DS #: 5267

APN: 137-27-215-001

PROJECT: Summerlin Village 25 - Parcel D

SUBMITTAL: 3rd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS NEVADA

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: July 29, 2020
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: **Summerlin Village 25 – Parcel D**		**COPIES TO:** GCW Engineers / Surveyors
Cross Streets:	NEC of Sky Vista Drive & Far Hills Boulevard		Pulte Homes
File Number:	F:\Depot\DSMemos\DS5267C.doc		Bart Anderson, P.E., DevCo
Parcel Number:	137-27-215-001		CCRFCD
Zoning Action:	TMP-78592		
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES X	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	4/10/2020	4/30/2020	Not Approved	$400.00	3811743: $400
2nd Submittal	6/22/2020	7/9/2020	Not Approved	$400.00	3889199: $400
3rd Submittal	7/16/2020	7/29/2020	See Comments Below	$400.00	3919474: $400
			TOTAL FEES (LDDRS):	**$1,200.00**	----

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.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

   Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

   http://gustfront.ccrfcd.org/LandDev/LandDev.aspx

2. The subject development is under the premise of flood protection by the improved perimeter streets, *Sky Vista Drive and Far Hill Boulevard.* No occupancy permit of the houses will be issued prior to the substantial buildout of the perimeter facilities.

3. **Repeated Previous Comment:** ***Sheet G3****: The central point of the Entry Driveway to Sky Vista Drive does not provide adequate freeboard to the 100-year flow depth in Sky Vista. Note that the hump must provide a minimum of six inches (6") of freeboard. Review and resolve in the next submittal.*

The drainage of *Sky Vista Drive* fronting the subject development is from north to south. However with the proposed grade change in *Sky Vista*, there appears to have a local low point adjacent to the north of *Carmel Cliff Avenue*, existing grade at (61.99)TC. This point is lower than (62.31)TC to the north and also lower than 61.66FL to the south. This must be resolved in the next submittal.

Also, if grade changes in an existing street *Sky Vista Drive* are proposed, provide and submit an update to the pertinent drainage study of the *Sky Vista Drive Street Improvements* project. The approval of the said *Sky Vista Drive* Update must be obtained prior to the final approval of the subject study.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.



Sample Letter to certify CD.pdf

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: T20S/R59E/27
AREA K-27

2nd Response to Comments for the Technical Drainage Study for Summerlin Village 25 – Parcel D

764-A173-001

July 2020

Prepared for:

Howard Hughes Company, LLC
10801 Charleston Boulevard, 3rd Floor
Las Vegas, Nevada 89146
Phone: 702.791.4300

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin Village 25 - Parcel D Date: July 2020

Location of Development: a) Descriptive (Cross Streets) North/South: Sky Vista Drive

East/West: Far Hills Drive

b) Section: 27 Township: 20S Range: 59E

c) APN : 137-27-215-001

Name of Owner: Pulte Homes

Telephone No.: Fax No.: E-Mail Address:

Address: 7255 S Tenaya Way, #200 Las Vegas, Nevada 89113

Contact Person-Name: Cody Beck, PE **Telephone No.:** 702.804.2000

* **E-Mail Address:** cbeck@gcwengineering.com **Fax No.:** 702.804.2299

Firm: GCW

Address: 1555 South Rainbow Boulevard Las Vegas, Nevada 89146

Type of Land Development/Land Disturbance Process:

	Rezoning		Subdivision Map		Clearing and Grading Only
	Parcel Map		Planned Unit Development	X	Other (Please specify below)
	Large Parcel Map		Building Permit	Grading Permit	

1. Total Owned Land Area: At Site: +/- 27.16 acres Being Developed/Disturbed: +/- 27.16 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: +/- 0.00 acres
6. Has the site drainage been evaluated in the past? ☒ **YES** ☐ **NO** If yes, please identify documentation: Master Conceptual Drainage Study for Summerlin West Village 25
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Existing 36" RCP stub in Far Hills Drive
8. Briefly describe your proposed schedule for the subject project: The Client intends to start construction as soon as practical. Any expediting of this process is appreciated.



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

764-A173-001

July 16, 2020

Albert Y. Sung, P.E.
Flood Control Project Engineer
City of Las Vegas Land Development Services
Flood Control Division
333 North Rancho Drive – 7th Floor
Las Vegas, Nevada 89106

Re: **2nd Response to Comments for the Technical Drainage Study for Summerlin Village 25 –Parcel D (DS5267A)**

Dear Mr. Sung,

This letter is to certify that all documents provided in the Technical Drainage Study for Summerlin Village 25 – Parcel D electronic submittal (CD) matches 100% the hardcopy version of the study.

Respectfully submitted,



Cody Beck, P.E.
Flood Control Project Engineer

1555 South Rainbow Boulevard
Las Vegas, Nevada 89146

O 702.804.2000
F 702.804.2299

info@gcwengineering.com
gcwengineering.com

2nd Response to Comments for the Technical Drainage Study for Summerlin Village 25 – Parcel D

764-A173-001
July 2020

Authored By:

Cody Beck, P.E.

Prepared By:

GCW, Inc.
1555 S. Rainbow Blvd.
Las Vegas, Nevada 89146
Phone: (702) 804-2000
Fax: (702) 804-2299

764-A173-001

Subject: **2nd Response to Comments to the Technical Drainage Study for Summerlin Village 25 – Parcel D (DS5267A)**

This report addresses City of Las Vegas (CLV) review comments dated July 9, 2020 included in Appendix A, regarding the project in its entirety.

Comment 1:

The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage concurrence submittal. Follow the link below for specific guidance.

http://gustfront.ccrfcd.org/LandDev/LandDev.aspx

Response:

Noted. The drainage study will be submitted to the CCRFCD following conditional approval by the City of Las Vegas.

Comment 2:

Second Request: *Provide a copy of the zoning/planning conditions associated with this site (**TMP-78592**) with the next submittal to verify compliance with conditions. Flood Control will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.*

The material provided in the last submittal was *Planning Department* staff recommended approval only. An approval letter must be obtained from the *City Council I Planning Commission* prior to the approval of the subject drainage study.

Response:

The approved zoning/planning conditions have been included in Appendix A.

Comment 3:

The subject development is under premise of flood protection by the improved perimeter streets, *Sky Vista Drive* and *Far Hills Drive*. No occupancy permit of the houses will be issued prior to the substantial buildout of the perimeter facilities.

Response:

Noted.

Comment 4:

Second Request: ***Figure 5 & Figure 6:*** *Provide the names of the perimeter streets and identify with all existing regional facilities. Show with size and label with* ***City of Las Vegas*** *recorded drawing numbers on the map.*

The street names provided are not legible and the existing regional facilities are still not identified and labeled with *City of Las Vegas* recorded drawing numbers. Review and revise accordingly.

Response:

Figure 5 and Figure 6 has been revised per comment request and included in Appendix C.

Comment 5:

Per previous comment, provide 3'-clearance between the edge of the storm drains to the lip of the concrete curb. However, for example, but not limited to: Per **Sheet U4**, a 36"-RCP in front of Lot 19 does not meet the 3'-minimum clearance criteria. Review and revise the overall onsite storm drain system in the next submittal.

Response:

The storm drain has been revised such that a minimum of 3-feet of clearance is provided from the edge of the storm drain to the lip of the L-curb. The storm drain hydraulics have been revised and included in Appendix B.

Comment 6:

Previous Comment #9: Sheet G3: *The central point of the Entry Driveway to Sky Vista Drive does not provide adequate freeboard to the 100-year flow depth in Sky Vista. Note that the hump must provide a minimum of six inches (6") of freeboard. Review and resolve in the next submittal.*

It is noted that the interface between the entry driveway and *Sky Vista Drive* has been lowered by 0.39' from the previous submittal. However, *Sky Vista Drive* is supposed to be existing in the sense of being built prior to the subject improvements. Therefore how can you lower an existing street? Address and resolve in the next submittal.

Response:

The centerline elevations of Sky Vista Drive will remain unchanged. In order to ensure positive drainage through the proposed valley gutter Sky Vista Drive will be sawcut to the existing Sky Vista pavement from the curb returns of the entry drive to the Sky Vista Drive centerline. This allows the pavement to be replaced with a cross-slope which will allow positive drainage to occur across the site entry.

Respectfully,



Cody Beck, P.E.

7/16/20

APPENDIX A

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: July 9, 2020
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: **Summerlin Village 25 – Parcel D**			**COPIES TO:** GCW Engineers / Surveyors
Cross Streets:	NEC of Sky Vista Drive & Far Hills Boulevard			Pulte Homes
File Number:	F:\Depot\DSMemos\DS5267B.doc			Bart Anderson, P.E., DevCo
Parcel Number:	137-27-215-001			CCRFCD
Zoning Action:	TMP-78592			
FEMA Flood Zone	YES	NO **X**		
Proposed Storm Drain	YES **X**	NO		

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	4/10/2020	4/30/2020	Not Approved	$400.00	3811743: $400
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			TOTAL FEES (LDDRS):	**$800.00**	**----**

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:
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	is conditionally approved subject to Clark County Public Works Department concurrence.

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   http://gustfront.ccrfcd.org/LandDev/LandDev.aspx

2. **Second Request:** *Provide a copy of the zoning/planning conditions associated with this site (**TMP-78592**) with the next submittal to verify compliance with conditions. Flood Control will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.*

   The material provided in the last submittal was *Planning Department* staff recommended approval only. An approval letter must be obtained from the *City Council / Planning Commission* prior to the final approval of the subject drainage study.

3. The subject development is under the premise of flood protection by the improved perimeter streets, *Sky Vista Drive and Far Hill Boulevard.* No occupancy permit of the houses will be issued prior to the substantial buildout of the perimeter facilities.

4. **Second Request:** ***Figure 5 & Figure 6****: Provide names of the perimeter streets and identify with all existing regional facilities. Show with size and label with* ***City of Las Vegas*** *recorded drawing numbers on the map.*

   The street names provided are not legible and the existing regional facilities are still not identified and labeled with *City of Las Vegas* recorded drawing numbers. Review and revise accordingly.

5. Per previous comment, provide a minimum 3'-clearance between the edge of the storm drains to the lip of the concrete curb. However, for example, but not limited to: Per **Sheet U4**, a 36"-RCP in front of Lot 19 does not meet the 3'-minimum criteria. Review and revise the overall onsite storm drain system in the next submittal.

6. **Previous Comment #9:** ***Sheet G3****: The central point of the Entry Driveway to Sky Vista Drive does not provide adequate freeboard to the 100-year flow depth in Sky Vista. Note that the hump must provide a minimum of six inches (6") of freeboard. Review and resolve in the next submittal.*

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In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.



Sample Letter to certify CD.pdf

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: T20S/R59E/27
AREA K-27

LAS VEGAS CITY COUNCIL

CAROLYN G. GOODMAN
Mayor

MICHELE FIORE
Mayor Pro Tem

STAVROS S. ANTHONY
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DÍAZ

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

DEVELOPMENT SERVICES CENTER

333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY

cityoflasvegas
lasvegasnevada.gov

May 13, 2020

Mr. Kevin Orrock
Howard Hughes Company LLC
10845 Griffith Peak Drive, Ste. 160
Las Vegas, Nevada 89135

RE: TMP-78592 [PRJ-78571] - TENTATIVE MAP
PLANNING COMMISSION MEETING OF MAY 12, 2020

Dear Applicant:

The Planning Commission at a regular meeting held on May 12, 2020 voted to ***APPROVE*** a request for a Tentative Map FOR A 111-UNIT SINGLE FAMILY RESIDENTIAL SUBDIVISION on 27.16 acres at the northeast corner of Far Hills Avenue and Sky Vista Drive (APN 137-27-215-001), P-C (Planned Community) Zone [SF3 (Single Family Detached) Summerlin Special Land Use Designation], Ward 2 (Seaman) [PRJ-78571].

This approval is subject to the following conditions:

Planning

1. Approval of the Tentative Map shall be for no more than four (4) years. If a Final Map is not recorded on all or a portion of the area embraced by the Tentative Map within four (4) years of the approval of the Tentative Map, this action is void.

2. Street names must be provided in accordance with the City's Street Naming Regulations.

3. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.

4. In conjunction with creation, declaration and recordation of the subject common-interest community, and prior to recordation of the Covenants, Codes and Restrictions ("CC&R"), or conveyance of any unit within the community, the Developer is required to record a Declaration of Private Maintenance Requirements ("DPMR") as a covenant on all associated properties, and on behalf of all current and

future property owners. The DPMR is to include a listing of all privately owned and/or maintained infrastructure improvements, along with assignment of maintenance responsibility for each to the common interest community or the respective individual property owners, and is to provide a brief description of the required level of maintenance for privately maintained components. The DPMR must be reviewed and approved by the City of Las Vegas Department of Field Operations prior to recordation, and must include a statement that all properties within the community are subject to assessment for all associated costs should private maintenance obligations not be met, and the City of Las Vegas be required to provide for said maintenance. Also, the CC&R are to include a statement of obligation of compliance with the DPMR. Following recordation, the Developer is to submit copies of the recorded DPMR and CC&R documents to the City of Las Vegas Department of Field Operations.

5. All development is subject to the conditions of City Departments and State Subdivision Statutes.

Public Works

6. Private streets must be granted and labeled on the Final Map for this site as Public Utility Easements (P.U.E.), Public Sewer Easements, and Public Drainage Easements with private surface maintenance by the Homeowner's Association.

7. Grant a 40-foot wide Public Sewer and Public Drainage Easement on the common lot between lots 9 and 62. Common Element "D" between lots 17 and 18 shall also be a Public Sewer and Public Drainage Easement. No trees or landscaping over 3-feet tall shall be allowed within public sewer easements.

8. Prior to the submittal of construction drawings, contact the Sanitary Sewer Planning Section of the Department of Public Works to discuss manhole location requirements in and adjacent to Common Element D.

9. Prior to the recordation of a Final Map for this site, a gated queuing analysis shall be submitted to and approved by the City of Las Vegas Traffic Engineering Section of the Department of Public Works. Additionally, a Pedestrian Circulation/Access Plan must be submitted to and approved by the Department of Public Works to identify nearby pedestrian attractors and recommend measures to accommodate pedestrians, such as but not limited to pedestrian access, crosswalk, pedestrian activated flashers and temporary sidewalks.

10. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building, grading permits or the recordation of a Final Map, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site.

11. The approval of all Public Works related improvements shown on this Tentative Map is in concept only. Specific design and construction details relating to size, type and/or alignment of improvements, including but not limited to street, sewer and drainage improvements, shall be resolved prior to approval of the construction plans by the City. No deviations from adopted City Standards shall be allowed unless specific written approval for such is received from the City Engineer prior to the recordation of a Final Map or the approval of subdivision-related construction plans, whichever may occur first. Approval of this Tentative Map does not constitute approval of any deviations. If such approval cannot be obtained, a revised Tentative Map must be submitted showing elimination of such deviations. Roadway locations and parcel entries are schematic and final studies and engineering improvements designs. Geometric design of Parcel entry points must be approved through the development review of each parcel.

12. Site development to comply with all applicable conditions of approval for Tentative Map TMP-77752 and all other applicable site-related actions.

This action by the Planning Commission on **May 12, 2020** is final unless a written appeal is filed with the City Clerk within seven days of the date of the Planning Commission's decision as allowed by code or there is a review action filed by the City Council within the same time period. For additional information on appeals or review requests submitted please access https://www.lasvegasnevada.gov/Business/Permits-Licenses/Building-Permits/Permit-Application-Status, or contact the Department of Planning and Development at 702.229.6301 after ***May 19, 2020***. No building permits or business licenses related to these items shall be issued prior to the expiration of the required seven day waiting period, or until any filed appeal is resolved pursuant to LVMC Title 19.18.

Sincerely,



Eric McCammond
Sr. Management Analyst
Case Planning Division

EM:nl

cc:

Mr. Brenin Anderson
PN II, Inc.
7255 South Tenaya Way, Ste. 200
Las Vegas, Nevada 89113

Ms. Cindie Gee
GCW, Inc.
1555 South Rainbow Blvd.
Las Vegas, Nevada 89146

APPENDIX B

```
T1  Summerlin Village 25 - Parcel D

T2  Pulte Homes - Mainline

T3  Starting HGL = Top of Pipe
SO   1000.00 3494.13   4                          3497.13
R    1029.00 3494.71   4      .013                                          1
TS   1029.01 3494.71   4      .013
WE   1029.01 3494.71   7
R    1145.29 3495.29   7      .013                                          1
JX   1145.30 3495.29   4  4  4.013    8.0     58.0  3495.29 3495.29   0.0-90.0  1.4
R    1226.11 3495.69   4      .013                                          1
TS   1226.12 3495.69   4      .013                                  7.7
R    1432.29 3496.73   4      .013                                          1
JX   1432.30 3496.73   4  2  2.013    4.0      4.0  3496.73 3496.73  45.0-90.0
R    1614.58 3497.64   4      .013                                          1
TS   1614.59 3497.64   4      .013                                  2.8
R    1754.90 3498.34   4      .013                                          1
JX   1754.91 3498.34   4  2  2.013    3.5      3.5  3498.34 3498.34  45.0-90.0
R    1927.97 3499.21   4      .013                                          1
TS   1927.98 3499.21   4      .013                                -41.4
R    1989.78 3499.70   4      .013                                          1
JX   1989.79 3499.70   4  2   .013   12.0           3501.20         -90.0
R    2026.98 3502.40   4      .013                                          1
SH   2026.98 3502.40   4
CD   1  4   0    .000   1.500     .000  .000  .000   .00
CD   2  4   0    .000   2.000     .000  .000  .000   .00
CD   3  4   0    .000   2.500     .000  .000  .000   .00
CD   4  4   0    .000   3.000     .000  .000  .000   .00
CD   5  4   0    .000   3.500     .000  .000  .000   .00
CD   6  4   0    .000   4.000     .000  .000  .000   .00
CD   7  4   0    .000   4.500     .000  .000  .000   .00
Q          12.000
```

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	0		1.500														
CD	2	4	0		2.000														
CD	3	4	0		2.500														
CD	4	4	0		3.000														
CD	5	4	0		3.500														
CD	6	4	0		4.000														
CD	7	4	0		4.500														

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -
Summerlin Village 25 - Parcel D

HEADING LINE NO 2 IS -
Pulte Homes - Mainline

HEADING LINE NO 3 IS -
Starting HGL = Top of Pipe

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1000.000	3494.130	4	3497.130

ELEMENT NO 2 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1029.000	3494.710	4	.013	.000	.000	.000	1

ELEMENT NO 3 IS A TRANSITION * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1029.010	3494.710	4	.013	.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 4 IS A WALL ENTRANCE *

U/S DATA	STATION	INVERT	SECT	FP
	1029.010	3494.710	7	.500

ELEMENT NO 5 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1145.290	3495.290	7	.013	.000	.000	.000	1

ELEMENT NO 6 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1145.300	3495.290	4	4	4	.013	8.000	58.000	3495.290	3495.290	.000	-90.000

RADIUS	ANGLE
.410	1.400

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 7 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1226.110	3495.690	4	.013	.000	.000	.000	1

ELEMENT NO 8 IS A TRANSITION * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1226.120	3495.690	4	.013	.074	7.700

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 9 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1432.290	3496.730	4	.013	.000	.000	.000	1

ELEMENT NO 10 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1432.300	3496.730	4	2	2	.013	4.000	4.000	3496.730	3496.730	45.000	-90.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 11 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1614.580	3497.640	4	.013	.000	.000	.000	1

ELEMENT NO 12 IS A TRANSITION * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1614.590	3497.640	4	.013	.205	2.800

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 13 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1754.900	3498.340	4	.013	.000	.000	.000	1

ELEMENT NO 14 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1754.910	3498.340	4	2	2	.013	3.500	3.500	3498.340	3498.340	45.000	-90.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 15 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1927.970	3499.210	4	.013	.000	.000	.000	1

ELEMENT NO 16 IS A TRANSITION * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1927.980	3499.210	4	.013	.014	-41.400

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 17 IS A REACH * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1989.780	3499.700	4	.013	.000	.000	.000	1

```
 ELEMENT NO  18 IS A JUNCTION          *         *     *     *                 *                  *              *
                    U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                               1989.790 3499.700    4     2     0   .013    12.000      .000  3501.200      .000 -90.000     .000
                                                                                                 RADIUS    ANGLE
                                                                                                   .000    .000
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
                                                  W S P G W                                                          PAGE NO   4
                           WATER SURFACE PROFILE - ELEMENT CARD LISTING
 ELEMENT NO  19 IS A REACH             *         *     *
                    U/S DATA   STATION    INVERT  SECT               N                          RADIUS    ANGLE     ANG PT  MAN H
                               2026.980 3502.400    4               .013                           .000     .000      .000     1
 ELEMENT NO  20 IS A SYSTEM HEADWORKS                 *                     *
                    U/S DATA   STATION    INVERT  SECT                                  W S ELEV
                               2026.980 3502.400    4                                      .000
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Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:28:35

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = Top of Pipe

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1000.000	3494.130	3.000	3497.130	105.00	14.85	3.43	3500.56	.00	2.91	.00	3.000	.000	.00	0 .0
29.000	.0200				.0248	.72	3.00	.00	3.00	.013	.00	.00	PIPE	
1029.000	3494.710	3.310	3498.020	105.00	14.85	3.43	3501.45	.00	2.91	.00	3.000	.000	.00	0 .0
TRANS STR	.0000				.0248	.00	3.31	.00		.013	.00	.00	PIPE	
1029.010	3494.710	3.310	3498.020	105.00	14.85	3.43	3501.45	.00	2.91	.00	3.000	.000	.00	0 .0
WALL	ENTRANCE													
1029.010	3494.710	7.435	3502.145	105.00	6.60	.68	3502.82	.00	3.01	.00	4.500	.000	.00	0 .0
116.280	.0050				.0029	.33	7.43	.00	2.92	.013	.00	.00	PIPE	
1145.290	3495.290	7.220	3502.510	105.00	6.60	.68	3503.19	.00	3.01	.00	4.500	.000	.00	0 .0
JUNCT STR	.0000				.0031	.00	.00	.00		.013	.00	.00	PIPE	
1145.300	3495.290	8.488	3503.778	39.00	5.52	.47	3504.25	.00	2.03	.00	3.000	.000	.00	0 .0
80.810	.0049				.0034	.28	8.49	.00	2.09	.013	.00	.00	PIPE	
1226.110	3495.690	8.388	3504.078	39.00	5.52	.47	3504.55	.00	2.03	.00	3.000	.000	.00	0 .0
TRANS STR	.0000				.0034	.00	.00	.00		.013	.00	.00	PIPE	
1226.120	3495.690	8.388	3504.078	39.00	5.52	.47	3504.55	.00	2.03	.00	3.000	.000	.00	0 .0
206.170	.0050				.0034	.70	8.39	.00	2.07	.013	.00	.00	PIPE	
1432.290	3496.730	8.076	3504.806	39.00	5.52	.47	3505.28	.00	2.03	.00	3.000	.000	.00	0 .0
JUNCT STR	.0000				.0028	.00	8.08	.00		.013	.00	.00	PIPE	

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:28:35

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = Top of Pipe

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1432.300	3496.730	8.409	3505.139	31.00	4.39	.30	3505.44	.00	1.80	.00	3.000	.000	.00	0 .0
182.280	.0050				.0022	.39	8.41	.00	1.78	.013	.00	.00	PIPE	
1614.580	3497.640	7.907	3505.547	31.00	4.39	.30	3505.85	.00	1.80	.00	3.000	.000	.00	0 .0
TRANS STR	.0000				.0022	.00	.00	.00		.013	.00	.00	PIPE	
1614.590	3497.640	7.907	3505.547	31.00	4.39	.30	3505.85	.00	1.80	.00	3.000	.000	.00	0 .0
140.310	.0050				.0022	.30	7.91	.00	1.78	.013	.00	.00	PIPE	
1754.900	3498.340	7.525	3505.865	31.00	4.39	.30	3506.16	.00	1.80	.00	3.000	.000	.00	0 .0
JUNCT STR	.0000				.0017	.00	7.53	.00		.013	.00	.00	PIPE	
1754.910	3498.340	7.753	3506.093	24.00	3.40	.18	3506.27	.00	1.58	.00	3.000	.000	.00	0 .0
173.060	.0050				.0013	.22	7.75	.00	1.51	.013	.00	.00	PIPE	
1927.970	3499.210	7.116	3506.325	24.00	3.40	.18	3506.50	.00	1.58	.00	3.000	.000	.00	0 .0
TRANS STR	.0000				.0013	.00	.00	.00		.013	.00	.00	PIPE	
1927.980	3499.210	7.116	3506.326	24.00	3.40	.18	3506.50	.00	1.58	.00	3.000	.000	.00	0 .0
61.800	.0079				.0013	.08	7.12	.00	1.33	.013	.00	.00	PIPE	
1989.780	3499.700	6.715	3506.415	24.00	3.40	.18	3506.59	.00	1.58	.00	3.000	.000	.00	0 .0

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:28:35

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = Top of Pipe

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT or I.D.	Base Wt ZL	ZR	No Wth Prs/Pip Type Ch
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall			
JUNCT STR .0000					.0008	.00	6.71	.00		.013	.00	.00	PIPE	
1989.790	3499.700	6.983	3506.683	12.00	1.70	.04	3506.73	.00	1.10	.00	3.000	.000	.00	0 .0
37.190	.0726				.0003	.01	6.98	.00	.53	.013	.00	.00	PIPE	
2026.980	3502.400	4.297	3506.697	12.00	1.70	.04	3506.74	.00	1.10	.00	3.000	.000	.00	0 .0

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = Top of Pipe

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1000.00   .I                    H                       E                                          .   R

1020.96   .                                                                                       .

1041.92   .   I                    CH W                       E                                  .   TX

1062.88   .   IYYYYYYYYYYYYYYYYYYYYCH W                      E                                  .   WE

1083.84   .   I                    C          H                   W    E                         .   R

1104.79   .                                                                                       .

1125.75   .                                                                                       .

1146.71   .        I                    C         H                  W    E                      .   JX

1167.67   .        I              C     H                                    W   E                .   R

1188.63   .                                                                                       .

1209.59   .                                                                                       .

1230.55   .           I              C      H                                   W   E              .   TX

1251.51   .           I              C      H                                   W   E              .   R

1272.46   .                                                                                       .

1293.42   .                                                                                       .

1314.38   .                                                                                       .

1335.34   .                                                                                       .

1356.30   .                                                                                       .

1377.26   .                                                                                       .
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1398.22   .                                                                .
1419.18   .                                                                .
1440.13   .                  I             C      H                        W   E          .   JX
1461.09   .                  I           C        H                          W E          .   R
1482.05   .                                                                .
1503.01   .                                                                .
1523.97   .                                                                .
1544.93   .                                                                .
1565.89   .                                                                .
1586.85   .                                                                .
1607.80   .                                                                .
1628.76   .                       I            C       H                     W E        .   TX
1649.72   .                       I            C       H                     W E        .   R
1670.68   .                                                                .
1691.64   .                                                                .
1712.60   .                                                                .
1733.56   .                                                                .
1754.52   .                                                                .
1775.47   .                           I           C        H                  W E     .   JX
1796.43   .                           I          C          H                 W E     .   R
1817.39   .                                                                .
1838.35   .                                                                .
1859.31   .                                                                .
1880.27   .                                                                .
1901.23   .                                                                .
1922.19   .                                                                .
1943.14   .                                 I          C          H          W E  .   TX
1964.10   .                                 I          C          H          W E  .   R
1985.06   .                                                                .
2006.02   .                                    I          C         H          WE  .   JX
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2026.98 . I C H W . R

3494.130 3495.391 3496.652 3497.914 3499.175 3500.436 3501.697 3502.958 3504.220 3505.481 3506.742

N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   S = SUPER-ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY

