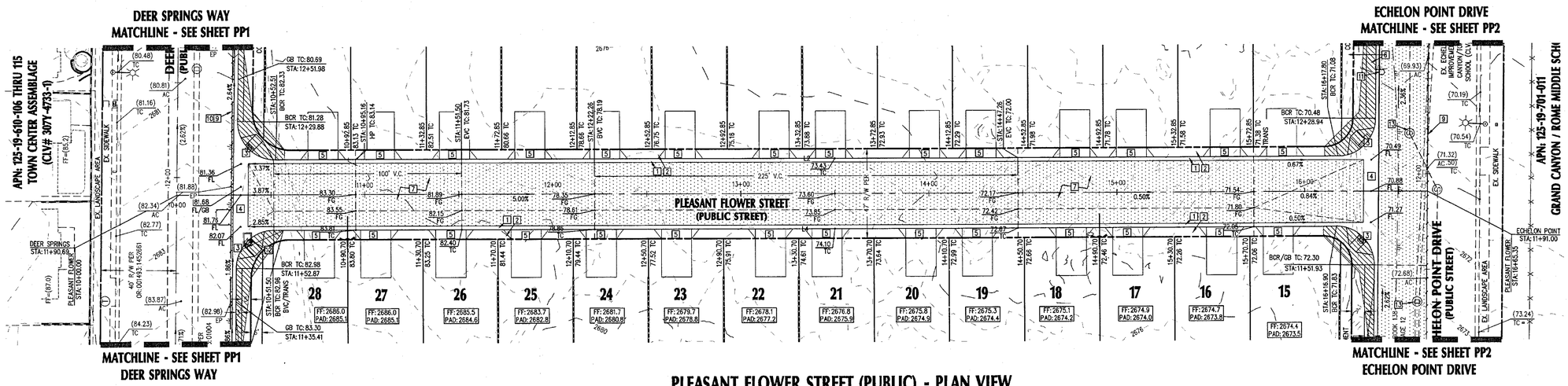
RICHMOND AMERICAN HOMES OF NEVADA

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

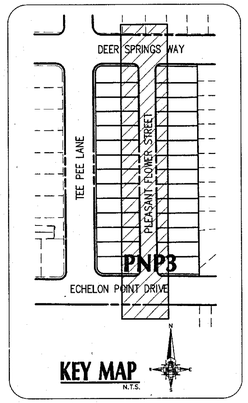
PP2 | 6/15

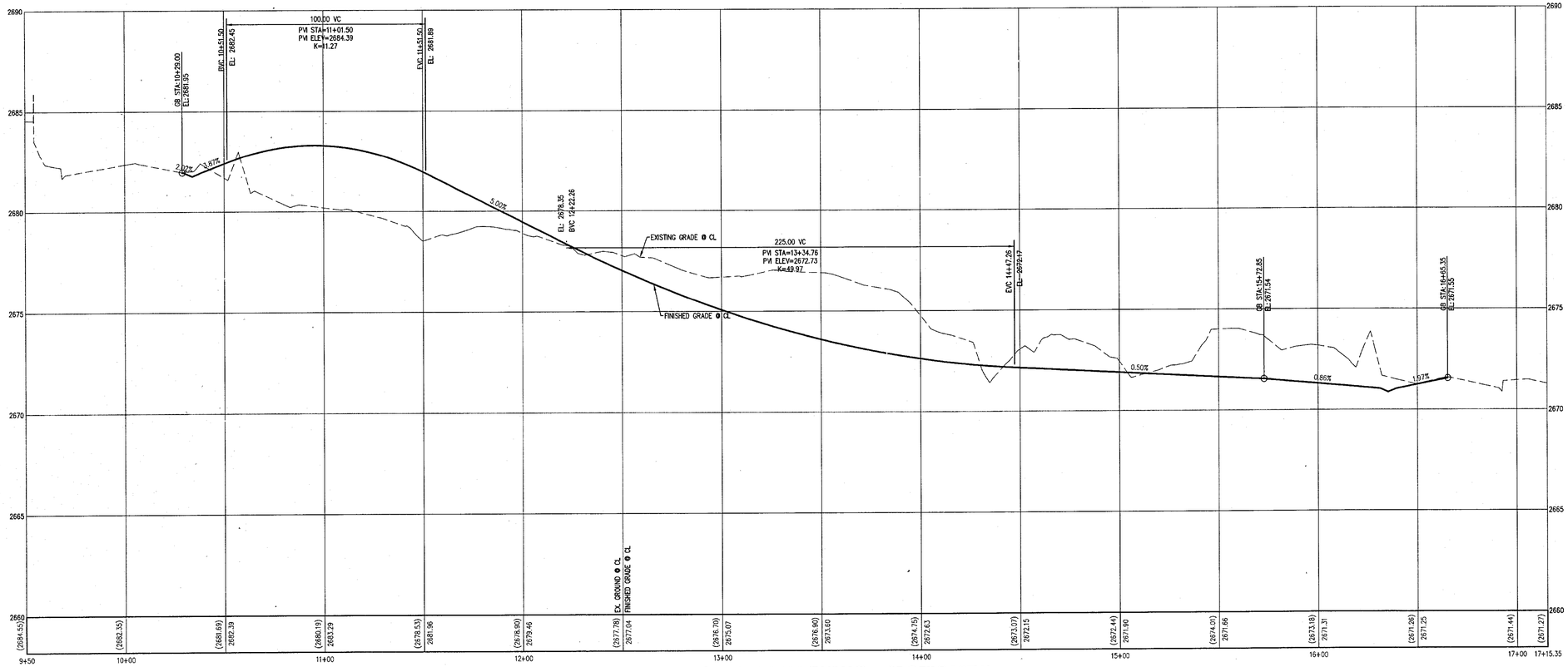
PLOT DATE: 04-06-15 PLOT TIME: 15:31:34 DWG PATH: C:\Users\cdoffin\appdata\Local\Temp\AcPublish_5541\63-005.PWP.dwg cdoffin