```
T1  Summerlin Village 25 - Parcel D

T2  Pulte Homes - Mainline

T3  Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

SO   1145.29 3495.29   4                          3503.778
R    1191.71 3496.00   4      .013                                                  1
JX   1191.72 3496.00   4  2   .013    7.0          3497.00          61.6        -1.1
R    1231.89 3496.94   4      .013                                                  1
JX   1231.90 3496.94   4  2   .013    7.0          3497.94         -36.8         2.2
R    1315.73 3499.45   3      .013                                                  1
TS   1315.74 3499.45   3      .013                                 -3.3
R    1398.33 3502.10   3      .013                                                  1
JX   1398.34 3502.10   3  3   .013   18.0          3502.10          57.8
R    1568.21 3514.25   3      .013                                                  1
TS   1568.22 3514.25   2      .013                                  6.6
R    1695.47 3519.93   2      .013                                                  1
TS   1695.48 3519.93   2      .013                                 34.5
R    1732.32 3520.30   2      .013                                                  1
JX   1732.33 3520.30   2  2   .013   16.0          3520.30         -45.0        61.3
R    1950.59 3524.40   2      .013                                                  1
JX   1950.60 3524.40   2  2   .013    5.0          3525.40         -90.0        77.8
R    1979.63 3525.20   2      .013                                                  1
SH   1979.63 3525.20   2
CD   1  4   0    .000   1.500     .000  .000  .000   .00
CD   2  4   0    .000   2.000     .000  .000  .000   .00
CD   3  4   0    .000   2.500     .000  .000  .000   .00
CD   4  4   0    .000   3.000     .000  .000  .000   .00
CD   5  4   0    .000   3.500     .000  .000  .000   .00
CD   6  4   0    .000   4.000     .000  .000  .000   .00
Q           5.000
```

WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	0		1.500														
CD	2	4	0		2.000														
CD	3	4	0		2.500														
CD	4	4	0		3.000														
CD	5	4	0		3.500														
CD	6	4	0		4.000														

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -
Summerlin Village 25 - Parcel D

HEADING LINE NO 2 IS -
Pulte Homes - Mainline

HEADING LINE NO 3 IS -
Starting HGL = HGL @ Station 1145.30 of ParcelDMain1line1 Model

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1145.290	3495.290	4	3503.770

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1191.710	3496.000	4	.013	.000	.000	.000	1

ELEMENT NO 3 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1191.720	3496.000	4	2	0	.013	7.000	.000	3497.000	.000	61.600	.000

RADIUS	ANGLE
.521	-1.100

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1231.890	3496.940	4	.013	.000	.000	.000	1

ELEMENT NO 5 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1231.900	3496.940	4	2	0	.013	7.000	.000	3497.940	.000	-36.800	.000

RADIUS	ANGLE
.261	2.200

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
WARNING - ADJACENT SECTIONS ARE NOT IDENTICAL - SEE SECTION NUMBERS AND CHANNEL DEFINITIONS

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1315.730	3499.450	3	.013	.000	.000	.000	1

ELEMENT NO 7 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1315.740	3499.450	3	.013	.174	-3.300

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 8 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1398.330	3502.100	3	.013	.000	.000	.000	1

ELEMENT NO 9 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1398.340	3502.100	3	3	0	.013	18.000	.000	3502.100	.000	57.800	.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 10 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1568.210	3514.250	3	.013	.000	.000	.000	1

ELEMENT NO 11 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1568.220	3514.250	2	.013	.087	6.600

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 12 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1695.470	3519.930	2	.013	.000	.000	.000	1

ELEMENT NO 13 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1695.480	3519.930	2	.013	.017	34.500

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 14 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1732.320	3520.300	2	.013	.000	.000	.000	1

ELEMENT NO 15 IS A JUNCTION * * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1732.330	3520.300	2	2	0	.013	16.000	.000	3520.300	.000	-45.000	.000

RADIUS	ANGLE
.009	61.300

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 16 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1950.590	3524.400	2	.013	.000	.000	.000	1

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 ELEMENT NO  17 IS A JUNCTION          *         *     *     *                 *                  *              *
                    U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                               1950.600 3524.400    2     2     0   .013     5.000      .000  3525.400      .000 -90.000     .000
                                                                                                 RADIUS    ANGLE
                                                                                                   .007  77.800
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
                                                 W S P G W                                                          PAGE NO   4
                              WATER SURFACE PROFILE - ELEMENT CARD LISTING
 ELEMENT NO  18 IS A REACH             *         *     *
                    U/S DATA   STATION    INVERT  SECT               N                          RADIUS    ANGLE     ANG PT  MAN H
                               1979.630 3525.200    2               .013                           .000     .000      .000     1
 ELEMENT NO  19 IS A SYSTEM HEADWORKS                 *                     *
                    U/S DATA   STATION    INVERT  SECT                                  W S ELEV
                               1979.630 3525.200    2                                      .000
```

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1145.290	3495.290	8.480	3503.770	58.00	8.21	1.05	3504.82	.00	2.47	.00	3.000	.000	.00	0 .0
46.420	.0153					.0076	.35	8.48	.00	1.86	.013	.00	.00	PIPE
1191.710	3496.000	8.173	3504.173	58.00	8.21	1.05	3505.22	.00	2.47	.00	3.000	.000	.00	0 .0
JUNCT STR	.0000					.0067	.00	.00	.00		.013	.00	.00	PIPE
1191.720	3496.000	8.615	3504.615	51.00	7.22	.81	3505.42	.00	2.32	.00	3.000	.000	.00	0 .0
40.170	.0234					.0058	.23	8.62	.00	1.50	.013	.00	.00	PIPE
1231.890	3496.940	7.950	3504.890	51.00	7.22	.81	3505.70	.00	2.32	.00	3.000	.000	.00	0 .0
JUNCT STR	.0000					.0051	.00	.00	.00		.013	.00	.00	PIPE
1231.900	3496.940	8.309	3505.249	44.00	8.96	1.25	3506.50	.00	2.21	.00	2.500	.000	.00	0 .0
83.830	.0299					.0115	.96	8.31	.00	1.42	.013	.00	.00	PIPE
1315.730	3499.450	6.826	3506.276	44.00	8.96	1.25	3507.52	.00	2.21	.00	2.500	.000	.00	0 .0
TRANS STR	.0000					.0115	.00	.00	.00		.013	.00	.00	PIPE
1315.740	3499.450	6.826	3506.276	44.00	8.96	1.25	3507.52	.00	2.21	.00	2.500	.000	.00	0 .0
82.590	.0321					.0115	.95	6.83	.00	1.39	.013	.00	.00	PIPE
1398.330	3502.100	5.189	3507.289	44.00	8.96	1.25	3508.54	.00	2.21	.00	2.500	.000	.00	0 .0
JUNCT STR	.0000					.0078	.00	5.19	.00		.013	.00	.00	PIPE
1398.340	3502.100	6.590	3508.690	26.00	5.30	.44	3509.13	.00	1.74	.00	2.500	.000	.00	0 .0
46.728	.0715					.0040	.19	6.59	.00	.83	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1445.068	3505.442	3.441	3508.884	26.00	5.30	.44	3509.32	.00	1.74	.00	2.500	.000	.00	0 .0
HYDRAULIC JUMP														
1445.068	3505.442	.837	3506.280	26.00	18.03	5.05	3511.33	.00	1.74	2.36	2.500	.000	.00	0 .0
52.314	.0715					.0666	3.49	.84	4.07	.83	.013	.00	.00	PIPE
1497.382	3509.184	.850	3510.034	26.00	17.65	4.84	3514.87	.00	1.74	2.37	2.500	.000	.00	0 .0
37.566	.0715					.0606	2.28	.85	3.94	.83	.013	.00	.00	PIPE
1534.948	3511.871	.880	3512.751	26.00	16.83	4.40	3517.15	.00	1.74	2.39	2.500	.000	.00	0 .0
20.001	.0715					.0531	1.06	.88	3.69	.83	.013	.00	.00	PIPE
1554.950	3513.302	.912	3514.214	26.00	16.04	4.00	3518.21	.00	1.74	2.41	2.500	.000	.00	0 .0
13.260	.0715					.0466	.62	.91	3.45	.83	.013	.00	.00	PIPE
1568.210	3514.250	.945	3515.195	26.00	15.30	3.63	3518.83	2.50	1.74	2.42	2.500	.000	.00	0 .0
TRANS STR	.0000					.0424	.00	2.50	3.22		.013	.00	.00	PIPE
1568.220	3514.250	1.077	3515.327	26.00	15.08	3.53	3518.86	.00	1.79	1.99	2.000	.000	.00	0 .0
23.358	.0446					.0404	.94	1.08	2.86	1.05	.013	.00	.00	PIPE
1591.578	3515.293	1.090	3516.383	26.00	14.84	3.42	3519.80	.00	1.79	1.99	2.000	.000	.00	0 .0

36.080	.0446					.0372	1.34	1.09	2.79	1.05	.013	.00	.00	PIPE					
1627.659	3516.903	1.133	3518.036	26.00	14.15	3.11	3521.14	.00	1.79	1.98	2.000	.000	.00	0	.0				
20.121	.0446					.0329	.66	1.13	2.59	1.05	.013	.00	.00	PIPE					

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1647.780	3517.801	1.179	3518.980	26.00	13.49	2.83	3521.81	.00	1.79	1.97	2.000	.000	.00	0 .0
13.434	.0446					.0291	.39	1.18	2.40	1.05	.013	.00	.00	PIPE
1661.214	3518.401	1.227	3519.628	26.00	12.86	2.57	3522.20	.00	1.79	1.95	2.000	.000	.00	0 .0
9.672	.0446					.0258	.25	1.23	2.22	1.05	.013	.00	.00	PIPE
1670.885	3518.833	1.278	3520.111	26.00	12.26	2.33	3522.45	.00	1.79	1.92	2.000	.000	.00	0 .0
7.269	.0446					.0229	.17	1.28	2.06	1.05	.013	.00	.00	PIPE
1678.155	3519.157	1.332	3520.489	26.00	11.69	2.12	3522.61	.00	1.79	1.89	2.000	.000	.00	0 .0
5.513	.0446					.0203	.11	1.33	1.90	1.05	.013	.00	.00	PIPE
1683.668	3519.403	1.391	3520.794	26.00	11.15	1.93	3522.72	.00	1.79	1.84	2.000	.000	.00	0 .0
4.280	.0446					.0181	.08	1.39	1.75	1.05	.013	.00	.00	PIPE
1687.948	3519.594	1.453	3521.047	26.00	10.63	1.75	3522.80	.00	1.79	1.78	2.000	.000	.00	0 .0
3.185	.0446					.0162	.05	1.45	1.60	1.05	.013	.00	.00	PIPE
1691.134	3519.736	1.522	3521.259	26.00	10.13	1.59	3522.85	.00	1.79	1.71	2.000	.000	.00	0 .0
2.330	.0446					.0146	.03	1.52	1.46	1.05	.013	.00	.00	PIPE
1693.464	3519.840	1.597	3521.438	26.00	9.66	1.45	3522.89	.00	1.79	1.60	2.000	.000	.00	0 .0
1.458	.0446					.0132	.02	1.60	1.31	1.05	.013	.00	.00	PIPE
1694.922	3519.906	1.683	3521.589	26.00	9.21	1.32	3522.91	.00	1.79	1.46	2.000	.000	.00	0 .0
.548	.0446					.0122	.01	1.68	1.17	1.05	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1695.470	3519.930	1.786	3521.716	26.00	8.78	1.20	3522.91	2.00	1.79	1.24	2.000	.000	.00	0 .0
TRANS STR	.0000					.0116	.00	2.00	1.00		.013	.00	.00	PIPE
1695.480	3519.930	1.843	3521.773	26.00	8.59	1.15	3522.92	.00	1.79	1.08	2.000	.000	.00	0 .0
36.840	.0100					.0123	.45	1.84	.90	2.00	.013	.00	.00	PIPE
1732.320	3520.300	2.000	3522.300	26.00	8.28	1.06	3523.36	2.00	1.79	.00	2.000	.000	.00	0 .0
JUNCT STR	.0000					.0076	.00	2.00	.00		.013	.00	.00	PIPE
1732.330	3520.300	3.243	3523.543	10.00	3.18	.16	3523.70	.00	1.13	.00	2.000	.000	.00	0 .0
74.009	.0188					.0019	.14	3.24	.00	.78	.013	.00	.00	PIPE
1806.339	3521.690	2.000	3523.690	10.00	3.18	.16	3523.85	.00	1.13	.00	2.000	.000	.00	0 .0
9.968	.0188					.0018	.02	2.00	.00	.78	.013	.00	.00	PIPE
1816.307	3521.877	1.814	3523.692	10.00	3.34	.17	3523.86	.00	1.13	1.16	2.000	.000	.00	0 .0
5.330	.0188					.0018	.01	1.81	.37	.78	.013	.00	.00	PIPE
1821.637	3521.978	1.706	3523.684	10.00	3.50	.19	3523.87	.00	1.13	1.42	2.000	.000	.00	0 .0

4.088	.0188						.0019	.01	1.71	.43	.78	.013	.00	.00	PIPE				
1825.725	3522.054	1.618	3523.673	10.00	3.67	.21	3523.88	.00	1.13	1.57	2.000	.000	.00	0	.0				
1.000	.0188						.0020	.00	1.62	.49	.78	.013	.00	.00	PIPE				
1826.725	3522.073	1.618	3523.691	10.00	3.67	.21	3523.90	.00	1.13	1.57	2.000	.000	.00	0	.0				

HYDRAULIC JUMP

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1826.725	3522.073	.781	3522.854	10.00	8.80	1.20	3524.06	.00	1.13	1.95	2.000	.000	.00	0 .0
2.229	.0188					.0188	.04	.78	2.03	.78	.013	.00	.00	PIPE
1828.954	3522.115	.781	3522.896	10.00	8.80	1.20	3524.10	.00	1.13	1.95	2.000	.000	.00	0 .0
68.961	.0188					.0176	1.21	.78	2.03	.78	.013	.00	.00	PIPE
1897.916	3523.410	.809	3524.219	10.00	8.39	1.09	3525.31	.00	1.13	1.96	2.000	.000	.00	0 .0
20.808	.0188					.0155	.32	.81	1.90	.78	.013	.00	.00	PIPE
1918.723	3523.801	.839	3524.640	10.00	8.00	.99	3525.63	.00	1.13	1.97	2.000	.000	.00	0 .0
11.376	.0188					.0136	.15	.84	1.77	.78	.013	.00	.00	PIPE
1930.099	3524.015	.870	3524.885	10.00	7.62	.90	3525.79	.00	1.13	1.98	2.000	.000	.00	0 .0
7.298	.0188					.0119	.09	.87	1.65	.78	.013	.00	.00	PIPE
1937.397	3524.152	.902	3525.054	10.00	7.27	.82	3525.87	.00	1.13	1.99	2.000	.000	.00	0 .0
4.890	.0188					.0105	.05	.90	1.54	.78	.013	.00	.00	PIPE
1942.287	3524.244	.936	3525.180	10.00	6.93	.75	3525.93	.00	1.13	2.00	2.000	.000	.00	0 .0
3.431	.0188					.0092	.03	.94	1.44	.78	.013	.00	.00	PIPE
1945.718	3524.308	.971	3525.280	10.00	6.61	.68	3525.96	.00	1.13	2.00	2.000	.000	.00	0 .0
2.310	.0188					.0081	.02	.97	1.34	.78	.013	.00	.00	PIPE
1948.028	3524.352	1.008	3525.360	10.00	6.30	.62	3525.98	.00	1.13	2.00	2.000	.000	.00	0 .0
1.550	.0188					.0071	.01	1.01	1.25	.78	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1949.578	3524.381	1.046	3525.427	10.00	6.01	.56	3525.99	.00	1.13	2.00	2.000	.000	.00	0 .0
.796	.0188					.0063	.01	1.05	1.16	.78	.013	.00	.00	PIPE
1950.374	3524.396	1.087	3525.483	10.00	5.73	.51	3525.99	.00	1.13	1.99	2.000	.000	.00	0 .0
.216	.0188					.0056	.00	1.09	1.08	.78	.013	.00	.00	PIPE
1950.590	3524.400	1.132	3525.531	10.00	5.46	.46	3525.99	2.00	1.13	1.98	2.000	.000	.00	0 .0
JUNCT STR	.0000					.0028	.00	2.00	1.00		.013	.00	.00	PIPE
1950.600	3524.400	1.811	3526.211	5.00	1.67	.04	3526.25	.00	.79	1.17	2.000	.000	.00	0 .0
3.787	.0276					.0004	.00	1.81	.18	.49	.013	.00	.00	PIPE
1954.387	3524.504	1.704	3526.208	5.00	1.75	.05	3526.26	.00	.79	1.42	2.000	.000	.00	0 .0
3.110	.0276					.0005	.00	1.70	.22	.49	.013	.00	.00	PIPE

1957.497	3524.590	1.615	3526.205	5.00	1.84	.05	3526.26	.00	.79	1.58	2.000	.000	.00	0	.0				
2.654	.0276					.0005	.00	1.62	.25	.49	.013	.00	.00	PIPE					
1960.151	3524.663	1.538	3526.201	5.00	1.93	.06	3526.26	.00	.79	1.69	2.000	.000	.00	0	.0				
2.381	.0276					.0006	.00	1.54	.27	.49	.013	.00	.00	PIPE					
1962.532	3524.729	1.468	3526.197	5.00	2.02	.06	3526.26	.00	.79	1.77	2.000	.000	.00	0	.0				
2.143	.0276					.0007	.00	1.47	.30	.49	.013	.00	.00	PIPE					
1964.675	3524.788	1.404	3526.192	5.00	2.12	.07	3526.26	.00	.79	1.83	2.000	.000	.00	0	.0				
1.939	.0276					.0007	.00	1.40	.33	.49	.013	.00	.00	PIPE					

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1966.614	3524.841	1.345	3526.187	5.00	2.22	.08	3526.26	.00	.79	1.88	2.000	.000	.00	0 .0
1.770	.0276					.0008	.00	1.35	.36	.49	.013	.00	.00	PIPE
1968.384	3524.890	1.290	3526.180	5.00	2.33	.08	3526.26	.00	.79	1.91	2.000	.000	.00	0 .0
1.635	.0276					.0009	.00	1.29	.39	.49	.013	.00	.00	PIPE
1970.019	3524.935	1.238	3526.173	5.00	2.45	.09	3526.27	.00	.79	1.94	2.000	.000	.00	0 .0
1.497	.0276					.0010	.00	1.24	.42	.49	.013	.00	.00	PIPE
1971.516	3524.977	1.189	3526.166	5.00	2.57	.10	3526.27	.00	.79	1.96	2.000	.000	.00	0 .0
1.356	.0276					.0012	.00	1.19	.45	.49	.013	.00	.00	PIPE
1972.873	3525.014	1.143	3526.157	5.00	2.69	.11	3526.27	.00	.79	1.98	2.000	.000	.00	0 .0
1.211	.0276					.0013	.00	1.14	.49	.49	.013	.00	.00	PIPE
1974.083	3525.047	1.100	3526.147	5.00	2.82	.12	3526.27	.00	.79	1.99	2.000	.000	.00	0 .0
1.137	.0276					.0015	.00	1.10	.53	.49	.013	.00	.00	PIPE
1975.221	3525.079	1.058	3526.137	5.00	2.96	.14	3526.27	.00	.79	2.00	2.000	.000	.00	0 .0
.982	.0276					.0017	.00	1.06	.57	.49	.013	.00	.00	PIPE
1976.203	3525.106	1.019	3526.125	5.00	3.11	.15	3526.27	.00	.79	2.00	2.000	.000	.00	0 .0
.860	.0276					.0020	.00	1.02	.61	.49	.013	.00	.00	PIPE
1977.063	3525.129	.982	3526.112	5.00	3.26	.16	3526.28	.00	.79	2.00	2.000	.000	.00	0 .0
.771	.0276					.0022	.00	.98	.66	.49	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:39:31

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1977.834	3525.151	.946	3526.097	5.00	3.42	.18	3526.28	.00	.79	2.00	2.000	.000	.00	0 .0
.634	.0276					.0025	.00	.95	.70	.49	.013	.00	.00	PIPE
1978.468	3525.168	.912	3526.080	5.00	3.58	.20	3526.28	.00	.79	1.99	2.000	.000	.00	0 .0
.529	.0276					.0029	.00	.91	.75	.49	.013	.00	.00	PIPE
1978.997	3525.183	.879	3526.062	5.00	3.76	.22	3526.28	.00	.79	1.99	2.000	.000	.00	0 .0
.373	.0276					.0033	.00	.88	.81	.49	.013	.00	.00	PIPE
1979.371	3525.193	.848	3526.041	5.00	3.94	.24	3526.28	.00	.79	1.98	2.000	.000	.00	0 .0
.247	.0276					.0037	.00	.85	.87	.49	.013	.00	.00	PIPE

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        |         |        |         |         |               |         |       |        |        |       |       |      |
1979.617  3525.200     .818  3526.018      5.00    4.13     .27  3526.28     .00     .79     1.97    2.000     .000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     |-
    .013    .0276                                        .0040      .00      .82     .93     .49    .013       .00   .00  PIPE
        |         |        |         |         |               |         |       |        |        |       |       |      |
1979.630  3525.200     .816  3526.016      5.00    4.15     .27  3526.28     .00     .79     1.97    2.000     .000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     |-
```

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1145.30 of ParcelDMain1ine1 Model

```
1145.29    .I      C H                W  E                                                                .    R

1151.38    .                                                                                             .

1157.47    .                                                                                             .

1163.56    .                                                                                             .

1169.65    .                                                                                             .

1175.74    .                                                                                             .

1181.83    .                                                                                             .

1187.92    .                                                                                             .

1194.01    .  I      C H               W   E                                                             .    JX

1200.10    .  I      C H                 W E                                                             .    R

1206.19    .                                                                                             .

1212.28    .                                                                                             .

1218.37    .                                                                                             .

1224.46    .                                                                                             .

1230.55    .                                                                                             .

1236.64    .     I      C H               W E                                                             .    JX

1242.73    .     I      CH                  W   E                                                         .    R

1248.82    .                                                                                             .

1254.91    .                                                                                             .

1261.00    .                                                                                             .

1267.09    .                                                                                             .

1273.18    .                                                                                             .

1279.27    .                                                                                             .
```

1285.36 . .

1291.45 . .

1297.54 . .

1303.63 . .

1309.72 . .

1315.81 . I CH W E . TX

1321.90 . I CH W E . R

1327.99 . .

1334.08 . .

1340.17 . .

1346.26 . .

1352.35 . .

1358.44 . .

1364.53 . .

1370.62 . .

1376.71 . .

1382.80 . .

1388.89 . .

1394.98 . .

1401.07 . I CH W E . JX

1407.16 . I C H W E . R

1413.25 . .

1419.34 . .

1425.43 . .

1431.52 . .

1437.61 . .

1443.70 . .

1449.79 . I C H WE . R

1455.88 . I W C H E . R

1461.97 . .

1468.06 . .

1474.15 . .

1480.24 . .

1486.33 . .

1492.42 . .

1498.51 . I W C H E . R

1504.60 . .

1510.69 . .

1516.78 . .

1522.87 . .

1528.96 . .

1535.05 . I W C H E . R

1541.14 . .

1547.23 . .

1553.32 . .

1559.42 . I W C H E . R

1565.51 . .

1571.60 . I W C H E . TX

1577.69 . I W H E . R

1583.78 . .

1589.87 . .

1595.96 . I W H E . R

1602.05 . .

1608.14 . .

1614.23 . .

1620.32 . .

1626.41 . .

1632.50 . I W H E . R

1638.59 . .

1644.68 . .

1650.77 . I W H E . R

```
1656.86   .                                                    .
1662.95   .                                  I   W H     E     .   R
1669.04   .                                                    .
1675.13   .                                  I   W CH    E     .   R
1681.22   .                                  I   W CH    E     .   R
1687.31   .                                  I   W H     E     .   R
1693.40   .                                  I   WCH     E     .   R
1699.49   .                                  I    WH     E     .   R
1705.58   .                                  I    WCH    E     .   R
1711.67   .                                  I    WH     E     .   R
1717.76   .                                  I    WH     E     .   TX
1723.85   .                                  I    WH     E     .   R
1729.94   .                                                    .
1736.03   .                                  I    CH     E     .   JX
1742.12   .                                  I  C  H     WE    .   R
1748.21   .                                                    .
1754.30   .                                                    .
1760.39   .                                                    .
1766.48   .                                                    .
1772.57   .                                                    .
1778.66   .                                                    .
1784.75   .                                                    .
1790.84   .                                                    .
1796.93   .                                                    .
1803.02   .                                                    .
1809.11   .                                       I   C  H     .   R
1815.20   .                                                    .
1821.29   .                                       I  C  H      .   R
1827.38   .                                       I   CWH      .   R
1833.47   .                                       I   CWEH     .   R
```

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   1839.56    .                                                                    I   C WH          .    R

   1845.65    .                                                                    I  WC  H          .    R

   1851.74    .                                                                     I WC  H          .    R

   1857.83    .                                                                                      .

   1863.92    .                                                                                      .

   1870.01    .                                                                                      .

   1876.10    .                                                                                      .

   1882.19    .                                                                                      .

   1888.28    .                                                                                      .

   1894.37    .                                                                                      .

   1900.46    .                                                                         I WC  H      .    R

   1906.55    .                                                                                      .

   1912.64    .                                                                                      .

   1918.73    .                                                                           I WC  H    .    R

   1924.82    .                                                                                      .

   1930.91    .                                                                             I WC EH  .    R

   1937.00    .                                                                                      .

   1943.09    .                                                                             I  W EH  .    R

   1949.18    .                                                                             I  WC EH .    R

   1955.27    .                                                                             I  WC EH .    R

   1961.36    .                                                                              I  W EH .    R

   1967.45    .                                                                              I  W EH .    R

   1973.54    .                                                                              I  W EH .    R

   1979.63    .                                                                              I  W EH .    JX

            3495.290  3498.481  3501.672  3504.863  3508.054  3511.245  3514.436  3517.626  3520.817  3524.008  3527.200
```

N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   S = SUPER-ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY

```
T1  Summerlin Village 25 - Parcel D

T2  Pulte Homes - Mainline

T3  Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

SO   1398.33 3502.10   3                          3508.69
R    1443.90 3506.80   3      .013                                          1
JX   1443.91 3506.80   3  2   .013    4.5           3506.80         -72.0       43.4
R    1473.53 3507.38   3      .013                                          1
JX   1473.54 3507.38   3  2   .013    4.5           3508.38          45.0
R    1788.88 3510.20   3      .013                                          1
JX   1788.89 3510.20   3  2   .013    4.5           3511.20          48.7
R    1821.66 3510.39   3      .013                                          1
TS   1821.67 3510.39   3      .013                                 -43.0
R    1863.61 3510.85   3      .013                                          1
SH   1862.61 3510.85   3
CD   1  4   0    .000   1.500     .000  .000  .000   .00
CD   2  4   0    .000   2.000     .000  .000  .000   .00
CD   3  4   0    .000   2.500     .000  .000  .000   .00
CD   4  4   0    .000   3.000     .000  .000  .000   .00
CD   5  4   0    .000   3.500     .000  .000  .000   .00
CD   6  4   0    .000   4.000     .000  .000  .000   .00
Q           4.500
```

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	0		1.500														
CD	2	4	0		2.000														
CD	3	4	0		2.500														
CD	4	4	0		3.000														
CD	5	4	0		3.500														
CD	6	4	0		4.000														

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -
Summerlin Village 25 - Parcel D

HEADING LINE NO 2 IS -
Pulte Homes - Mainline

HEADING LINE NO 3 IS -
Starting HGL = HGL @ Station 1398.34 of ParcelDMain1line2 Model

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET * * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1398.330	3502.100	3	3508.690

ELEMENT NO 2 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1443.900	3506.800	3	.013	.000	.000	.000	1

ELEMENT NO 3 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1443.910	3506.800	3	2	0	.013	4.500	.000	3506.800	.000	-72.000	.000

RADIUS	ANGLE
.013	43.400

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 4 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1473.530	3507.380	3	.013	.000	.000	.000	1

ELEMENT NO 5 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1473.540	3507.380	3	2	0	.013	4.500	.000	3508.380	.000	45.000	.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 6 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1788.880	3510.200	3	.013	.000	.000	.000	1

ELEMENT NO 7 IS A JUNCTION * * * * * *

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1788.890	3510.200	3	2	0	.013	4.500	.000	3511.200	.000	48.700	.000

RADIUS	ANGLE
.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 8 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1821.660	3510.390	3	.013	.000	.000	.000	1

ELEMENT NO 9 IS A TRANSITION * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	1821.670	3510.390	3	.013	.013	-43.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING

ELEMENT NO 10 IS A REACH * * *

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1863.610	3510.850	3	.013	.000	.000	.000	1

ELEMENT NO 11 IS A SYSTEM HEADWORKS * *

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1862.610	3510.850	3	.000

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1398.330	3502.100	6.590	3508.690	18.00	3.67	.21	3508.90	.00	1.44	.00	2.500	.000	.00	0 .0
40.501	.1031					.0019	.08	6.59	.00	.62	.013	.00	.00	PIPE
1438.831	3506.277	2.500	3508.777	18.00	3.67	.21	3508.99	.00	1.44	.00	2.500	.000	.00	0 .0
2.072	.1031					.0018	.00	2.50	.00	.62	.013	.00	.00	PIPE
1440.903	3506.491	2.268	3508.759	18.00	3.85	.23	3508.99	.00	1.44	1.45	2.500	.000	.00	0 .0
1.105	.1031					.0017	.00	2.27	.38	.62	.013	.00	.00	PIPE
1442.008	3506.605	2.133	3508.738	18.00	4.03	.25	3508.99	.00	1.44	1.77	2.500	.000	.00	0 .0
.847	.1031					.0019	.00	2.13	.45	.62	.013	.00	.00	PIPE
1442.855	3506.692	2.022	3508.714	18.00	4.23	.28	3508.99	.00	1.44	1.97	2.500	.000	.00	0 .0
.685	.1031					.0021	.00	2.02	.51	.62	.013	.00	.00	PIPE
1443.540	3506.763	1.925	3508.688	18.00	4.44	.31	3508.99	.00	1.44	2.10	2.500	.000	.00	0 .0
.361	.1031					.0023	.00	1.93	.56	.62	.013	.00	.00	PIPE
1443.900	3506.800	1.870	3508.670	18.00	4.57	.32	3508.99	2.50	1.44	2.17	2.500	.000	.00	0 .0
JUNCT STR	.0000					.0016	.00	2.50	.60		.013	.00	.00	PIPE
1443.910	3506.800	2.245	3509.045	13.50	2.91	.13	3509.18	.00	1.24	1.51	2.500	.000	.00	0 .0
6.277	.0196					.0010	.01	2.24	.29	.83	.013	.00	.00	PIPE
1450.187	3506.923	2.115	3509.038	13.50	3.05	.14	3509.18	.00	1.24	1.80	2.500	.000	.00	0 .0
5.112	.0196					.0011	.01	2.12	.34	.83	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1455.300	3507.023	2.006	3509.029	13.50	3.20	.16	3509.19	.00	1.24	1.99	2.500	.000	.00	0 .0
4.303	.0196					.0012	.01	2.01	.39	.83	.013	.00	.00	PIPE
1459.603	3507.107	1.911	3509.018	13.50	3.35	.17	3509.19	.00	1.24	2.12	2.500	.000	.00	0 .0
3.809	.0196					.0013	.01	1.91	.43	.83	.013	.00	.00	PIPE
1463.412	3507.182	1.824	3509.006	13.50	3.52	.19	3509.20	.00	1.24	2.22	2.500	.000	.00	0 .0
3.303	.0196					.0015	.00	1.82	.47	.83	.013	.00	.00	PIPE
1466.715	3507.246	1.745	3508.991	13.50	3.69	.21	3509.20	.00	1.24	2.30	2.500	.000	.00	0 .0
2.894	.0196					.0016	.00	1.75	.51	.83	.013	.00	.00	PIPE
1469.609	3507.303	1.672	3508.975	13.50	3.87	.23	3509.21	.00	1.24	2.35	2.500	.000	.00	0 .0
2.526	.0196					.0019	.00	1.67	.56	.83	.013	.00	.00	PIPE
1472.136	3507.353	1.604	3508.957	13.50	4.06	.26	3509.21	.00	1.24	2.40	2.500	.000	.00	0 .0
1.394	.0196					.0020	.00	1.60	.61	.83	.013	.00	.00	PIPE
1473.530	3507.380	1.564	3508.944	13.50	4.18	.27	3509.22	.00	1.24	2.42	2.500	.000	.00	0 .0
JUNCT STR	.0000					.0014	.00	1.56	.64		.013	.00	.00	PIPE
1473.540	3507.380	1.724	3509.104	9.00	2.49	.10	3509.20	.00	1.00	2.31	2.500	.000	.00	0 .0

	7.594	.0089					.0008	.01	1.72	.35	.82	.013	.00	.00	PIPE				
	1481.134	3507.448	1.652	3509.100	9.00	2.61	.11	3509.21	.00	1.00	2.37	2.500	.000	.00	0	.0			
	6.970	.0089					.0009	.01	1.65	.38	.82	.013	.00	.00	PIPE				

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1488.104	3507.510	1.585	3509.095	9.00	2.74	.12	3509.21	.00	1.00	2.41	2.500	.000	.00	0 .0
6.431	.0089					.0010	.01	1.59	.41	.82	.013	.00	.00	PIPE
1494.535	3507.568	1.522	3509.090	9.00	2.88	.13	3509.22	.00	1.00	2.44	2.500	.000	.00	0 .0
6.002	.0089					.0011	.01	1.52	.45	.82	.013	.00	.00	PIPE
1500.537	3507.621	1.462	3509.083	9.00	3.02	.14	3509.22	.00	1.00	2.46	2.500	.000	.00	0 .0
5.427	.0089					.0012	.01	1.46	.48	.82	.013	.00	.00	PIPE
1505.965	3507.670	1.406	3509.076	9.00	3.16	.16	3509.23	.00	1.00	2.48	2.500	.000	.00	0 .0
4.960	.0089					.0014	.01	1.41	.52	.82	.013	.00	.00	PIPE
1510.925	3507.714	1.353	3509.067	9.00	3.32	.17	3509.24	.00	1.00	2.49	2.500	.000	.00	0 .0
4.602	.0089					.0016	.01	1.35	.56	.82	.013	.00	.00	PIPE
1515.527	3507.756	1.302	3509.058	9.00	3.48	.19	3509.25	.00	1.00	2.50	2.500	.000	.00	0 .0
4.080	.0089					.0018	.01	1.30	.60	.82	.013	.00	.00	PIPE
1519.608	3507.792	1.254	3509.046	9.00	3.65	.21	3509.25	.00	1.00	2.50	2.500	.000	.00	0 .0
3.635	.0089					.0020	.01	1.25	.65	.82	.013	.00	.00	PIPE
1523.242	3507.824	1.208	3509.032	9.00	3.83	.23	3509.26	.00	1.00	2.50	2.500	.000	.00	0 .0
HYDRAULIC JUMP														
1523.242	3507.824	.819	3508.644	9.00	6.43	.64	3509.29	.00	1.00	2.35	2.500	.000	.00	0 .0
174.270	.0089					.0089	1.56	.82	1.47	.82	.013	.00	.00	PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1697.513	3509.383	.819	3510.202	9.00	6.43	.64	3510.84	.00	1.00	2.35	2.500	.000	.00	0 .0
55.816	.0089					.0086	.48	.82	1.47	.82	.013	.00	.00	PIPE
1753.328	3509.882	.837	3510.719	9.00	6.24	.60	3511.32	.00	1.00	2.36	2.500	.000	.00	0 .0
19.988	.0089					.0077	.15	.84	1.41	.82	.013	.00	.00	PIPE
1773.317	3510.061	.867	3510.928	9.00	5.95	.55	3511.48	.00	1.00	2.38	2.500	.000	.00	0 .0
8.617	.0089					.0067	.06	.87	1.31	.82	.013	.00	.00	PIPE
1781.933	3510.138	.898	3511.036	9.00	5.67	.50	3511.54	.00	1.00	2.40	2.500	.000	.00	0 .0
4.421	.0089					.0059	.03	.90	1.23	.82	.013	.00	.00	PIPE
1786.354	3510.177	.930	3511.107	9.00	5.41	.45	3511.56	.00	1.00	2.42	2.500	.000	.00	0 .0
1.934	.0089					.0052	.01	.93	1.15	.82	.013	.00	.00	PIPE
1788.288	3510.195	.964	3511.159	9.00	5.15	.41	3511.57	.00	1.00	2.43	2.500	.000	.00	0 .0
.592	.0089					.0045	.00	.96	1.07	.82	.013	.00	.00	PIPE
1788.880	3510.200	1.000	3511.200	9.00	4.91	.37	3511.57	.00	1.00	2.45	2.500	.000	.00	0 .0

JUNCT STR	.0000						.0023	.00	1.00	1.00			.013		.00	.00	PIPE		
1788.890	3510.200	1.330	3511.530	4.50	1.70	.04	3511.57	.00	.70	2.49	2.500		.000	.00	0	.0			
8.436	.0058					.0004		.00	1.33	.29	.64	.013		.00	.00	PIPE			
1797.326	3510.249	1.280	3511.529	4.50	1.78	.05	3511.58	.00	.70	2.50	2.500		.000	.00	0	.0			
7.908	.0058					.0005		.00	1.28	.31	.64	.013		.00	.00	PIPE			

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1805.234	3510.295	1.233	3511.528	4.50	1.87	.05	3511.58	.00	.70	2.50	2.500	.000	.00	0 .0
7.531	.0058					.0005		.00	1.23	.33	.64	.013	.00	.00 PIPE
1812.765	3510.338	1.188	3511.526	4.50	1.96	.06	3511.59	.00	.70	2.50	2.500	.000	.00	0 .0
7.148	.0058					.0006		.00	1.19	.36	.64	.013	.00	.00 PIPE
1819.913	3510.380	1.145	3511.525	4.50	2.05	.07	3511.59	.00	.70	2.49	2.500	.000	.00	0 .0
1.747	.0058					.0007		.00	1.15	.39	.64	.013	.00	.00 PIPE
1821.660	3510.390	1.135	3511.525	4.50	2.08	.07	3511.59	2.50	.70	2.49	2.500	.000	.00	0 .0
TRANS STR	.0000					.0007		.00	2.50	.39		.013	.00	.00 PIPE
1821.670	3510.390	1.136	3511.525	4.50	2.08	.07	3511.59	.00	.70	2.49	2.500	.000	.00	0 .0
3.391	.0110					.0007		.00	1.14	.39	.55	.013	.00	.00 PIPE
1825.061	3510.427	1.094	3511.521	4.50	2.18	.07	3511.59	.00	.70	2.48	2.500	.000	.00	0 .0
3.017	.0110					.0008		.00	1.09	.42	.55	.013	.00	.00 PIPE
1828.078	3510.460	1.056	3511.516	4.50	2.28	.08	3511.60	.00	.70	2.47	2.500	.000	.00	0 .0
2.978	.0110					.0009		.00	1.06	.45	.55	.013	.00	.00 PIPE
1831.056	3510.493	1.018	3511.511	4.50	2.39	.09	3511.60	.00	.70	2.46	2.500	.000	.00	0 .0
2.633	.0110					.0011		.00	1.02	.48	.55	.013	.00	.00 PIPE
1833.689	3510.522	.983	3511.505	4.50	2.51	.10	3511.60	.00	.70	2.44	2.500	.000	.00	0 .0
2.581	.0110					.0012		.00	.98	.52	.55	.013	.00	.00 PIPE

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1836.270	3510.550	.948	3511.498	4.50	2.63	.11	3511.61	.00	.70	2.43	2.500	.000	.00	0 .0
2.316	.0110					.0014		.00	.95	.55	.55	.013	.00	.00 PIPE
1838.587	3510.575	.915	3511.490	4.50	2.76	.12	3511.61	.00	.70	2.41	2.500	.000	.00	0 .0
2.037	.0110					.0016		.00	.92	.59	.55	.013	.00	.00 PIPE
1840.624	3510.598	.884	3511.482	4.50	2.90	.13	3511.61	.00	.70	2.39	2.500	.000	.00	0 .0
1.848	.0110					.0018		.00	.88	.63	.55	.013	.00	.00 PIPE
1842.472	3510.618	.854	3511.472	4.50	3.04	.14	3511.62	.00	.70	2.37	2.500	.000	.00	0 .0
.362	.0110					.0020		.00	.85	.68	.55	.013	.00	.00 PIPE
1842.834	3510.622	.824	3511.446	4.50	3.19	.16	3511.60	.00	.70	2.35	2.500	.000	.00	0 .0
HYDRAULIC JUMP														

1842.834	3510.622	.552	3511.174	4.50	5.59	.48	3511.66	.00	.70	2.07	2.500	.000	.00	0	.0		
.905	.0110					.0099	.01	.55	1.58	.55	.013	.00	.00	PIPE			
1843.739	3510.632	.569	3511.201	4.50	5.35	.44	3511.65	.00	.70	2.10	2.500	.000	.00	0	.0		
9.438	.0110					.0087	.08	.57	1.49	.55	.013	.00	.00	PIPE			
1853.177	3510.736	.588	3511.324	4.50	5.10	.40	3511.73	.00	.70	2.12	2.500	.000	.00	0	.0		
4.680	.0110					.0076	.04	.59	1.39	.55	.013	.00	.00	PIPE			
1857.857	3510.787	.609	3511.396	4.50	4.86	.37	3511.76	.00	.70	2.15	2.500	.000	.00	0	.0		
3.102	.0110					.0067	.02	.61	1.31	.55	.013	.00	.00	PIPE			

Program Package Serial Number: 3074

WATER SURFACE PROFILE LISTING Date: 7-15-2020 Time:11:48:58

Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1860.959	3510.821	.629	3511.450	4.50	4.64	.33	3511.78	.00	.70	2.17	2.500	.000	.00	0	.0		
1.621	.0110					.0058	.01	.63	1.22	.55	.013	.00	.00	PIPE			
1862.580	3510.839	.651	3511.490	4.50	4.42	.30	3511.79	.00	.70	2.19	2.500	.000	.00	0	.0		
.781	.0110					.0051	.00	.65	1.14	.55	.013	.00	.00	PIPE			
1863.361	3510.847	.674	3511.521	4.50	4.22	.28	3511.80	.00	.70	2.22	2.500	.000	.00	0	.0		
.249	.0110					.0044	.00	.67	1.07	.55	.013	.00	.00	PIPE			
1863.610	3510.850	.699	3511.549	4.50	4.01	.25	3511.80	.00	.70	2.24	2.500	.000	.00	0	.0		
1862.610	3510.850	.699	3511.549	4.50	4.01	.25	3511.80	.00	.70	2.24	2.500	.000	.00	0	.0		

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Summerlin Village 25 - Parcel D

Pulte Homes - Mainline

Starting HGL = HGL @ Station 1398.34 of ParcelDMain1ine2 Model

1398.33 .I C H W E . R

1402.30 . .

1406.27 . .

1410.23 . .

1414.20 . .

1418.17 . .

1422.14 . .

1426.11 . .

1430.08 . .

1434.04 . .