PLEASANT FLOWER STREET (PUBLIC) - PLAN VIEW

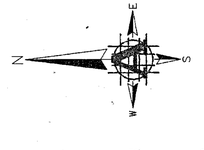
REFER TO DETAIL "A" SHEET DET FOR STREET SECTION
SCALE: 1"=30'





PLEASANT FLOWER STREET (PUBLIC) - PROFILE VIEW

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



0 30' 60'
SCALE: 1" = 30'

LEGEND

	EXISTING PAVEMENT	HERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
	PROPERTY LINE	RCP	REINFORCED ELLIPTICAL CONCRETE PIPE
	SCARP	HP	LOT HIGH POINT
	RETAINING WALL	EVC	END VERTICAL CURVE
	FLOW RATE/DIRECTION	EX.	EXISTING
	BLOCK WALL	FF	FINISH FLOOR
J	LOT NUMBER	FG	FINISH GRADE
2	BLOCK NUMBER	FL	FLOW LINE
2090	NAT. GRND CONTOUR	GB	GRADE BREAK
BC	BACK OF CURB	TF	TOP OF FOOTING
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BVC	BEGIN VERTICAL CURVE	PL	PROPERTY LINE
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	V-DITCH/SWALE	P.S.	PRIVATE STREET
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BASIS OF BEARINGS

SOUTH 89°29'14" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 128 OF PLATS, AT PAGE 23.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 5LV90 19E6

RIVET & PLATE IN TOP OF CURB @ NE CORNER OF TEE PEE & DEER SPRINGS.

ELEVATION=818.615 Meters (NAVD'88 2008 ADJUSTMENT)
ELEVATION=2685.74 FEET (NAVD'88 2008 ADJUSTMENT)

NOTE:
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SOILS NOTE:

FOR SOILS INFORMATION, REFERENCE SOILS STUDY
BY: ANGLE ENGINEERING
PROJECT NUMBER: 26174-1
DATED: 10/16/14

NOTE:

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CIVIL ENGINEERING CONSULTING PLANNING