1438.01 . .

```
1441.98   .                              I          C        H E                              .   R
1445.95   .                            I          C      W H                                .   R
1449.92   .                             I          C     W EH                                .   R
1453.88   .                             I          C    W  E H                              .   R
1457.85   .                              I          C   W  E H                              .   R
1461.82   .                              I          C   W  E H                              .   JX
1465.79   .                              I         C       WEH                              .   R
1469.76   .                               I         C      WE  H                             .   R
1473.73   .                                I         C     W E H                             .   R
1477.69   .                                I         C    W E  H                             .   R
1481.66   .                                 I         C    W E   H                           .   R
1485.63   .                                I         C    W E   H                           .   R
1489.60   .                                 I         C   W E    H                          .   R
1493.57   .                                 I         C  W  E    H                          .   R
1497.54   .                                 I         C  W  E    H                          .   JX
1501.50   .                                 I       C     WE    H                          .   R
1505.47   .                                  I       C     WE    H                          .   R
1509.44   .                                   I      C     WE     H                          .   R
1513.41   .                                  I       C    WE     H                          .   R
1517.38   .                                   I      C    WE      H                          .   R
1521.34   .                                   I       C   WE      H                          .   R
1525.31   .                                   I       C  W E       H                          .   R
1529.28   .                                    I       C W E       H                          .   R
1533.25   .                                   I       C W E       H                          .   R
1537.22   .                                   I       C W E        H                         .   R
1541.19   .                                   I      WC   E        H                         .   R
1545.15   .                                                                                   .
1549.12   .                                                                                   .
1553.09   .                                                                                   .
1557.06   .                                                                                   .
```

1561.03 . .

1564.99 . .

1568.96 . .

1572.93 . .

1576.90 . .

1580.87 . .

1584.84 . .

1588.80 . .

1592.77 . .

1596.74 . .

1600.71 . .

1604.68 . .

1608.64 . .

1612.61 . .

1616.58 . .

1620.55 . .

1624.52 . .

1628.49 . .

1632.45 . .

1636.42 . .

1640.39 . .

1644.36 . .

1648.33 . .

1652.30 . .

1656.26 . .

1660.23 . .

1664.20 . .

1668.17 . .

1672.14 . .

1676.10 . .

```
1680.07   .                                                                .
1684.04   .                                                                .
1688.01   .                                                                .
1691.98   .                                                                .
1695.95   .                                                                .
1699.91   .                                        I       WC   E       H  .   R
1703.88   .                                                                .
1707.85   .                                                                .
1711.82   .                                                                .
1715.79   .                                                                .
1719.75   .                                                                .
1723.72   .                                                                .
1727.69   .                                                                .
1731.66   .                                                                .
1735.63   .                                                                .
1739.60   .                                                                .
1743.56   .                                                                .
1747.53   .                                                                .
1751.50   .                                                                .
1755.47   .                                          I     W C  E        H  .   R
1759.44   .                                                                .
1763.40   .                                                                .
1767.37   .                                                                .
1771.34   .                                                                .
1775.31   .                                           I      WC   E       H  .   R
1779.28   .                                                                .
1783.25   .                                             I      WC  E        H  .   R
1787.21   .                                             I       W   E        H  .   R
1791.18   .                                             I       W   E        H  .   R
1795.15   .                                             I       W   E        H  .   JX
1799.12   .                                             I     C    WE        H  .   R
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   1803.09    .                                                          I     C    WE         H      .    R

   1807.06    .                                                          I      C   WE          H     .    R

   1811.02    .                                                                                        .

   1814.99    .                                                           I     C   WE          H     .    R

   1818.96    .                                                                                        .

   1822.93    .                                                           I     C   WE          H     .    R

   1826.90    .                                                           I     C   WE          H     .    TX

   1830.86    .                                                           I     C   WE          H     .    R

   1834.83    .                                                            I     C  WE           H    .    R

   1838.80    .                                                            I     C  WE           H    .    R

   1842.77    .                                                            I     C  WE           H    .    R

   1846.74    .                                                            I      C WE            H   .    R

   1850.71    .                                                             I     C WE            H   .    R

   1854.67    .                                                             I     C WE            H   .    R

   1858.64    .                                                             I     C WE            H   .    R

   1862.61    .                                                             I     C WE            H   .    R

            3502.100  3503.225  3504.350  3505.475  3506.600  3507.725  3508.850  3509.975  3511.100  3512.225  3513.350
```

N O T E S
1. GLOSSARY
   I = INVERT ELEVATION
   C = CRITICAL DEPTH
   W = WATER SURFACE ELEVATION
   S = SUPER-ELEVATION
   H = HEIGHT OF CHANNEL
   E = ENERGY GRADE LINE
   X = CURVES CROSSING OVER
   B = BRIDGE ENTRANCE OR EXIT
   Y = WALL ENTRANCE OR EXIT
2. STATIONS FOR POINTS AT A JUMP MAY NOT BE PLOTTED EXACTLY

GCW
ENGINEERS \ SURVEYORS

MINOR STORM DRAIN LATERAL - CCRFCD MANUAL FRICTION LOSS CALCULATION SHEET

STORM DRAIN DESIGN						PIPE HYDRAULIC CHARACTERISTICS						LOSS	HGL			DESCRIPTION	
Q_{DESIGN}			INVERTS			A	R		V	H_V =	S_f	PIPE	PIPE				
(CFS)	DIAMETER (FT)	MANNING'S 'n'	D / S ELEV.	U / S ELEV.	LENGTH	(FT^2)	(FT)	Φ	(FPS)	$V^2/2g$ (FT)	(FT/FT)	H_f (FT)	TRUNK WSE (from Model)	LATERAL PIPE D/S HGL ELEV.[1]	LATERAL PIPE U/S HGL ELEV.	PARTIAL FLOW?	LATERAL
7	2	0.013	3497.00	3497.51	33.82	3.14	0.5	0.004925	2.23	0.077092	0.000954466	0.032	3504.62	3504.62	3504.65	No	24" RCP Lateral for DI#6.1
7	2	0.013	3497.94	3500.25	11.57	3.14	0.5	0.004925	2.23	0.077092	0.000954466	0.011	3505.25	3505.25	3505.26	No	24" RCP Lateral for DI#6
16	2	0.013	3520.30	3539.00	126.94	3.14	0.5	0.004925	5.09	0.402767	0.0049866	0.633	3523.54	3523.54	3524.17	Yes	24" RCP Lateral for DI#1
5	2	0.013	3525.40	3527.21	9.70	3.14	0.5	0.004925	1.59	0.039333	0.000486973	0.005	3526.21	3527.40	3527.40	Yes	24" RCP Lateral for DI#7
4.5	2	0.013	3506.80	3507.66	30.56	3.14	0.5	0.004925	1.43	0.03186	0.000394448	0.012	3509.05	3509.05	3509.06	Yes	24" RCP Lateral for DI#9
4.5	2	0.013	3508.38	3510.30	10.70	3.14	0.5	0.004925	1.43	0.03186	0.000394448	0.004	3509.10	3510.38	3510.38	Yes	24" RCP Lateral for DI#9.1
4.5	2	0.013	3511.20	3512.91	9.24	3.14	0.5	0.004925	1.43	0.03186	0.000394448	0.004	3511.53	3513.20	3513.20	Yes	24" RCP Lateral for DI#8
4	2	0.013	3496.73	3498.70	28.7	3.14	0.5	0.004925	1.27	0.025173	0.000311663	0.009	3505.14	3505.14	3505.15	No	24" RCP Lateral for DI#4
4	2	0.013	3496.73	3499.00	12.09	3.14	0.5	0.004925	1.27	0.025173	0.000311663	0.004	3505.14	3505.14	3505.14	No	24" RCP Lateral for DI#4.1
3.5	2	0.013	3498.34	3500.30	30.01	3.14	0.5	0.004925	1.11	0.019273	0.000238617	0.007	3506.09	3506.09	3506.10	No	24" RCP Lateral for DI#3
3.5	2	0.013	3498.34	3500.45	10.57	3.14	0.5	0.004925	1.11	0.019273	0.000238617	0.003	3506.09	3506.09	3506.09	No	24" RCP Lateral for DI#3.1
12	2	0.013	3501.20	3505.30	24.01	3.14	0.5	0.004925	3.82	0.226557	0.002804963	0.067	3506.68	3506.68	3506.75	Yes	24" RCP Lateral for DI#2

Pipe Friction Loss Calculations per CCRFCD Manual 804.2.1

$\Phi = 2g\,(n^2) / 2.21$

$Sf = \Phi\, Hv / R^{1.33}$

$H_f = \text{Length} \times S_f$

1 - Where HGL in lateral is below top of pipe, assume HGL is at top of pipe.

APPENDIX C



PRORATED FLOW RATE SUMMARY

Onsite Parent Basins			
Subbasin	Q_{100} (cfs)	Area (acres)	cfs/acre
*D	105	27.15	3.87
Onsite Prorated Basins			
Subbasin	Q_{100} (cfs)	Area (acres)	cfs/acre
D-1	16	4.24	3.87
D-2	24	6.14	3.87
D-3	7	1.75	3.87
D-4	8	2.07	3.87
D-5	8	2.11	3.87
D-6	14	3.52	3.87
D-7	10	2.70	3.87
D-8	9	2.30	3.87
D-9	9	2.32	3.87
TOTAL	**105**	**27.15**	**N/A**

100-Year Onsite Summary Min. Slope

Section ID	Tributary Sources	Slope (%)	Q_{100} (cfs)	Depth (ft)	Velocity (fps)	D*V
Section 1	D-1	3.00	16	0.36	4.24	1.53
Section 2	D-2	4.31	24	0.38	5.37	2.04
Section 2.1 Min Slope	D-2	4.12	24	0.39	5.28	2.06
Section 2.1 Max Slope	D-2	6.50	24	0.36	6.26	2.25
Section 3	D-3	0.50	7	0.37	1.76	0.65
Section 4	D-4	0.50	8	0.38	1.82	0.69
Section 5 Min Slope	D-5	0.50	8	0.38	1.82	0.69
Section 5 Max Slope	D-5	1.00	8	0.35	2.36	0.83
Section 6 Min Slope	D-6	2.60	14	0.35	3.89	1.36
Section 6 Max Slope	D-6	6.50	14	0.31	5.51	1.71
Section 7	D-7	0.75	10	0.38	2.24	0.85
Section 8	D-8	0.74	9	0.37	2.17	0.80
Section 9 Min Slope	D-9	0.74	9	0.37	2.17	0.80
Section 9 Max Slope	D-9	2.00	9	0.32	3.17	1.01

% COMPLETE

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GOV APP

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-15-20
PLOT TIME: 12:58:09

GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

F:\Projects\700\764-A173-001\Division\Civil\Figures\764-A173-001_Figure 5.dwg
Cody Beck

PULTE HOMES

SUMMERLIN VILLAGE 25 - PARCEL D

INTERIM CONDITION
ONSITE DRAINAGE MAP

DRAWING
FIGURE 5
1 OF 1 SHTS



PRORATED FLOW RATE SUMMARY			
Onsite Parent Basins			
Subbasin	Q_{100} (cfs)	Area (acres)	cfs/acre
*D	105	27.15	3.87
Onsite Prorated Basins			
Subbasin	Q_{100} (cfs)	Area (acres)	cfs/acre
D-1	16	4.24	3.87
D-2	24	6.14	3.87
D-3	7	1.75	3.87
D-4	8	2.07	3.87
D-5	8	2.11	3.87
D-6	14	3.52	3.87
D-7	10	2.70	3.87
D-8	9	2.30	3.87
D-9	9	2.32	3.87
TOTAL	**105**	**27.15**	**N/A**

% COMPLETE

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-15-20
PLOT TIME: 12:57:36

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

F:\Projects\700\764-A173-001\Division\Civil\Figures\764-A173-001_Figure 6.dwg
Cody Beck

PULTE HOMES

SUMMERLIN VILLAGE 25 - PARCEL D

INTERIM CONDITION
ONSITE DRAINAGE MAP

DRAWING
FIGURE 6
1 OF 1 SHTS

GROSS ACREAGE:	14.92
NO. OF LOTS:	54
DENSITY (UNIT/AC):	3.62

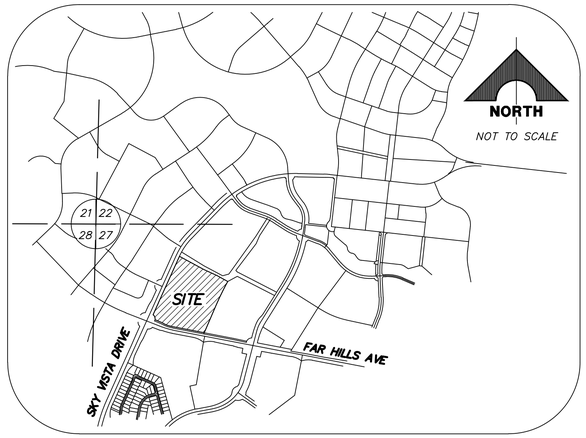
SHEET INDEX		
NO.	DWG	DESCRIPTION
1	C1	COVER SHEET
2	C2	GENERAL NOTES
3	C3	LEGEND, ABBREVIATIONS AND QUANTITIES
4	G1	GRADING PLAN 1
5	G2	GRADING PLAN 2
6	G3	GRADING PLAN 3
7	G4	GRADING PLAN 4
8	G5	GRADING PLAN 5
9	G6	GRADING PLAN 6
10	D1	GRADING SECTIONS & DETAILS 1
11	D2	GRADING SECTIONS & DETAILS 2
12	P1	CACTUS SUNRISE ST PLAN & PROFILE 8+00 TO 13+00
13	P2	CARMEL SKY ST PLAN & PROFILE 9+50 TO 14+00
14	P3	HARRIS PEAK ST PLAN & PROFILE 9+00 TO 13+50
15	P4	HARRIS PEAK ST PLAN & PROFILE 13+50 TO 19+50
16	P5	WILSON RIDGE ST PLAN & PROFILE 9+50 TO 14+50
17	P6	WILSON RIDGE ST PLAN & PROFILE 14+50 TO 20+00
18	P7	HARRIS SUMMIT AVE PLAN & PROFILE 8+50 TO 14+00
19	P8	CARMEL CLIFF AVE PLAN & PROFILE 9+50 TO 12+50
20	P9	SAGE THUNDER AVE PLAN & PROFILE 7+00 TO 11+00
21	P10	SAGE THUNDER AVE PLAN & PROFILE 11+00 TO 15+50
22	P11	KNUCKLE A AND KNUCKLE B TC PLAN & PROFILES
23	LAT1	STORM DRAIN LATERAL PLAN & PROFILE
24	LAT2	STORM DRAIN LATERAL PLAN & PROFILE
25	MU	MASTER UTILITY PLAN
26	U1	UTILITY PLAN 1
27	U2	UTILITY PLAN 2
28	U3	UTILITY PLAN 3
29	U4	UTILITY PLAN 4
30	T1	TRAFFIC PLAN 1
31	T2	TRAFFIC PLAN 2
32	T3	TRAFFIC PLAN 3
33	T4	TRAFFIC PLAN 4

IMPROVEMENT PLANS FOR

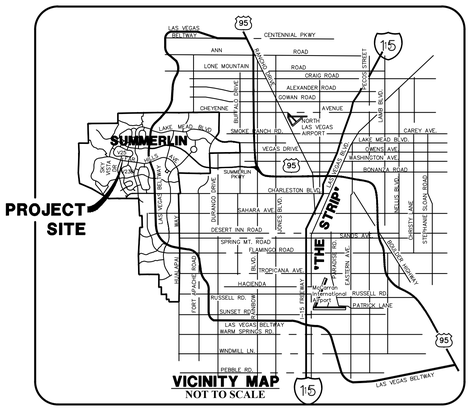
SUMMERLIN VILLAGE 25 - PARCEL D

PHASE 1

APN # 137-27-215-001



VICINITY MAP



BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

OWNER
THE HOWARD HUGHES COMPANY LLC
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NV 89135
(702) 791-4000

DEVELOPER
PULTE HOMES
7255 S. TENAYA WAY
SUITE 200
LAS VEGAS, NV 89113
(702) 914-4800

ENGINEER
GCW, INC.
1555 SOUTH RAINBOW BLVD.
LAS VEGAS, NEVADA 89146
(702) 804-2000
(702) 804-2299 (FAX)

UTILITY/AGENCY APPROVALS

COX COMMUNICATIONS LAS VEGAS, INC. — DATE

CENTRAL TELEPHONE COMPANY, DBA CENTURY LINK — DATE

THE AFFIXED CENTRAL TELEPHONE COMPANY, DBA CENTURY LINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

NV ENERGY — DATE

NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

NV ENERGY – TRANSMISSION ENGINEERING — DATE

SOUTHWEST GAS CORP. — DATE

CLV PLANNING DEPARTMENT
THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE CITY OF LAS VEGAS PLANNING DEPARTMENT

PLANNING DEPARTMENT — DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE, FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL DATE

SUMMERLIN DESIGN REVIEW COMMITTEE — DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 1375A2 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM
SHEETS: C1-C3, P1-P14, LAT1-LAT3, U1-U6

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-642-2444

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

L# XXX-XXXXX | CLV DWG#

ENGINEER - STATE OF NEVADA
WESLEY T. PETTY
1/31/2021
No. 16369
PROFESSIONAL ENGINEER

BID SET — DATE: 07-16-20

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 09:59:32

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-CV-Ph1.dwg
Nicholas DeRosa

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
COVER SHEET

DRAWING
C1
1 OF 33 SHTS

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS, MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY GEOTEK RESIDENTIAL, LLC, REPORT # 15244-LVR, DATE JANUARY 16TH, 2020 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

WALL NOTES:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC., TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. AFTER HAUNCHING AND PRIOR TO BACKFILL OPERATIONS WHICH WOULD COVER SANITARY SEWER AND STORM DRAIN FACILITIES, CONTRACTOR IS REQUIRED TO SCHEDULE CLV OPEN-TRENCH UTILITY SURVEY INSPECTION FOR DETERMINATION OF FINAL LOCATION COORDINATES. FACILITIES TO BE LOCATED BY CLV SHALL INCLUDE AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN ALIGNMENT, INCLUDING DEFLECTION POINTS.

OR

(MAY BE USED ONLY ON PROJECTS ASSOCIATED WITH A TENTATIVE MAP CONTAINING 5 LOTS OR MORE)

- SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 06/04/18

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES FOR HYDRANTS AND ACCESS

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S – APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC SECTION 105.6.15]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC SECTION 3310, SECTION 3312]
5. TO IDENTIFY FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC SECTION 507.5.7.3]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC SECTION 106.3]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A. APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC SECTION 507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC SECTION 507]
9. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED. [IFC SECTION 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC SECTION 507]
11. FIRE HYDRANTS SPACING SHALL BE AS FOLLOWS: [IFC SECTION C102]
    RESIDENTIAL – 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    COMMERCIAL – 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1,000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC SECTION C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC SECTION C102.10]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC SECTION C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC SECTION C102.7]
17. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC SECTION C102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OF SERVICE DUE TO A SERVICE INTERRUPTION. [IFC SECTION C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC SECTION 503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC SECTION 503.2.7, 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 IN. [IFC SECTION 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB. NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB. NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. FIRE LANES THROUGH PARKING LOTS SHALL NOT BE LESS THAN 24 FT. [IFC SECTION 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. [IFC SECTION 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR SINGLE POINT OF ACCESS IN EXCESS of 600 FT. CLV REGULATION AND MOU.
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. CLV REGULATION
27. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC SECTION 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. [IFC SECTION 503.6]
29. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS, OR HAVING FOUR OR MORE TRAVEL LANES AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION.

REVISED FEBRUARY 4, 2019

FLOOD ZONE NOTE

THIS PROJECT IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE X PER FIRM PANEL 32003C2150E, DATED SEPTEMBER 27, 2002. A ZONE X IS DEFINED AS BEING OUTSIDE THE 100-YEAR FLOODPLAIN AND NOT LOCATED WITHIN A FEMA-DESIGNATED SPECIAL FLOOD HAZARD AREA.

LAS VEGAS VALLEY WATER DISTRICT LVVWD PROJECT # 137540

(REVISED 08/01/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS
9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE LISTED ON THE LVVWD APPROVED PRODUCT'S LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT 811 OR 1-800-227-2600
14. THE INSTALLATION OF LVVWD MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR ON THE STREET SURFACE.

    ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

15. NO LEAD COMPLIANCE NOTE:
    TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE REUSED.

ADDTIONAL WATER NOTES

1. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE 15.
2. 24" MINIMUM DEPTH OF COVER OVER WATER LINE MUST BE MAINTAINED DURING CONSTRUCTION.
3. THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
4. THIS PROJECT PROVIDES FOR THE INSTALLATION OF OFF-SITE MAINS ONLY, AND DOES NOT PROVIDE OR IMPLY ANY WATER COMMITMENT.

CONDITIONAL APPROVAL OF VALVED OUTLET (6" AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE. HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

WATER MAIN JOINT NOTES (PVC 4"-24")

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

WATER MAIN JOINT NOTES (DIP 4"-12")

DIP PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE TWO AND ONE-HALF (2.5) DEGREES PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 415 FEET, PER UDACS 2.07.03.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

DEVIATION FROM STANDARDS

- NONE

CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

		HORIZONTAL/VERTICAL	COMPACTION
A.	PAVEMENT AREA SUBGRADE	0.1'±	+0.0' TO -0.1' SEE SOILS REPORT
B.	ENGINEERED FILL	0.5'±	+0.1' TO -0.1' SEE SOILS REPORT

- REPORT COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.

7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLIC OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIW OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

REVISED 4/15/10

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS, ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SE

ABBREVIATIONS

A	AIR
AC	ASPHALT CONCRETE, ACRE
ACP	ASBESTOS CEMENT PIPE
ADD'L	ADDITIONAL
AP	ANGLE POINT
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AVAR	AIR VALVE, AIR RELEASE ASSEMBLY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
BLM	BUREAU OF LAND MANAGEMENT
BLVD	BOULEVARD
BM	BENCHMARK
BO	BLOW-OFF
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BVP	BEGIN VERTICAL POINT
BW	BACK OF SIDEWALK
C, ℄	CENTERLINE
C&G	CURB AND GUTTER
CATV	UNDERGROUND CABLE TV
CCBM	CLARK COUNTY BENCH MARK
CCPW	CLARK COUNTY PUBLIC WORKS
CCTV	CLOSED-CIRCUIT TELEVISION
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT
CE	COMMON ELEMENT
CFS	CUBIC FEET PER SECOND
CIP	CAPITAL IMPROVEMENTS PROJECT, CORRUGATED IRON PIPE
CIPM	CURED-IN-PLACE MANHOLE
CIPP	CURED-IN-PLACE PIPE
CIR	CIRCLE
CLR	CLEAR OR CLEARANCE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CLV	CITY OF LAS VEGAS
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNLV	CITY OF NORTH LAS VEGAS
CO	CLEANOUT
CONC	CONCRETE
COND	CONDUIT
CONST	CONSTRUCT OR CONSTRUCTION
COORD	COORDINATE
COR	CORNER
CPEP	CORRUGATED POLYETHELYNE PIPE
CT	COURT
CY	CUBIC YARD(S)
Δ	DELTA
DBL	DOUBLE
DCSWCS	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEM (LATEST ED.)
DE	DRAINAGE EASEMENT
DEFL	DEFLECTION
DG	DESIGN GRADE
DI/D.I.	DROP INLET
DIA, ø	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DR	DRIVE
DS	DOWNSPOUT
DTL	DETAIL
DW	DRIVEWAY
DWG	DRAWING
E	EAST
ECR	END CURB RETURN
ELEC,ELE	ELECTRICAL
ELEV	ELEVATION
EP,EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVC	END VERTICAL CURVE
EVP	END VERTICAL POINT
EX,EXIST	EXISTING
EXP	EXPANSION JOINT
FC	FACE OF CURB
FF, FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FINISH SURFACE
FT	FOOT/FEET
FTG	FOOTING
FUT	FUTURE
G	GAS
GA	GAGE, GUY ANCHOR
GB	GRADE BREAK
GND	GROUND
GRD	GRADE, GROUND
H, HGT	HEIGHT
HDWL	HEADWALL
HGL	HYDRAULIC GRADE LINE
HORIZ	HORIZONTAL
HP	HIGH POINT, HIGH PRESSURE
HPS	HIGH PRESSURE SODIUM
IBC	INTERNATIONAL BUILDING CODE
INV	INVERT
INT	INTERIM
JT	JOINT
L	LENGTH
LT	LEFT
LF	LINEAR FEET
LIP	LIP OF GUTTER
LN	LANE
LP	LOW POINT, LIGHT POLE
LS,LSCP	LANDSCAPE
LVWD	LAS VEGAS VALLEY WATER DISTRICT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MLTMCP	MORTAR LINED TAPE & MORTAR COATED PIPE
MP	MESA PARK
MOD	MODIFY/MODIFIED
MON	MONUMENT
MPH	MILES PER HOUR
N	NORTH
NAP	NOT A PART
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
N.I.C.	NOT IN CONTRACT
No.	NUMBER
NOSHA	STATE OF NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
NPC	NEVADA POWER COMPANY
NTS	NOT TO SCALE
NVE	NV ENERGY
OB	OVERBUILD
OC	ON CENTER
OHC	OVERHEAD COX COMMUNICATION
OHP	OVERHEAD POWER LINE
P	POWER LINE
PAC	PUBLIC ACCESS EASEMENT
PB	PULL BOX
PBS	PLANTMIX BITUMINOUS SURFACE
PDE	PUBLIC DRAINAGE EASEMENT
PLT	PLATE
PC	POINT OF CURVE, PRESSURE CLASS
PCC	POINT OF COMPOUND CURVE
PE	PROJECT ENGINEER OR POLYETHYLENE
PED	PEDESTRIAN
PGL	PROFILE GRADE LINE
PH	POTHOLE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PL, P/L	PROPERTY LINE
PLCP	POLYURETHANE LINED AND COATED STEEL PIPE
PMF	PAVEMENT MARKING FILM
POB	POINT OF BEGINNING
POC	POINT ON CURVE, POINT OF CONNECTION
POT	POINT ON TANGENT
PP	POWER POLE
PROP	PROPOSED
PRC	POINT OF REVERSE CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PZ	PRESSURE ZONE
R, RAD	RADIAL, RADIUS
RT	RIGHT
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REC	RECTANGULAR
REF	REFERENCE
REINF	REINFORCED
REQD	REQUIRED
RIM	TOP OF RIM ELEVATION
RND	ROUND
R/W,ROW	RIGHT OF WAY
RP	RADIUS POINT
RPM	RAISED PAVEMENT MARKERS
RSGV	RESILIENT SEAT GATE VALVE
S	SEWER, SOUTH
SCH	SCHEDULE
SDWK	SIDEWALK
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SECT	SECTION
SF	SQUARE FOOT/FEET
SHLDR	SHOULDER
SHT	SHEET
SIS	SUMMERLIN IMPROVEMENT STANDARDS
SL	STREET LIGHT
SP	SERVICE POINT
SQ	SQUARE
SR	SEWER RECLAIM MAIN
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
ST	STREET
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURE
SV	SKY VISTA DRIVE
SVZ	SIGHT VISIBILITY ZONE
SW	SIDEWALK
SWG	SOUTHWEST GAS
T	TELEPHONE OR TOP
TAN	TANGENT
TB	TOP OF BERM
TC	TOP OF CURB
TCE	TEMPORARY CONSTRUCTION ESMT
TEL,TELE	TELEPHONE
TEMP	TEMPORARY
TF	TOP OF FOOTING
TG	TOP OF GRATE
TMH	TOP OF MANHOLE
TOP	TOP OF PIPE
TP	TELEPHONE POLE
TRANS	TRANSITION
TRW	TOP OF RETAINING WALL
TS	TEST STATION
TS&V	TAPPING SLEEVE & VALVE
TW	TOP OF WALL
TYP,(TYP)	TYPICAL
UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (LATEST EDITION)
UG	UNDERGROUND
ULT	ULTIMATE
USDCCA, USD	UNIFORM STD. DRAWINGS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA (LATEST EDITION)
UT	UNDERGROUND TELEPHONE
VAR	VARIABLE/VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VG	VALLEY GUTTER
VOL	VOLUME
W	WATER, WEST
W/	WITH
WMH	WATER MANHOLE
WS	WATER SUPPLY
WT	WEIGHT
WTR	WATER
XING	CROSSING
YD	YARD, YARD DRAIN
Z	PRESSURE ZONE

LEGEND

- TYPICAL PROPOSED LINEWORK
- TYPICAL EXISTING LINEWORK
- TYPICAL FUTURE LINEWORK
- SECTION LINE
- EASEMENT LINE
- EDGE OF PAVEMENT
- LOTLINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- CENTERLINE
- TYPICAL UTILITY LINE 4" – 12" (SINGLE LINE)
- TYPICAL UTILITY LINE > THAN 12" (DOUBLE LINE)
- TYPICAL SEWER LINE W/MH
- TYPICAL WATER LINE W/GV
- TYPICAL STORM LINE W/MH
- 100 YR HYDRAULIC GRADE LINE
- CONCRETE OR STEEL ENCASEMENT
- TYPICAL STUB & BLOW-OFF
- EX. GAS LINE (–PE GAS–)
- EX. ELECTRICAL (–ELEC–)
- EX. CABLE TV (–CBL–)
- EX. TELEPHONE (–TEL–)
- EX. OVERHEAD POWER LINES (–OPL–)
- EX. ELEC & PWR POLES
- TYPICAL CURB & GUTTER, SIDEWALK AND RAMP
- POST AND CABLE FENCE
- WROUGHT IRON FENCE
- CHAIN LINK FENCE
- SAWCUT
- PAVEMENT RESORATION AREA
- PROPOSED ABANDONMENT
- EXISTING ABANDONMENT
- CUT LINE LIMITS
- FILL LINE LIMITS

- DETAIL BUBBLE W/ REF. (1/C)
- BENCHMARK
- GATE VALVE
- PRESSURE REDUCING VALVE (PRV)
- BACK WATER VALVE (BWV)
- DROP INLET
- FIRE HYDRANT
- WATER METER
- WATER RPPA
- WATER RPDA
- TRAFFIC SIGNAL PULL BOX
- STREET LIGHT CLARK COUNTY
- STREET LIGHT SUMMERLIN STD
- TRAFFIC SIGNAL/FLASHER
- EXISTING TELE POLE
- EXISTING POWER POLE
- EXISTING POLE
- EX. ELEC MARKER
- TRANSFORMER PAD
- SERVICE PEDESTAL
- PULLBOX
- 3005 — PROPOSED CONTOUR
- (3005) — EXISTING CONTOUR
- 60.50 TC — PROPOSED SPOT ELEVATION
- (60.50) TC — EXISTING SPOT ELEVATION
- 1.00% — PROPOSED SLOPE
- TOP SLOPE / TOE SLOPE — SLOPE DIRECTION
- FF = 2333.25 — FINISH FLOOR ELEVATION

CAUTION: HIGH PRESSURE GAS!!

CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION.

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
2. MINIMUM HORIZONTAL AND VERTICAL CLEARANCES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND FACILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC SHALL BE AT LEAST 12-INCHES OR GREATER AS DICTATED BY LOCAL CODES AND STANDARDS.
   a) ANY DEVIATION FROM SPECIFIED MINIMUM CLEARANCES MUST BE APPROVED BY ALL AFFECTED UTILITIES AND/OR MUNICIPALITIES
3. FOR VALVE ADJUSTMENT CONTACT 702-668-6107 48 HOURS PRIOR TO CONSTRUCTION
4. IN THE EVENT OF A NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND STRUCTURES CONTACT 702-365-2099

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION — DATE

QUANTITY ESTIMATE

NOTE: CONTRACTOR TO VERIFY QUANTITIES FOR BIDDING PURPOSES

SEWER

DESCRIPTION	UNIT	PUBLIC	PRIVATE
4" SEWER	LF	–	1,470
8" SEWER	LF	3,220	–
SEWER MANHOLE 6 TO 18 FEET	EA	14	–
SEWER MANHOLE > 18 FEET	EA	2	–
BACKWATER VALVES	EA	–	15

WATER

DESCRIPTION	UNIT	PUBLIC	PRIVATE
6" PVC WATER MAIN	LF	270	–
8" PVC WATER MAIN	LF	2,440	–
8" C-900 WATER MAIN	LF	560	–
LANDSCAPE WATER SERVICE	EA	–	4
WATER LATERAL	LF	875	–
IRRIGATION SLEEVES	LF	–	397
WATER SERVICE TO LOTS 3/4" METER PER UDACS PLATE NO. 1	EA	54	–
FIRE HYDRANT	EA	6	–
3/4" IRRIGATION METER W/ 1" RPPA	EA	4	–

ROADWAY

DESCRIPTION	UNIT	PUBLIC	PRIVATE
CURB & GUTTER (TYPE "L" & "A")	LF	–	373
CURB & GUTTER (30" ROLL TYPE)	LF	–	5,825
CROSS GUTTER	SF	2,875	–
SIDEWALK 4"	SF	–	10,875
SIDEWALK RAMP	EA	–	15
TYPE II GRAVEL BASE	CY	–	1,330
2" ASPHALTIC CONCRETE PAVING	SY	–	11,960
PVMT BUTTON (REFLECTIVE)	EA	–	6
SURVEY MONUMENTS	EA	–	38

DRAINAGE

DESCRIPTION	UNIT	PUBLIC	PRIVATE
24" STORM DRAIN	LF	625	–
30" STORM DRAIN	LF	455	–
36" STORM DRAIN	LF	216	–
54" STORM DRAIN	LF	117	–
10.0' CM2 DROP INLET	EA	1	–
10.0' DM2 DROP INLET	EA	3	–
15.0' CM2 DROP INLET	EA	1	–
15.0' DM2 DROP INLET	EA	2	–
48" SD MANHOLE	EA	8	–
60" SD MANHOLE	EA	4	–

DRY UTILITIES AND OTHER IMPROVEMENTS

DESCRIPTION	UNIT	PUBLIC	PRIVATE
EXCAVATION & EMBANKMENT	CY	–	139,538
CABLE TO LOTS (RES SUBDIV ONLY)	EA	–	54
GAS TO LOTS (RES SUBDIV ONLY)	EA	–	54
PHONE TO LOTS (RES SUBDIV ONLY)	EA	–	54
POWER TO LOTS (RES SUBDIV ONLY)	EA	–	54

BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE:LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 — FIRST APPROVAL DATE: _____

LVVWD APPROVED FIRE FLOW: TOTAL 1,500 GPM / ON-SITE 30 GPM

L# XXX-XXXXX | CLV DWG#

ENGINEER - STATE OF NEVADA — WESLEY T. PETTY — 6/21/2021 — No. 16369 — CIVIL

DATE: 07-16-20

BID SET

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE

PROJECT NO. 764-A173-001

DESIGN: ____ DRAWN: ____ CHECK: ____

PLOT DATE: 07-16-20 PLOT TIME: 09:59:38

GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

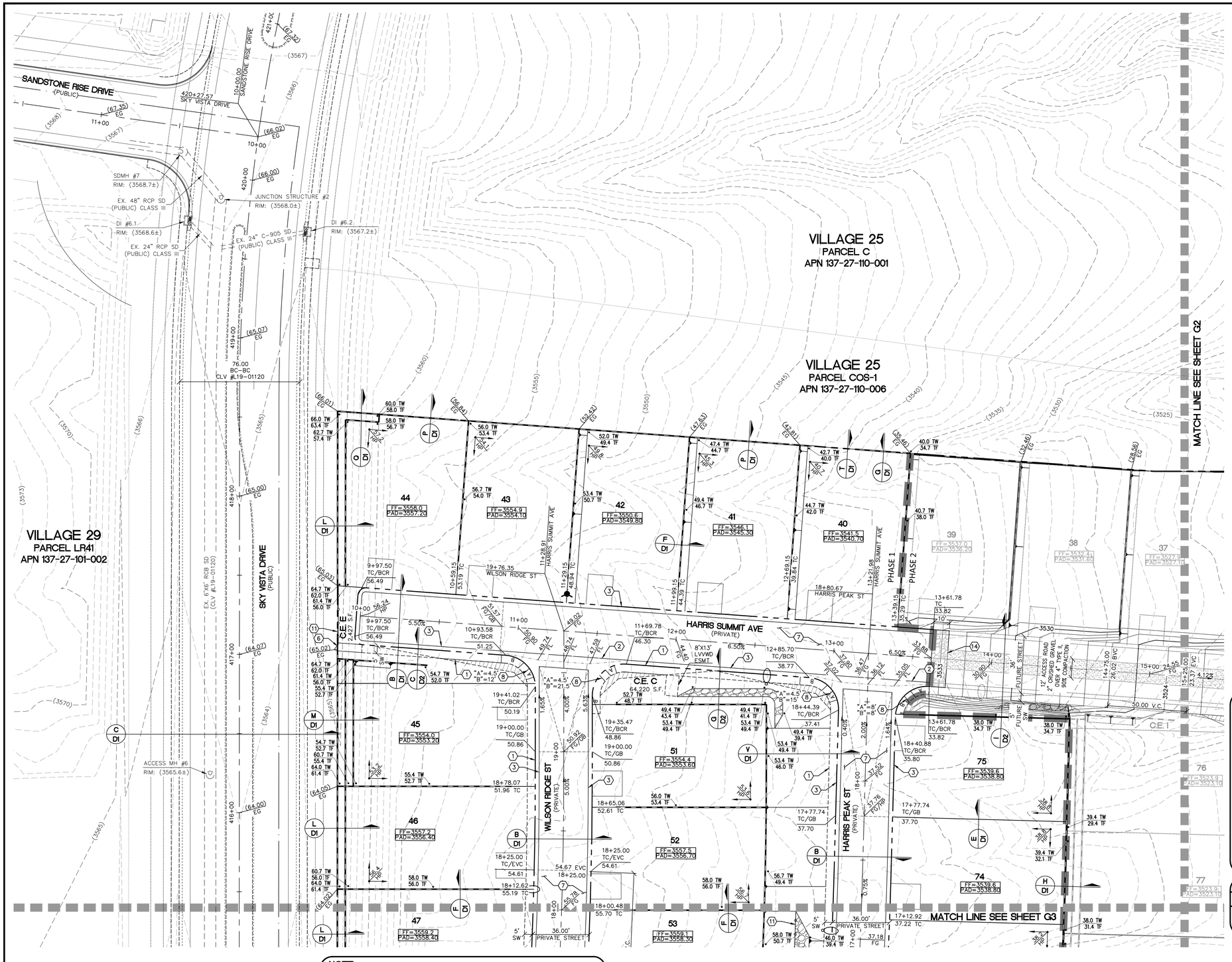
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Nicholas DeRosa

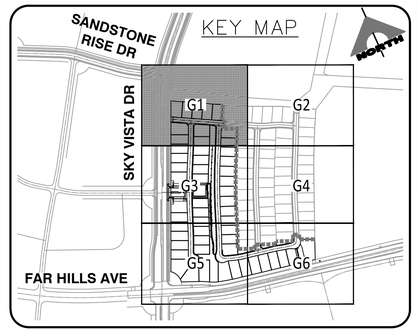
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

LEGEND, ABBREVIATIONS AND QUANTITIES

DRAWING
C3
3 OF 33 SHTS





30' 0' 15' 30' 60'

SCALE: 1" = 30'

NORTH

EARTHWORKS

CUT-RAW	FILL-RAW
79,705 CY	139,538 CY

CONSTRUCTION NOTES

1. CONSTRUCT CONCRETE SIDEWALK PER SUMMERLIN STD DWG NO. S-72 & S-48.
2. CONSTRUCT 8' WIDE VALLEY GUTTER PER SUMMERLIN STD DWG NO. S-64.
3. CONSTRUCT ROLL CURB PER SUMMERLIN STD DWG NO. S-48.
4. CONSTRUCT MEDIAN "A" TYPE PER SUMMERLIN STD DWG NO. S-50.
5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244-LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
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LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

DRAINAGE STUDY COMPLIANCE

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY DS05267 ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT

07-16-20
WESLEY T. PETTY, P.E. — DATE
NEVADA PE #16369

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L# XXX-XXXXX | CLV DWG#

BID SET

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE
						07-16-20

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:00:18

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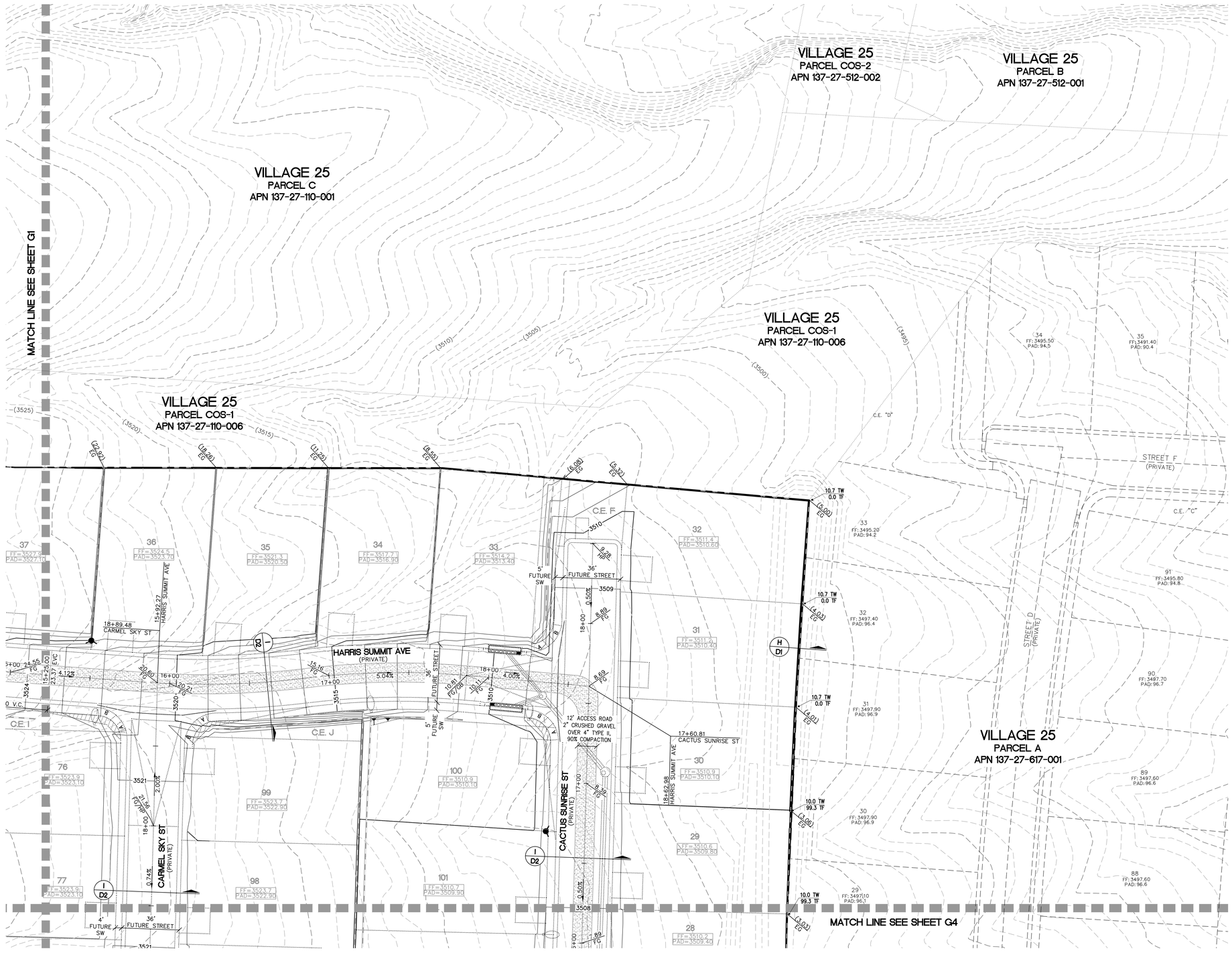
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Nicholas DeRosa

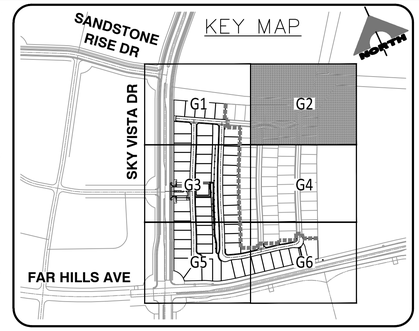
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

GRADING PLAN 1

DRAWING
G1
4 OF 33 SHTS





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07–16–20

WESLEY T. PETTY, P.E. — DATE
NEVADA PE #16369

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L# XXX–XXXXX | CLV DWG#

STATE OF NEVADA — PROFESSIONAL ENGINEER — WESLEY T. PETTY — 7/31/2021 — No. 16369

BID SET

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE
						07–16–20

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07–16–20
PLOT TIME: 10:00:31

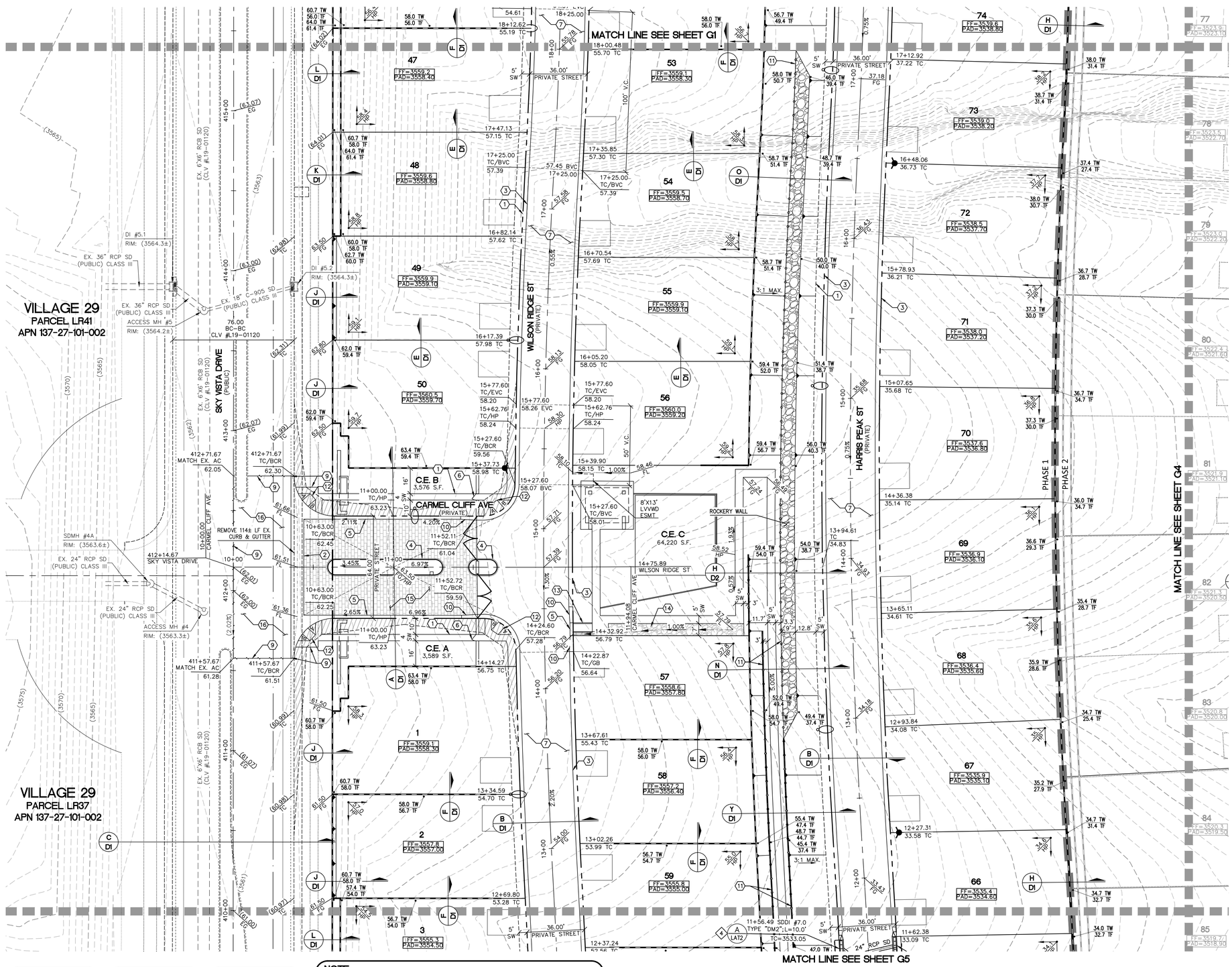
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P:\Projects\700\764–a173–001\GWC\production\Phase 1\764–A173–G0–Ph1.dwg
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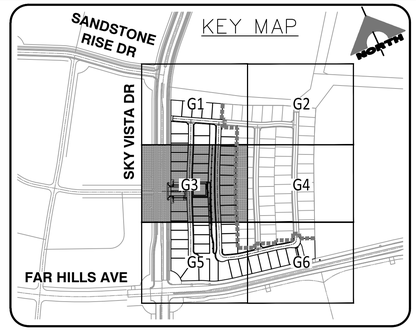
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