PLAN & PROFILE - PLEASANT FLOWER

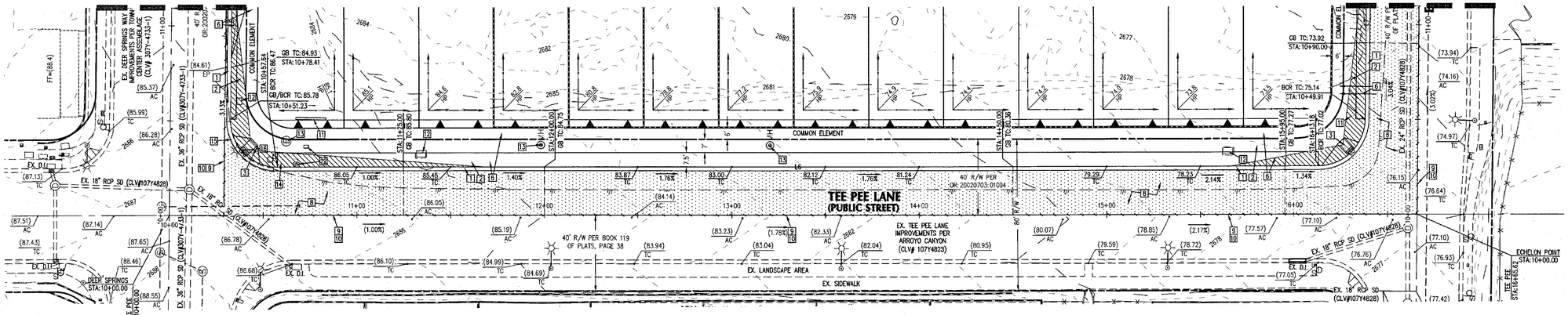
SOLANO SPRINGS
RICHMOND AMERICAN HOMES OF NEVADA

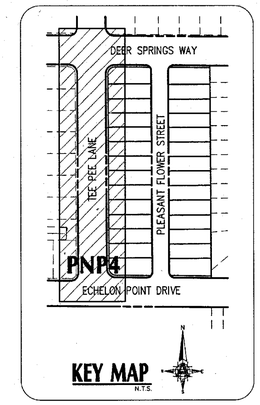
NO.	DATE	REVISIONS DESCRIPTION	BY

JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

PP3 | 7/15

cshaffin PLOT DATE: 04-06-15 PLOT TIME: 15:31:37 DWG PATH: C:\Users\cshaffin\appdata\local\temp\AcPublish_5541\063-005_PNP.dwg





TEE PEE LANE (PUBLIC) - PLAN VIEW

REFER TO DETAIL "C" SHEET DE1 FOR STREET SECTIONS
SCALE: 1"=30'

NOTE:
SEE SHEET PNP1 FOR LINE AND CURVE TABLES.

LEGEND

	EXISTING PAVEMENT	HERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
	PROPERTY LINE	RCP	REINFORCED ELLIPTICAL CONCRETE PIPE
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	RETAINING WALL	EVC	END VERTICAL CURVE
	FLOW RATE/DIRECTION	EX.	EXISTING
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[2]	BLOCK NUMBER	FL	FLOW LINE
~2090~	NAT. GRND CONTOUR	GB	GRADE BREAK
BC	BACK OF CURB	TF	TOP OF FOOTING
BCR	BACK OF CURB RETURN	TRW	TOP OF RETAINING WALL
BVC	BEGIN VERTICAL CURVE	PL	PROPERTY LINE
CL	CENTERLINE	TC	TOP OF CURB
R/W	RIGHT OF WAY	VG	VALLEY GUTTER
	V-DITCH/SWALE	P.S.	PRIVATE STREET
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TEE PEE LANE (PUBLIC) - PROFILE VIEW

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SOILS NOTE:

FOR SOILS INFORMATION, REFERENCE SOILS STUDY
BY: ANGLE ENGINEERING
PROJECT NUMBER: 26174-1
DATED: 10/16/14

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Call 811
OR
1-800-227-2600

BASIS OF BEARINGS

SOUTH 89°29'14" EAST BEING THE BEARING OF THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN ON THAT CERTAIN MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN BOOK 128 OF PLATS, AT PAGE 23.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: SLV90 19E6

RIVET & PLATE IN TOP OF CURB @ NE CORNER OF TEE PEE & DEER SPRINGS.

ELEVATION=818.615 Meters (NAVD'88 2008 ADJUSTMENT)
ELEVATION=2685.74 FEET (NAVD'88 2008 ADJUSTMENT)

#########

ADVANTAGE CIVIL DESIGN GROUP, LLP
2920 N. GREEN VALLEY PKWY. BLDG A STE. H-122
HENDERSON, NEVADA 89014
Office: 702.492.2254
Fax: 702.456.2254
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CIVIL ENGINEERING PLANNING CONSULTING

REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA
BRANDON G. BOYTY
No. 20007
EXPIRES: 12/31/16
CIVIL

PLAN & PROFILE - TEE PEE

SOLANO SPRINGS
RICHMOND AMERICAN HOMES OF NEVADA

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

JOB NUMBER: 063-005
DRAWN BY: MK
DESIGNED BY: MK
CHECKED BY: KGK
DATE: 04/2015

PP4 | 8/15

cchoffin PLOT DATE: 04-06-15 PLOT TIME: 15:31:41 DWG PATH: C:\Users\cchoffin\appdata\Local\Temp\AcePublish_5541\163-005_PHP.dwg