GRADING PLAN 2

DRAWING
G2
5 OF 33 SHTS





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L# XXX-XXXXX | CLV DWG#

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PROJECT NO. 764-A173-001
DESIGN:
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PLOT DATE: 07-16-20
PLOT TIME: 10:00:42

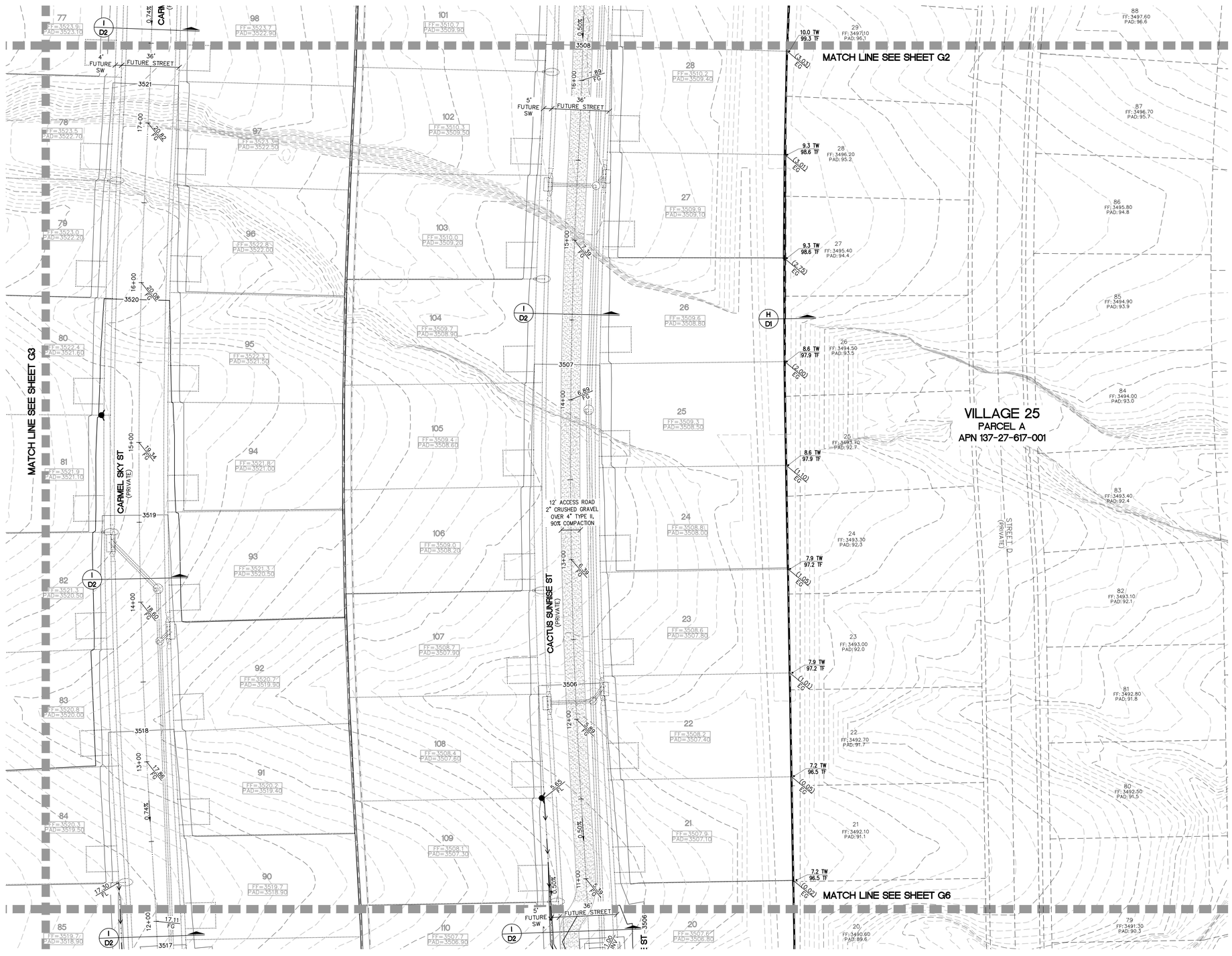
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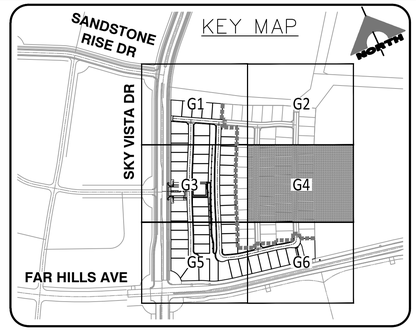
BID SET
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Nicholas DeRosa

PULTE HOMES
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PARCEL D - PHASE 1
GRADING PLAN 3

DRAWING G3
6 OF 33 SHTS





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LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T50S,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

DRAINAGE STUDY COMPLIANCE

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY DS05267 ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT

07-16-20

WESLEY T. PETTY, P.E. — DATE
NEVADA PE #16369

Call before you UnderGround 1-702-432-5300 FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig Avoid cutting underground utility lines. It is costly. Call 811 OR 1-800-227-2600

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD 1-702-227-2929

NOTE

ALL STORM DRAIN DROP INLETS PER NEWLY ADOPTED UCSCCA DRAWING NO. 421 (STORMWATER QUALITY MANAGEMENT STAMP AND SIGN DETAIL.)

NOTE

ALL ONSITE STORM DRAINS AND ASSOCIATED STORM FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA.

ALL PRIVATE STREETS ARE P.U.E., PUBLIC DRAINAGE EASEMENT AND PUBLIC SEWER EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

NOTES TO CONTRACTOR

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L# XXX-XXXXX | CLV DWG#

BID SET

DATE: 07-16-20

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:00:52

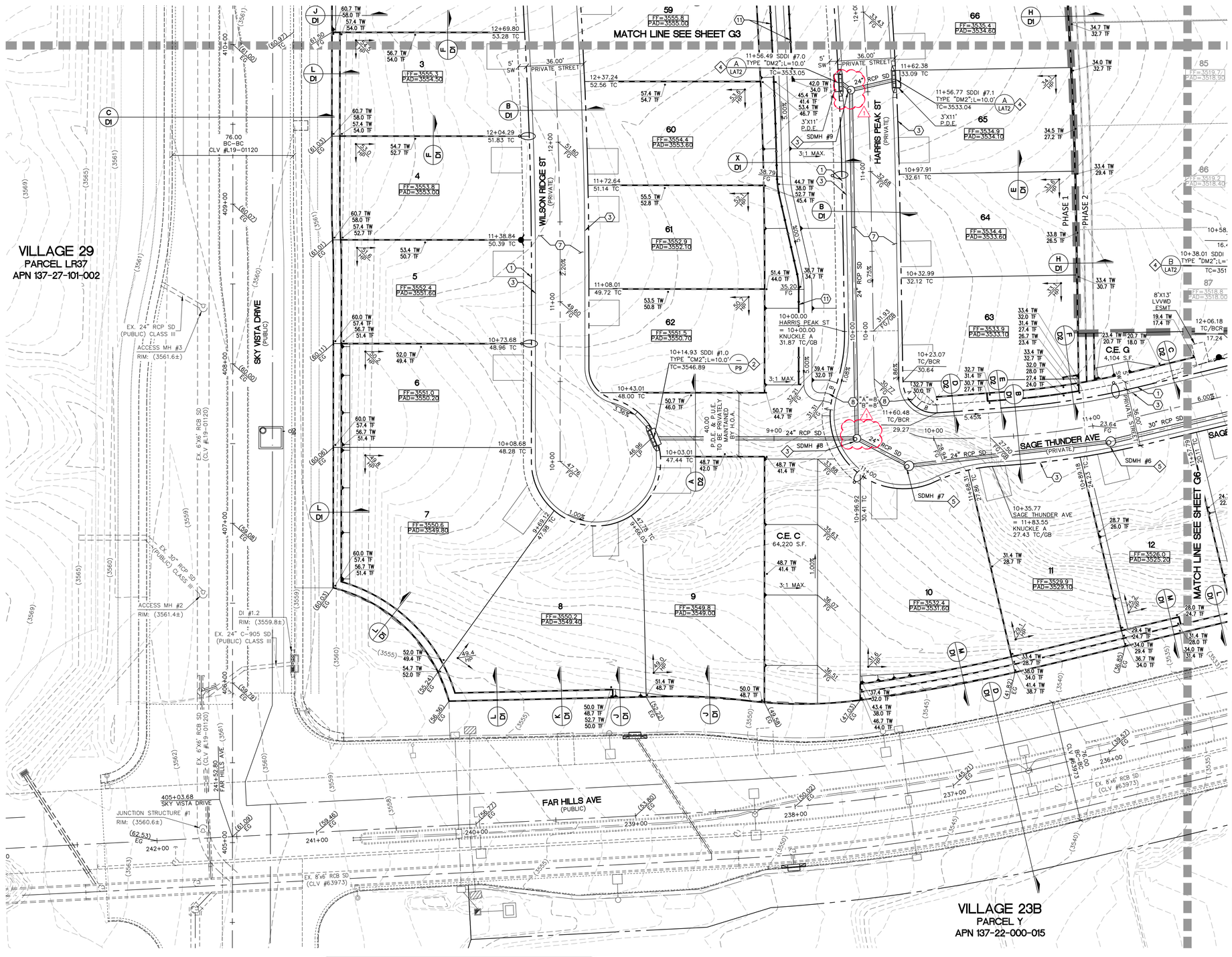
GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com
f:\Projects\700\764-a173-001\GWC\production\Phase 1\764-A173-GD-Ph1.dwg
Nicholas DeRosa

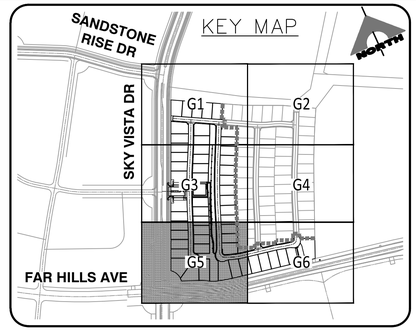
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

GRADING PLAN 4

DRAWING
G4
7 OF 33 SHTS





30' 0' 15' 30' 60'

SCALE: 1" = 30'

NORTH

EARTHWORKS

CUT-RAW	FILL-RAW
79,705 CY	139,538 CY

CONSTRUCTION NOTES

1. CONSTRUCT CONCRETE SIDEWALK PER SUMMERLIN STD DWG NO. S-72 & S-48.
2. CONSTRUCT 8' WIDE VALLEY GUTTER PER SUMMERLIN STD DWG NO. S-64.
3. CONSTRUCT ROLL CURB PER SUMMERLIN STD DWG NO. S-48.
4. CONSTRUCT MEDIAN "A" TYPE PER SUMMERLIN STD DWG NO. S-50.
5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244–LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
9. SAWCUT & MATCH TO EXISTING PAVEMENT. CONTRACTOR SHALL VERIFY EX. LOCATION & PAVEMENT PRIOR TO CONSTRUCTION.
10. CONSTRUCT 10' TRANSITION FROM "L" CURB TO ROLL CURB PER DETAIL 2 ON SHEET D2.
11. CONSTRUCT REMOVABLE WROUGHT IRON FENCE PER USDCCA NO. 425.S1.
12. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE II. SEE PLAN FOR "A" & "B" DIMENSION.
13. CONSTRUCT SIDEWALK RAMP PER DETAIL 3 ON SHEET D2.
14. CONSTRUCT RIP-RAP, D50=12", T=24".
15. CONSTRUCT CONCRETE PAVER AND BAND PER DETAIL 4 ON SHEET D2.
16. CONSTRUCT 4" AC OVER 4" TYPE II BASE.

STORM DRAIN CONSTRUCTION NOTES

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
5. CONSTRUCT 60" TYPE III STORM DRAIN MANHOLE PER STD. DWG 406.1.

BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
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WESLEY T. PETTY, P.E.
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L# XXX-XXXXX | CLV DWG#

STATE OF NEVADA — PROFESSIONAL ENGINEER — WESLEY T. PETTY — 7/31/2021 — No. 16369

BID SET

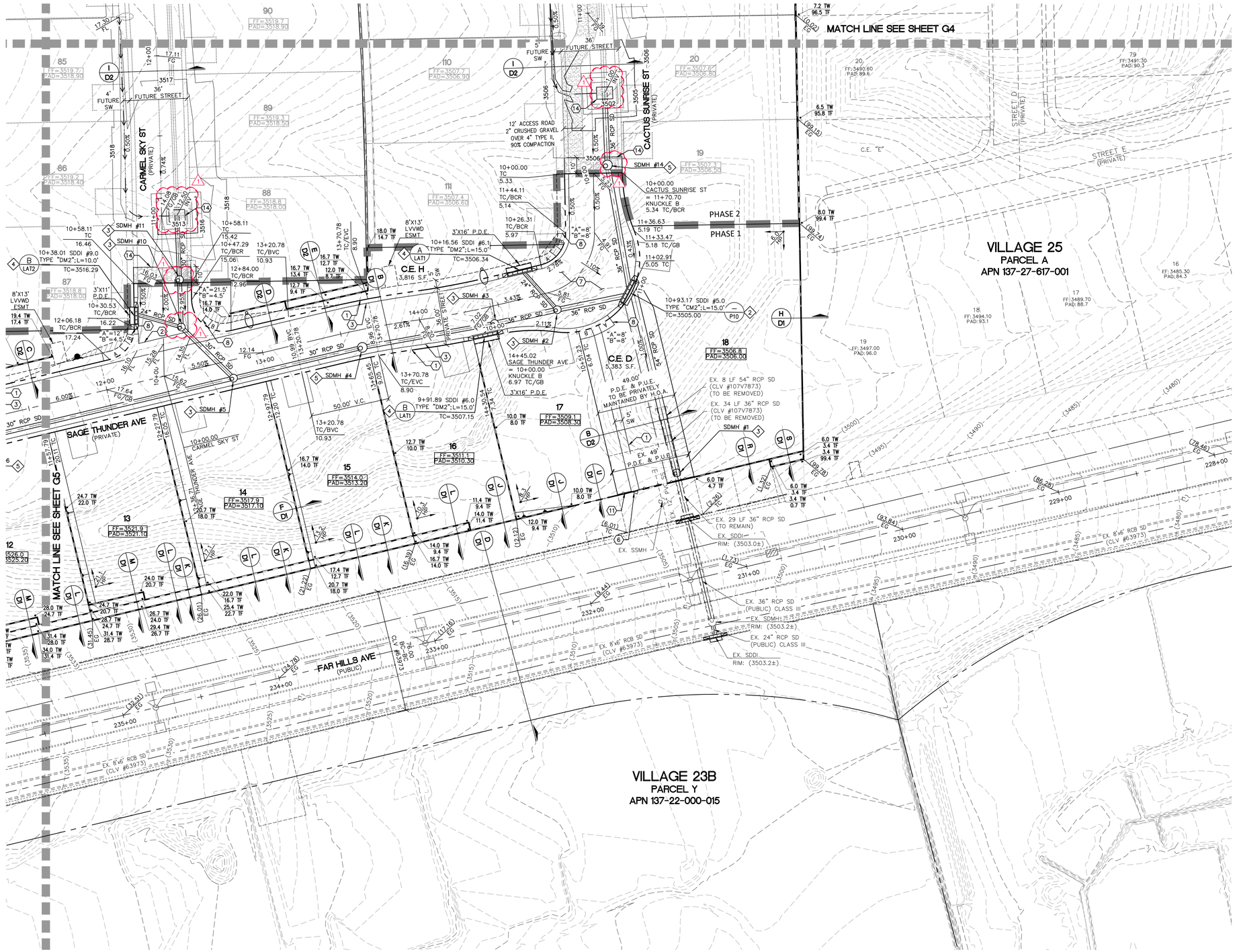
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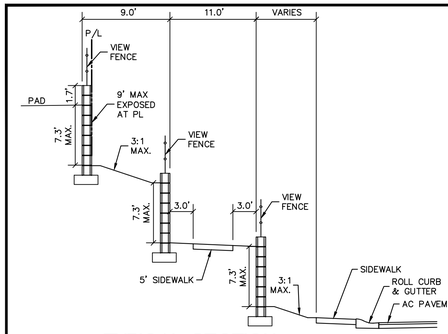
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PROJECT NO. 764-A173-001

GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
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F: 702.804.2299
gcwengineering.com
f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-G5-Ph1.dwg
Nicholas DeRosa

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
GRADING PLAN 5

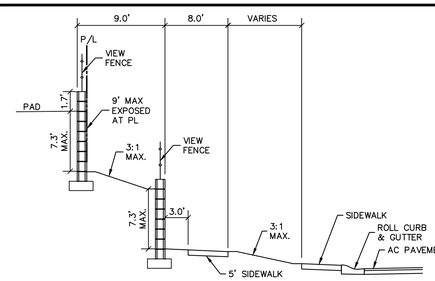
DRAWING G5
8 OF 33 SHTS


MATCH LINE SEE SHEET G4
MATCH LINE SEE SHEET G5
SAGE THUNDER AVE (PRIVATE)
CARMEL SKY ST (PRIVATE)
CACTUS SUNRISE ST (PRIVATE)
FAR HILLS AVE (PUBLIC)
STREET D (PRIVATE)
STREET E (PRIVATE)
PRIVATE STREET
C.E. H 3,816 S.F.
C.E. D 5,383 S.F.
C.E. "E"
PHASE 2
PHASE 1
VILLAGE 25
PARCEL A
APN 137-27-617-001
VILLAGE 23B
PARCEL Y
APN 137-22-000-015
12' ACCESS ROAD 2" CRUSHED GRAVEL OVER 4" TYPE II, 90% COMPACTION
SDMH #1
SDMH #2
SDMH #3
SDMH #4
SDMH #5
SDMH #10
SDMH #11
SDMH #14
EX. 8 LF 54" RCP SD (CLV #107V7873) (TO BE REMOVED)
EX. 34 LF 36" RCP SD (CLV #107V7873) (TO BE REMOVED)
EX. 29 LF 36" RCP SD (TO REMAIN)
EX. SSMH
EX. 36" RCP SD (PUBLIC) CLASS III
EX. SDMH
EX. 24" RCP SD (PUBLIC) CLASS III
EX. SDDI
EX. 8'x6' RCB SD (CLV #63973)
EX. 49' P.D.E. & P.U.E.
49.00' P.D.E. & P.U.E. TO BE PRIVATELY MAINTAINED BY H.O.A.
5' SW
FF=3519.7 PAD=3518.90
FF=3519.2 PAD=3518.40
FF=3519.3 PAD=3518.50
FF=3518.8 PAD=3518.00
FF=3518.8 PAD=3518.00
FF=3507.7 PAD=3506.90
FF=3507.6 PAD=3506.80
FF=3507.3 PAD=3506.50
FF=3507.4 PAD=3506.60
FF=3506.8 PAD=3506.00
FF=3509.1 PAD=3508.30
FF=3511.1 PAD=3510.30
FF=3514.0 PAD=3513.20
FF=3517.9 PAD=3517.10
FF=3521.9 PAD=3521.10
FF=3490.60 PAD:89.6
FF:3491.30 PAD:90.3
FF:3494.10 PAD:93.1
FF:3497.00 PAD:96.0
FF:3489.70 PAD:88.7
FF:3485.30 PAD:84.3
10+00.00 TC 5.33
11+44.11 TC/BCR 5.14
10+26.31 TC/BCR 5.97
10+00.00 CACTUS SUNRISE ST = 11+70.70 KNUCKLE B 5.34 TC/BCR
11+36.63 5.19 TC
11+33.47 5.18 TC/GB
11+02.91 5.05 TC
10+93.17 SDDI #5.0 TYPE "DM2";L=15.0' TC=3505.00
10+16.56 SDDI #6.1 TYPE "DM2";L=15.0' TC=3506.34
9+91.89 SDDI #6.0 TYPE "DM2";L=15.0' TC=3507.15
10+38.01 SDDI #9.0 TYPE "DM2";L=10.0' TC=3516.29
14+45.02 SAGE THUNDER AVE = 10+00.00 KNUCKLE B 6.97 TC/GB
3'X16' P.D.E.
3'X11' P.D.E.
8'X13' LVVWD ESMT
18.0 TW 14.7 TF
19.4 TW 17.4 TF
16.7 TW 14.0 TF
16.7 TW 13.4 TF
12.7 TW 9.4 TF
12.0 TW 8.7 TF
10.0 TW 8.0 TF
12.7 TW 10.0 TF
24.7 TW 22.0 TF
28.0 TW 24.7 TF
31.4 TW 28.0 TF
34.0 TW 31.4 TF
24.0 TW 20.7 TF
28.7 TW 24.7 TF
31.4 TW 28.7 TF
26.7 TW 24.0 TF
29.4 TW 26.7 TF
22.0 TW 16.7 TF
25.4 TW 22.7 TF
17.4 TW 12.7 TF
20.7 TW 18.0 TF
14.0 TW 9.4 TF
16.7 TW 14.0 TF
11.4 TW 9.4 TF
14.0 TW 11.4 TF
12.0 TW 9.4 TF
6.0 TW 4.7 TF
6.0 TW 3.4 TF
3.4 TW 0.7 TF
7.2 TW 96.5 TF
6.5 TW 95.8 TF
8.0 TW 99.4 TF
6.0 TW 3.4 TF
3.4 TW 99.4 TF
3.4 TW 99.4 TF
6.0 TW 3.4 TF
3.4 TW 0.7 TF
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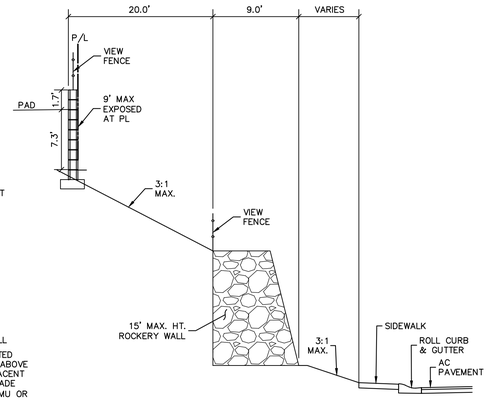
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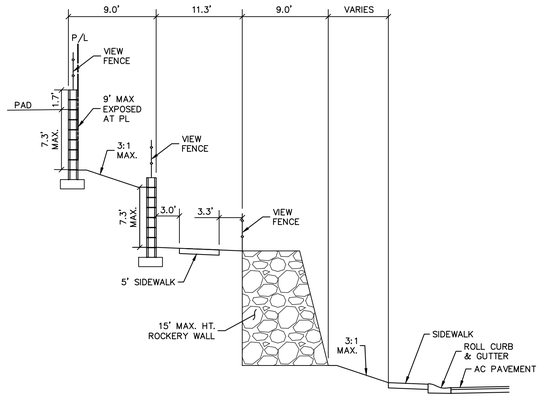
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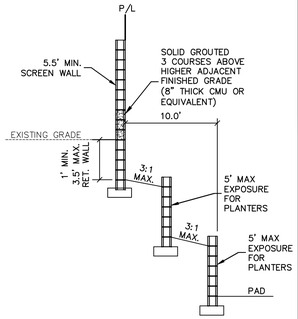
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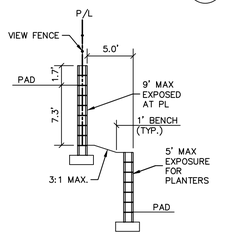
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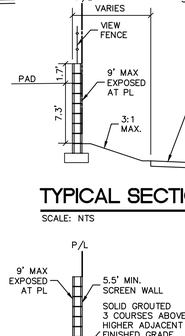
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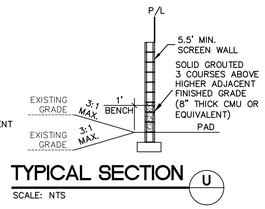
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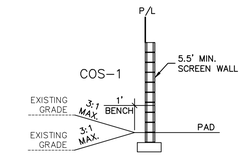
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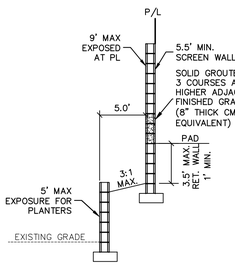
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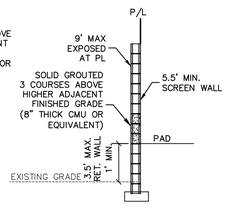
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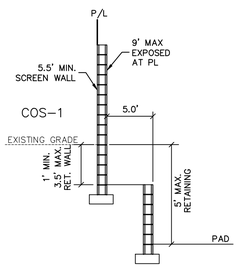
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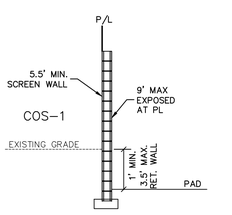
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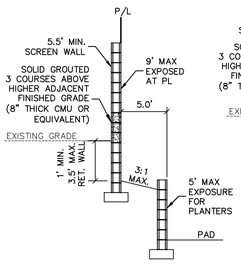
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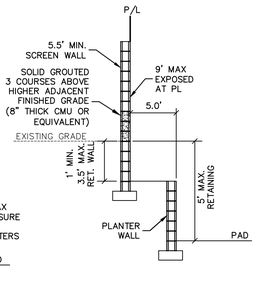
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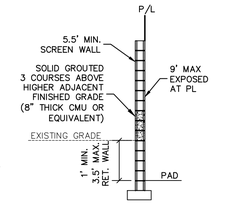
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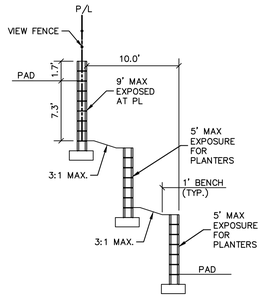
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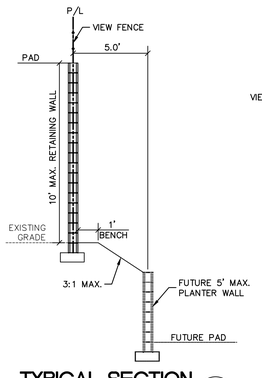
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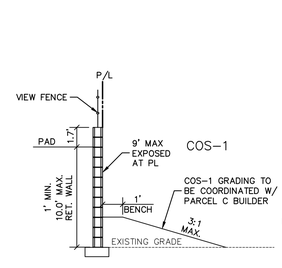
TYPICAL SECTION I

SCALE: NTS



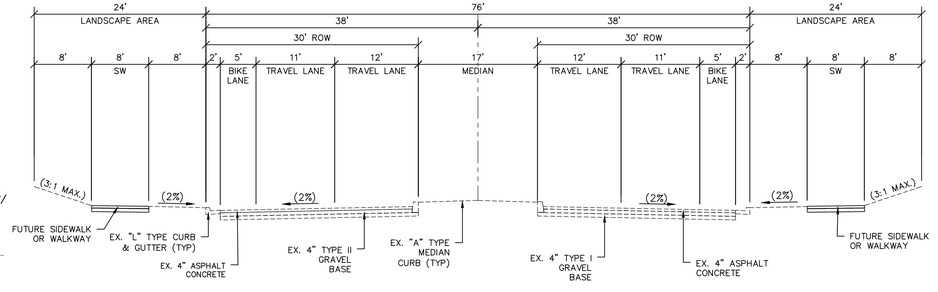
TYPICAL SECTION H

SCALE: NTS



TYPICAL SECTION G

SCALE: NTS



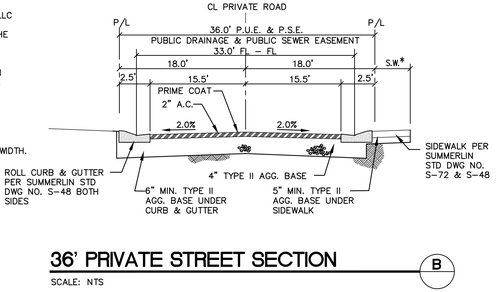
FAR HILLS AVE (PUBLIC)

SCALE: NTS

NOTE: ALL AGGREGATE BASES SHALL BE COMPACTED PER SOILS REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC #15244-LVR. PRELIMINARY PAVEMENT SECTIONS SHALL BE VERIFIED WITH THE FINAL PAVEMENT SECTION RECOMMENDATION REPORT PRIOR TO CONSTRUCTION. IF FINAL PAVEMENT SECTIONS ARE DIFFERENT, A REVISION TO THE IMPROVEMENT PLANS WILL BE REQUIRED.

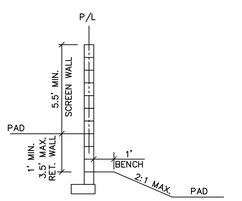
*SIDEWALK NOTE

SIDEWALK WIDTH SHALL BE 5 FT FOR PRIMARY STREETS AND 4 FT FOR SECONDARY AND TERTIARY STREETS. SEE PLAN FOR PROPOSED SIDEWALK WIDTH.



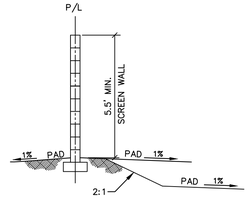
36' PRIVATE STREET SECTION

SCALE: NTS



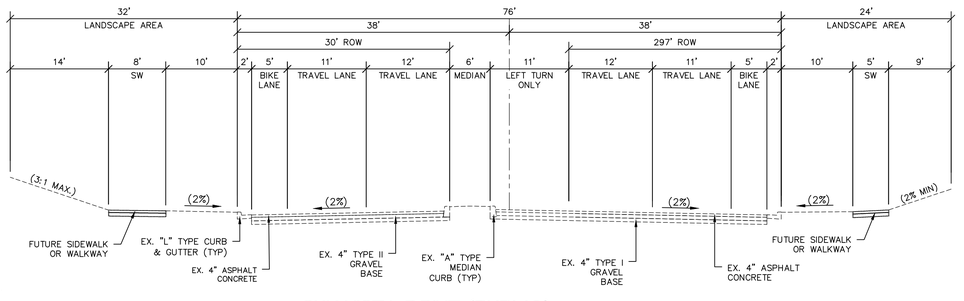
TYPICAL SECTION F

SCALE: NTS



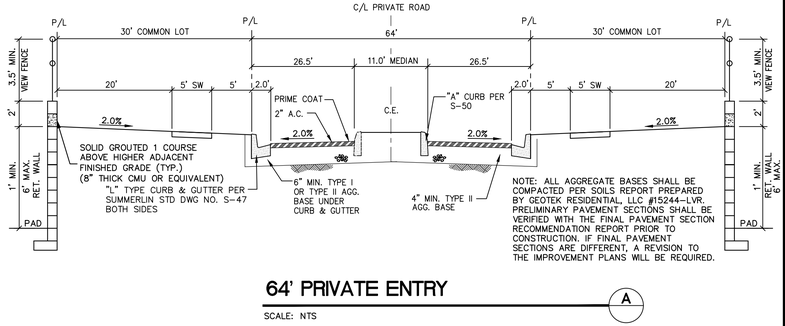
TYPICAL SECTION E

SCALE: NTS



SKY VISTA DRIVE (PUBLIC)

SCALE: NTS



64' PRIVATE ENTRY

SCALE: NTS

L# XXX-XXXXX | CLV DWG#

BID SET

ENGINEER - STATE OF NEVADA - WESLEY T. PETTY - 13161 - 1/31/2021 - PROFESSIONAL ENGINEER

DATE: 07-16-20

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001

DESIGN:
DRAWN:
CHECK:

PLOT DATE: 07-16-20
PLOT TIME: 10:01:24

GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-01-Ph1.dwg
Nicholas DeRosa

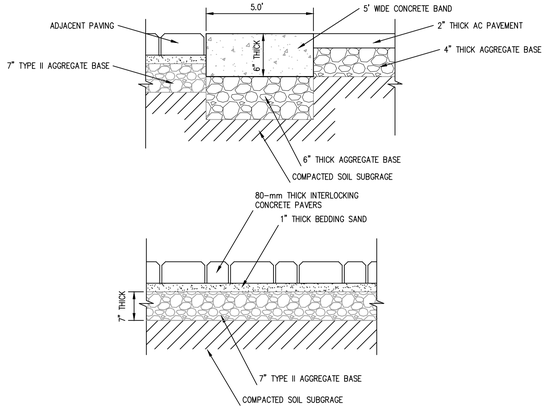
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

GRADING SECTIONS & DETAILS 1

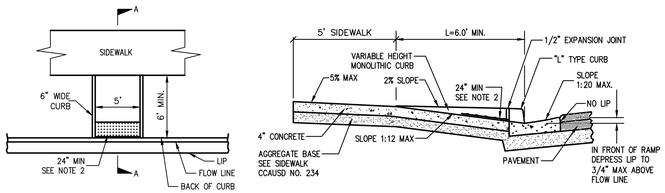
DRAWING D1

10 OF 33 SHTS



CONCRETE PAVER AND BAND 4

SCALE: NTS



SIDEWALK RAMP **SECTION A-A**

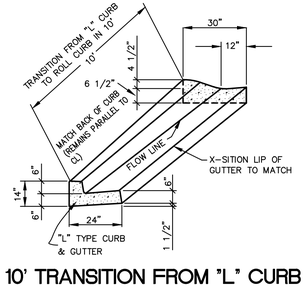
NOTES:

1. FLOWLINE IS TO BE MAINTAINED ACROSS RAMP AREA.

2. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF CCAUSD DRAWING NO. 235 AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING THE FULL WIDTH OF THE RAMP AND EXTENDING A MINIMUM DISTANCE OF 24 INCHES UP THE RAMP.

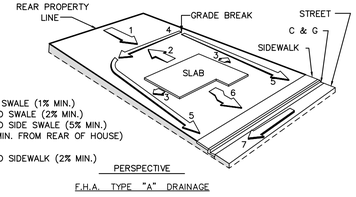
SIDEWALK RAMP DETAIL 3

SCALE: NTS



10' TRANSITION FROM "L" CURB TO ROLL CURB 2

SCALE: NTS



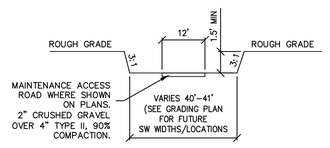
NOTES:

1. SLOPE FROM REAR TO SWALE (1% MIN.)
2. SLOPE FROM HOUSE TO SWALE (2% MIN.)
3. SLOPE FROM HOUSE TO SIDE SWALE (5% MIN.)
4. REAR SWALE 1% (10' MIN. FROM REAR OF HOUSE)
5. SIDE SWALE 1%
6. SLOPE FROM HOUSE TO SIDEWALK (2% MIN.)
7. SLOPE OF STREET

F.H.A. TYPE "A" DRAINAGE

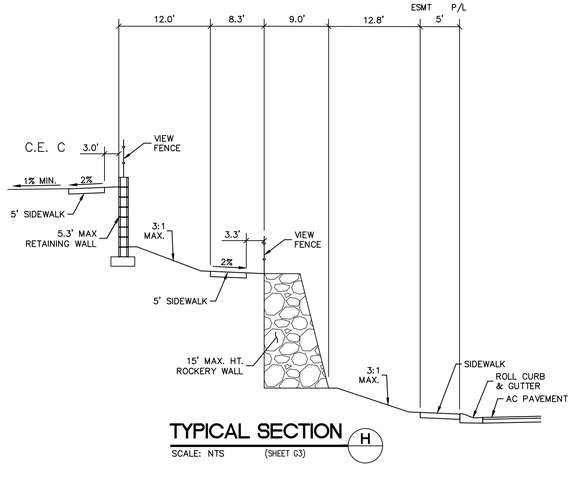
TYPICAL TYPE "A" DRAINAGE DETAIL 1

SCALE: NTS



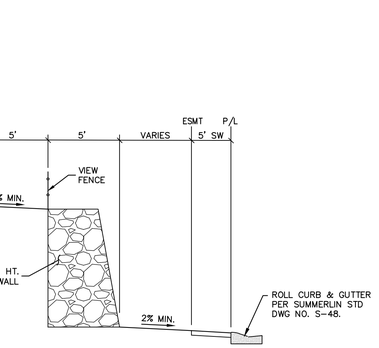
ROUGH GRADE STREET SECTION I

SCALE: NTS (SHEETS G1-G2, G4, G6)



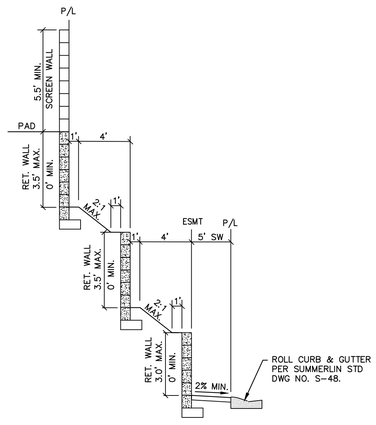
TYPICAL SECTION H

SCALE: NTS (SHEET G3)



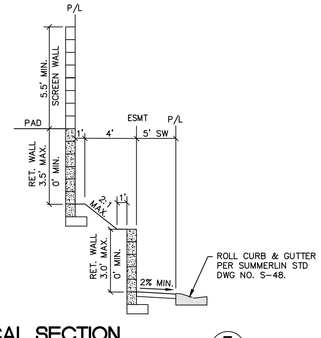
TYPICAL SECTION G

SCALE: NTS (SHEET G1)



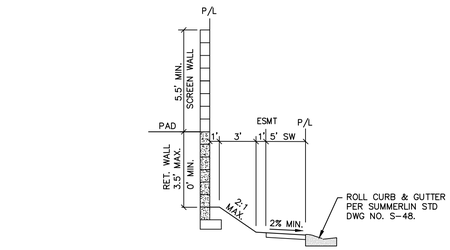
TYPICAL SECTION F

SCALE: NTS (SHEETS G5)



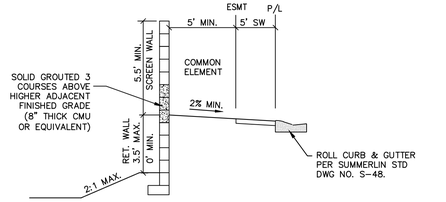
TYPICAL SECTION E

SCALE: NTS (SHEETS G5-G6)



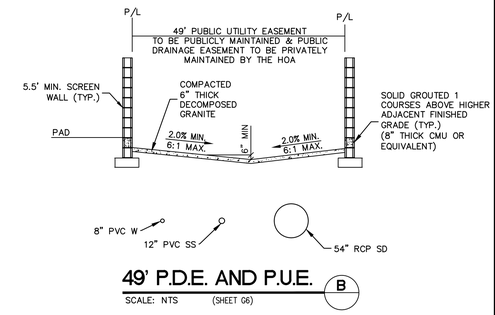
TYPICAL SECTION D

SCALE: NTS (SHEETS G5-G6)



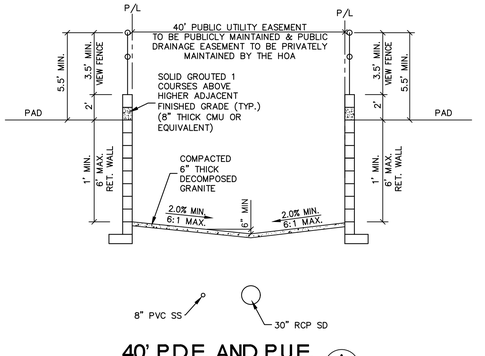
TYPICAL SECTION C

SCALE: NTS (SHEETS G1, G5-G6)



49' P.D.E. AND P.U.E. B

SCALE: NTS (SHEET G6)



40' P.D.E. AND P.U.E. A

SCALE: NTS (SHEET G5)

L# XXX-XXXXX | CLV DWG#

BID SET

ENGINEER - STATE OF NEVADA - WESLEY T. PETTY - 21031 - CIVIL - No. 16369 - PROFESSIONAL

DATE: 07-16-20

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE

PROJECT NO. 764-A173-001

DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:01:30

GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

f:\Projects\700\764-a173-001\GWE\production\Phase 1\764-A173-DT-Ph1.dwg
Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

GRADING SECTIONS & DETAILS 2

DRAWING D2

11 OF 33 SHTS



PLAN AND PROFILE

VERT.: 1" = 3'
HOR. : 1" = 30'

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

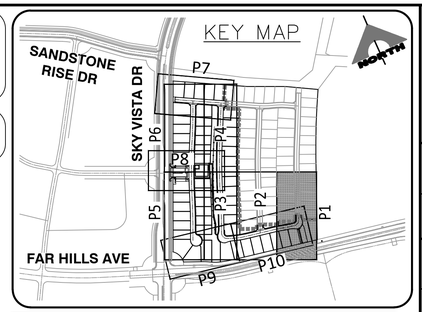
DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN MINUMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

FAST
Call before you UnderGround
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929



CONSTRUCTION NOTES

1. CONSTRUCT CONCRETE SIDEWALK PER SUMMERLIN STD DWG NO. S-72 & S-48.
2. CONSTRUCT 8' WIDE VALLEY GUTTER PER SUMMERLIN STD DWG NO. S-64.
3. CONSTRUCT ROLL CURB PER SUMMERLIN STD DWG NO. S-48.
4. CONSTRUCT MEDIAN "A" TYPE PER SUMMERLIN STD DWG NO. S-50.
5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244–LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
9. SAWCUT & MATCH TO EXISTING PAVEMENT. CONTRACTOR SHALL VERIFY EX. LOCATION & PAVEMENT PRIOR TO CONSTRUCTION.
10. CONSTRUCT 10' TRANSITION FROM "L" CURB TO ROLL CURB PER DETAIL 2 ON SHEET D2.
11. CONSTRUCT REMOVABLE WROUGHT IRON FENCE PER USDCCA NO. 425.S1.
12. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE II. SEE PLAN FOR "A" & "B" DIMENSION.
13. CONSTRUCT SIDEWALK RAMP PER DETAIL 3 ON SHEET D2.
14. CONSTRUCT RIP-RAP, D50=12", T=24".
15. CONSTRUCT CONCRETE PAVER AND BAND PER DETAIL 4 ON SHEET D2.
16. CONSTRUCT 4" AC OVER 4" TYPE II BASE.

STORM DRAIN CONSTRUCTION NOTES

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
5. CONSTRUCT 60" TYPE III STORM DRAIN MANHOLE PER STD. DWG 406.1.

NOTE:

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCE/ WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

NOTE

ALL ONSITE STORM DRAINS AND ASSOCIATED STORM FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA.

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BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

ENGINEER – STATE OF NEVADA
WESLEY T. PETTY
No. 16369
PROFESSIONAL ENGINEER
6/21/2021
DATE: 07-16-20

BID SET

REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SDMH RELOCATION PER CLV				

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:02:47

GCW
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
ENGINEERS \ SURVEYORS gcwengineering.com

f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-PP-NS-P1.dwg
Nicholas DeRosa

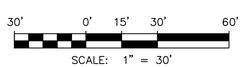
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

CACTUS SUNRISE ST PLAN & PROFILE 8+00 TO 13+00

DRAWING
P1
12 OF 33 SHTS





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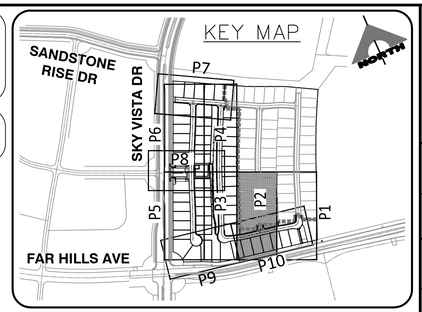
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OR
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FAST
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LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

ENGINEER – STATE OF NEVADA
WESLEY T. PETTY
No. 16369
PROFESSIONAL ENGINEER
1/31/2021
DATE: 07–16–20

BID SET

REV	DATE	DESCRIPTION	APP
1	07/16/20	SDMH RELOCATION PER CLV	GCW

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07–16–20
PLOT TIME: 10:03:06

GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

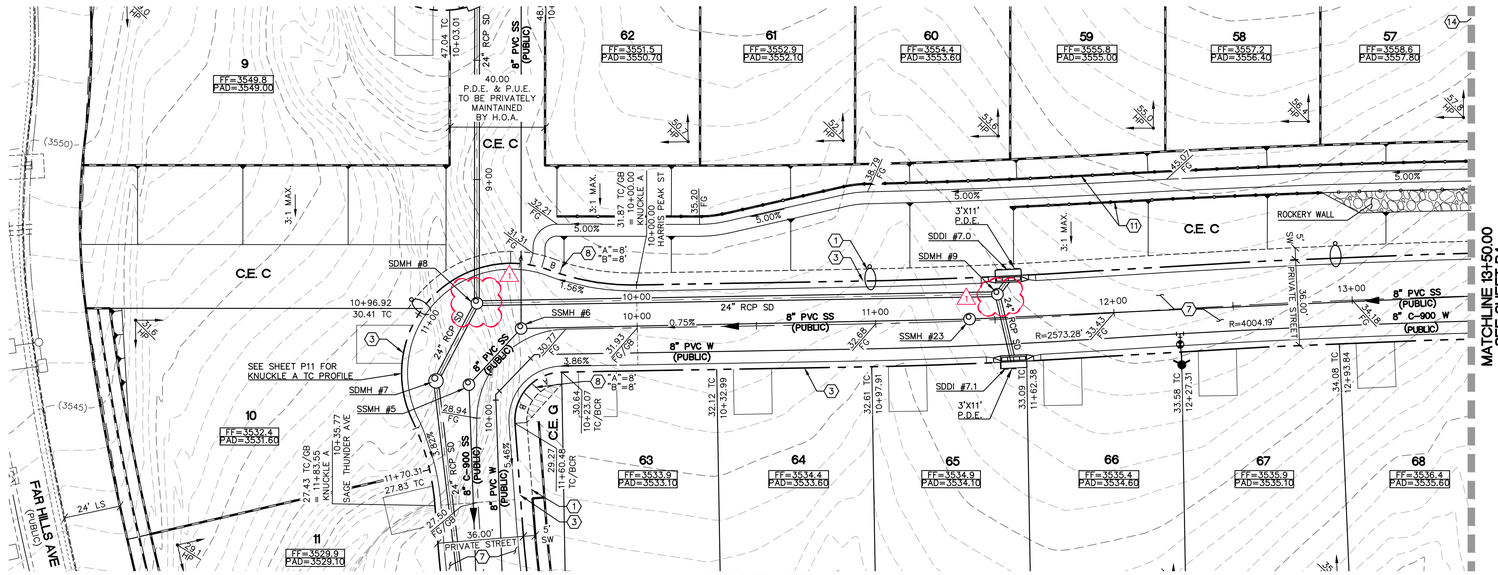
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Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

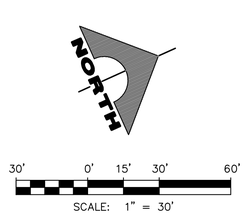
CARMEL SKY ST PLAN & PROFILE 9+50 TO 14+00

DRAWING
P2
13 OF 33 SHTS



PLAN AND PROFILE

VERT.: 1" = 3'
HOR. : 1" = 30'



DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

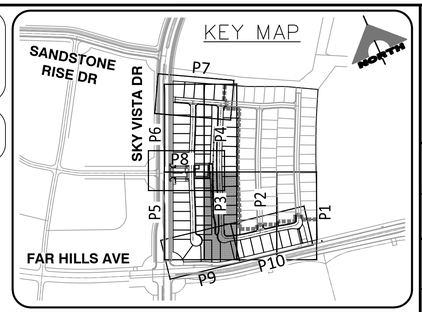
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244–LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
9. SAWCUT & MATCH TO EXISTING PAVEMENT. CONTRACTOR SHALL VERIFY EX. LOCATION & PAVEMENT PRIOR TO CONSTRUCTION.
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3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
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NOTE:

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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

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SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

ENGINEER – STATE OF NEVADA
WESLEY T. PETTY
No. 16369
4/21/2021
PROFESSIONAL ENGINEER
DATE: 07–16–20
BID SET

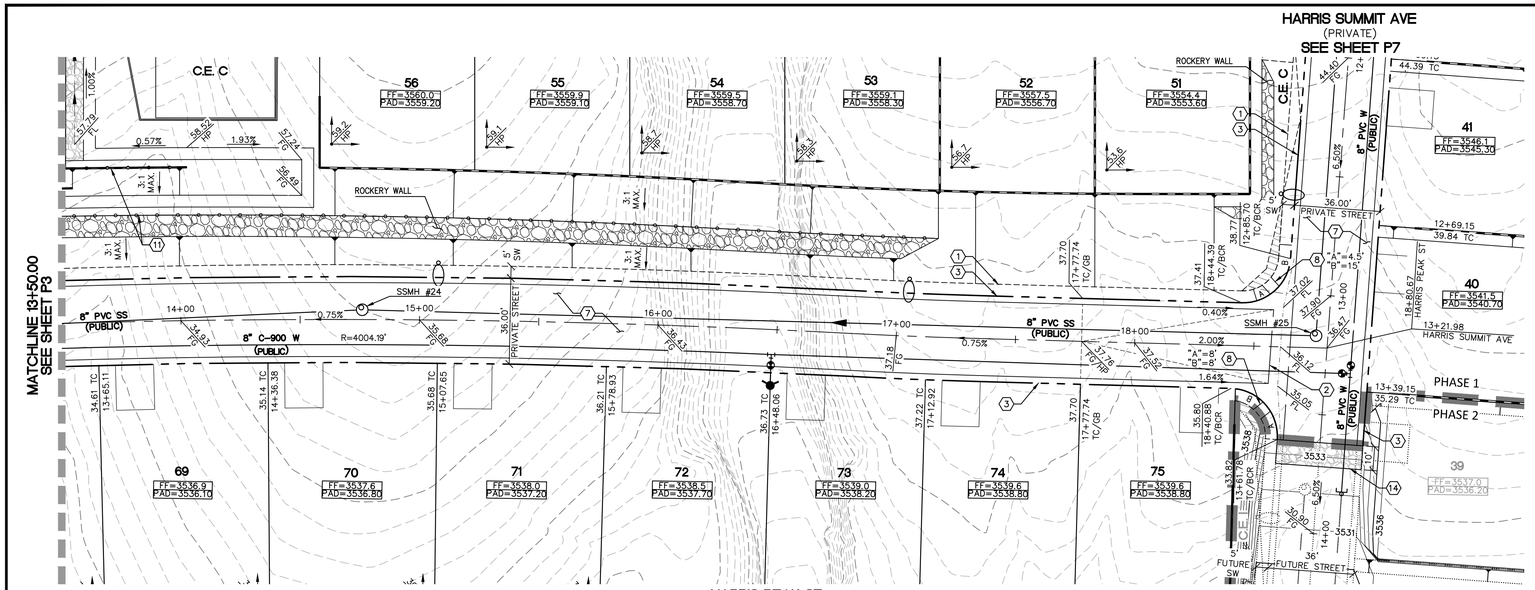
REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SSMH RELOCATION PER CLV				

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07–16–20
PLOT TIME: 10:03:26
P:\764-A173-PP-NS-PLOT.dwg

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LAS VEGAS, NV 89146
T: 702.804.2000
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f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-PP-NS-PLOT.dwg
Nicholas DeRosa

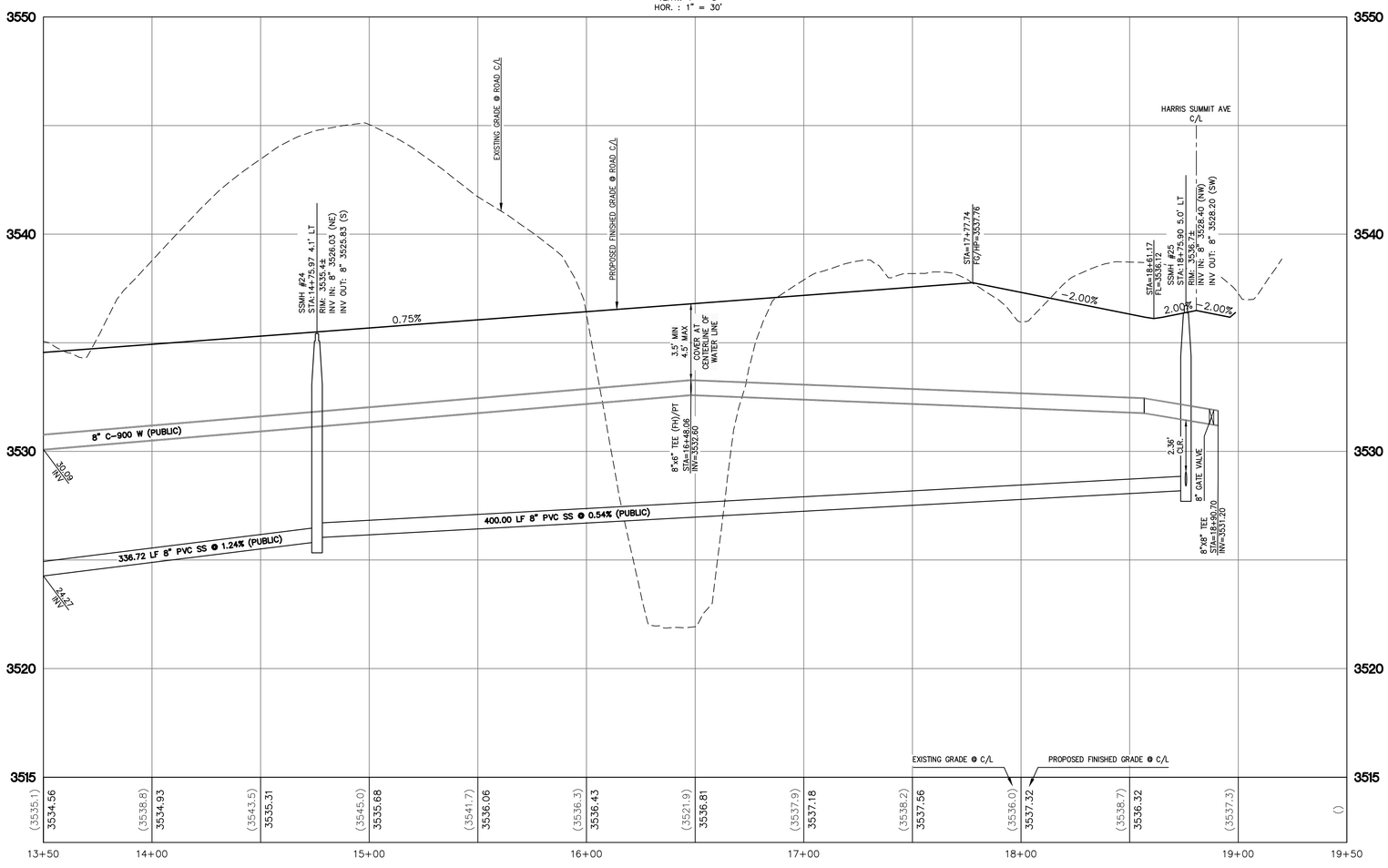
PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
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DRAWING
P3
14 OF 33 SHTS



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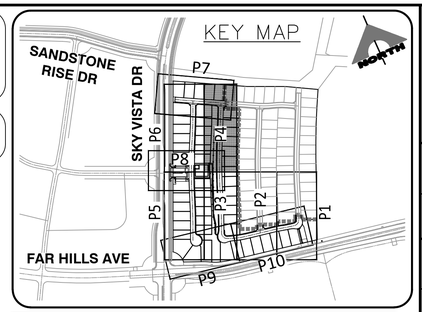
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30' 0' 15' 30' 60'
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L# XXX–XXXXX | CLV DWG#

ENGINEER – STATE OF NEVADA
WESLEY T. PETTY
No. 16369
6/21/2021
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BID SET

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE

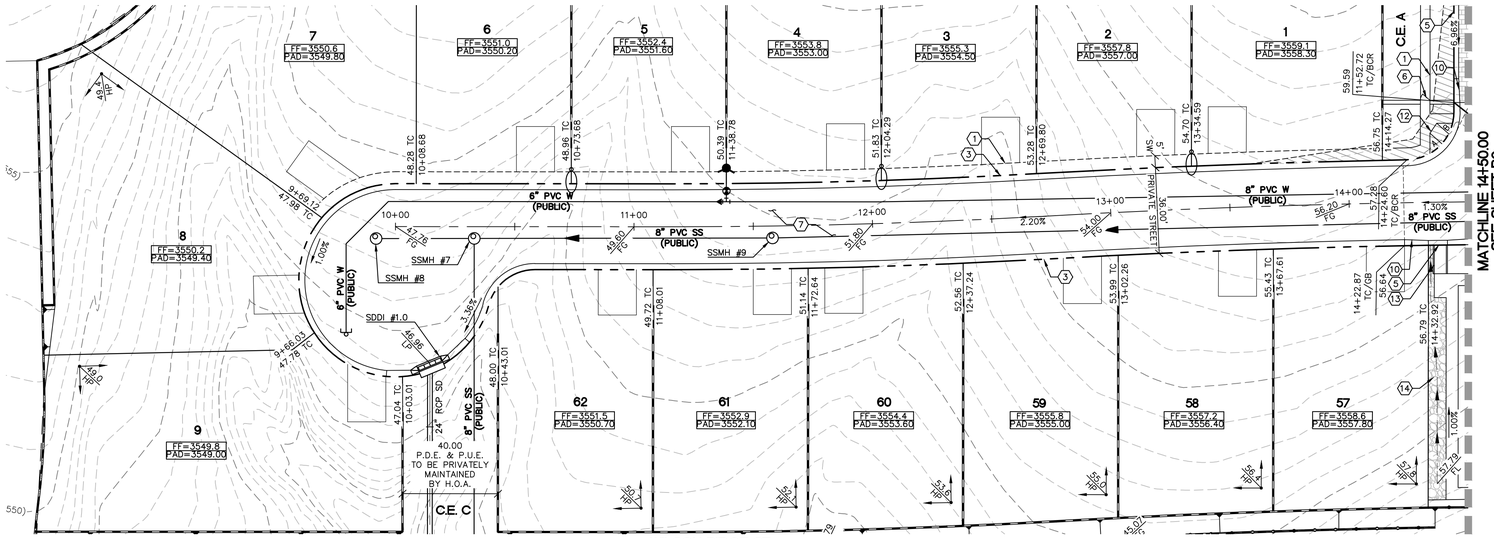
PROJECT NO. 764-A173-001
DESIGN:
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F:\Projects\700\764-a173-001\GWK\production\Phase 1\764-A173-PP-NS-Nicholas DeRosa

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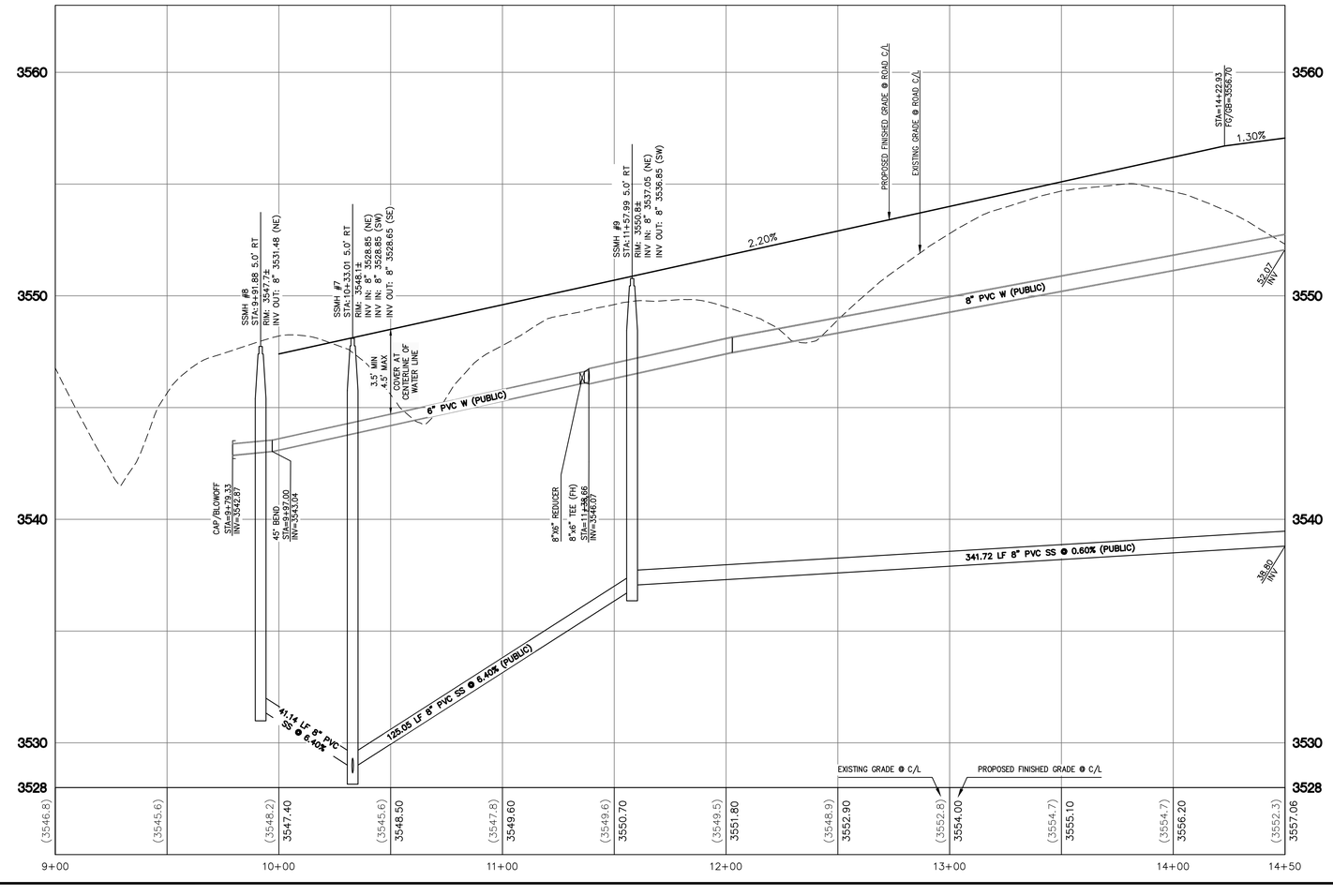
DRAWING
P4
15 OF 33 SHTS



WILSON RIDGE ST
(PRIVATE)

PLAN AND PROFILE

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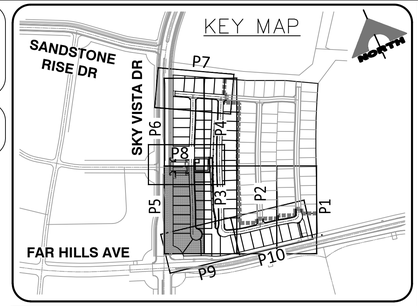
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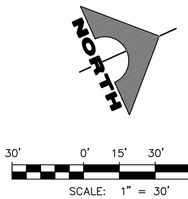


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GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
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2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#



DATE: 07-16-20

BID SET

REV	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE

PROJECT NO. 764-A173-001

DESIGN:
DRAWN:
CHECK:

PLOT DATE: 07-16-20
PLOT TIME: 10:04:05

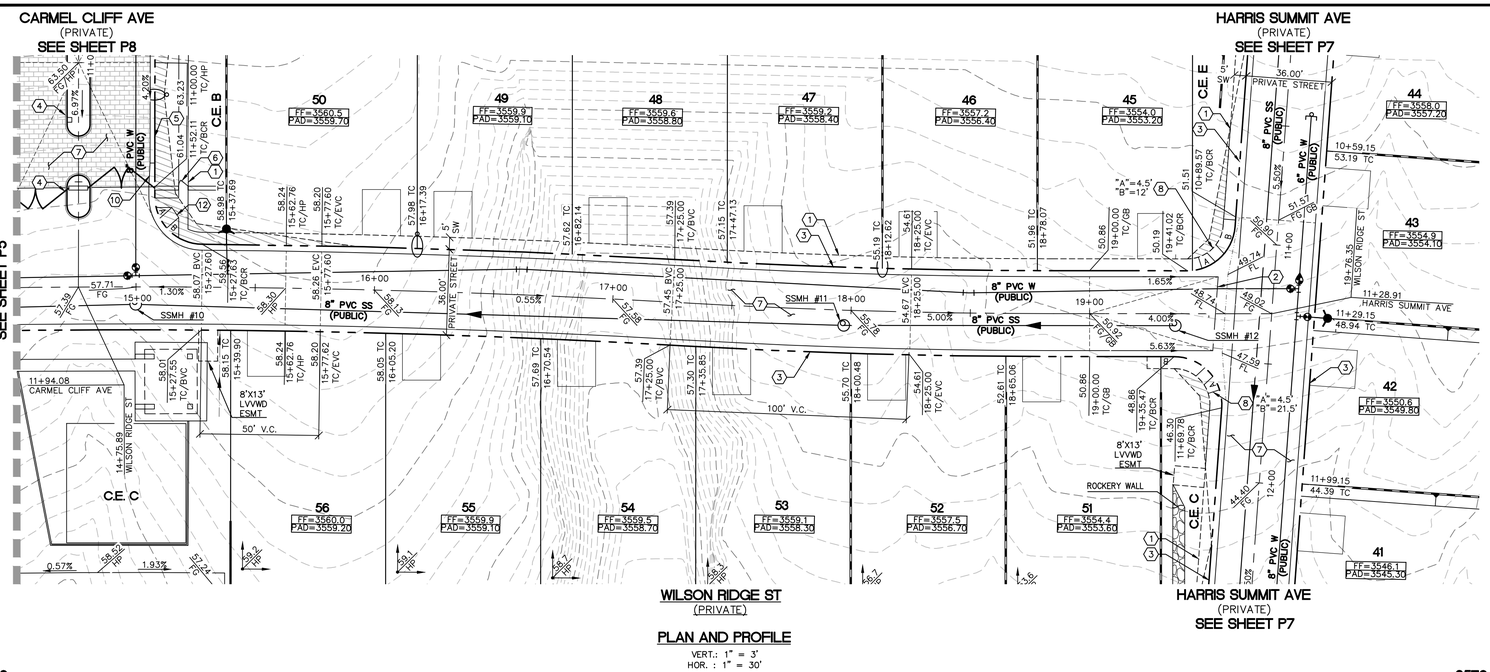
GCW
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com
f: \Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-PP-NS-
Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

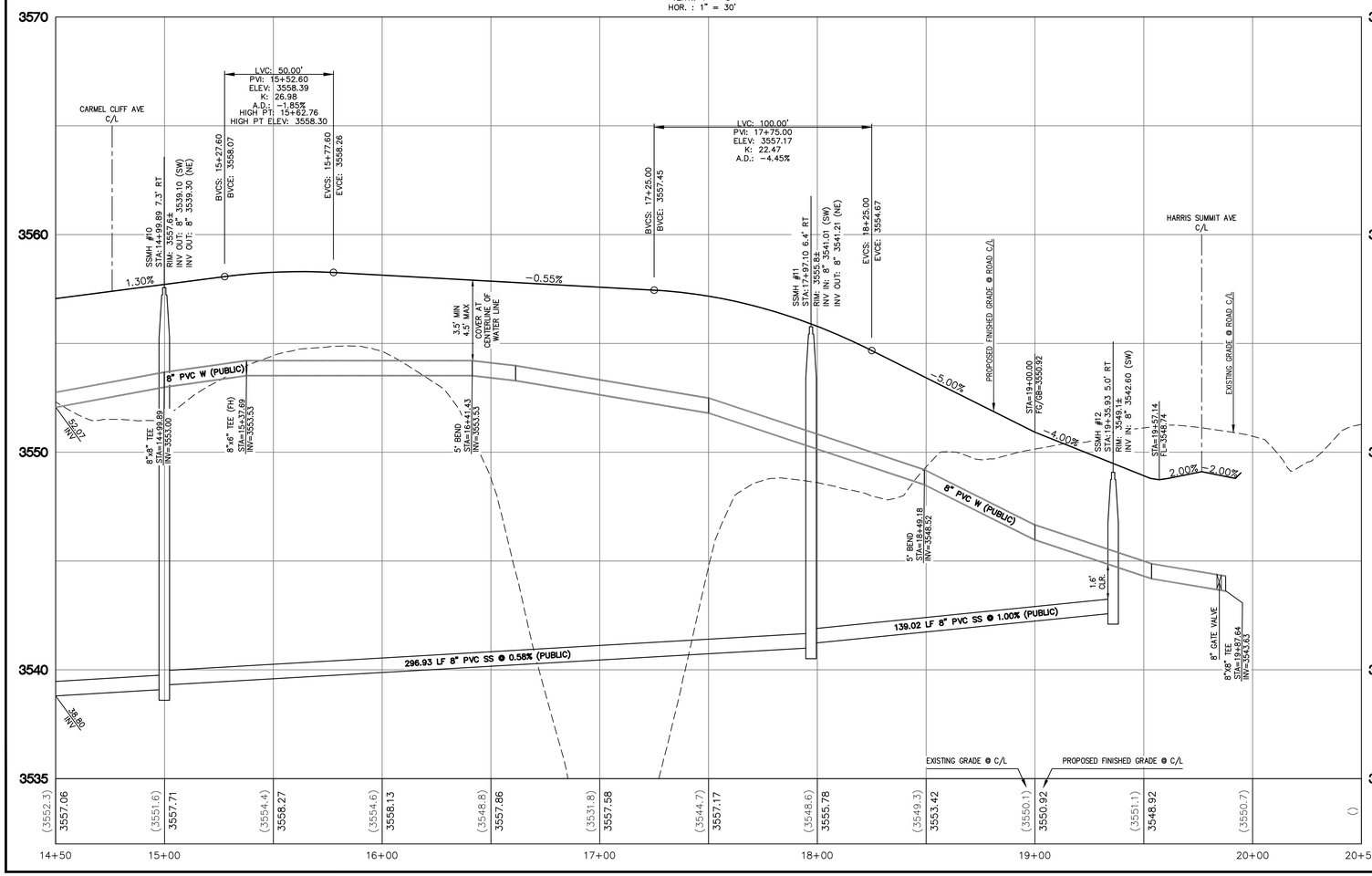
WILSON RIDGE ST PLAN & PROFILE 9+50 TO 14+50

DRAWING
P5
16 OF 33 SHTS



PLAN AND PROFILE

VERT.: 1" = 3'
HOR. : 1" = 30'



DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

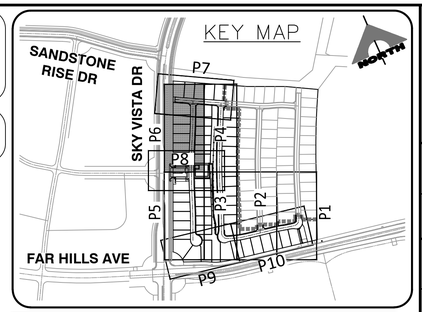
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5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244–LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
9. SAWCUT & MATCH TO EXISTING PAVEMENT. CONTRACTOR SHALL VERIFY EX. LOCATION & PAVEMENT PRIOR TO CONSTRUCTION.
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SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

NORTH
30' 0' 15' 30' 60'
SCALE: 1" = 30'

ENGINEER – STATE OF NEVADA – WESLEY T. PETTY – No. 16369 – 1/31/2021 – RENEWAL 12/31/2021

BID SET

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE: 07-16-20

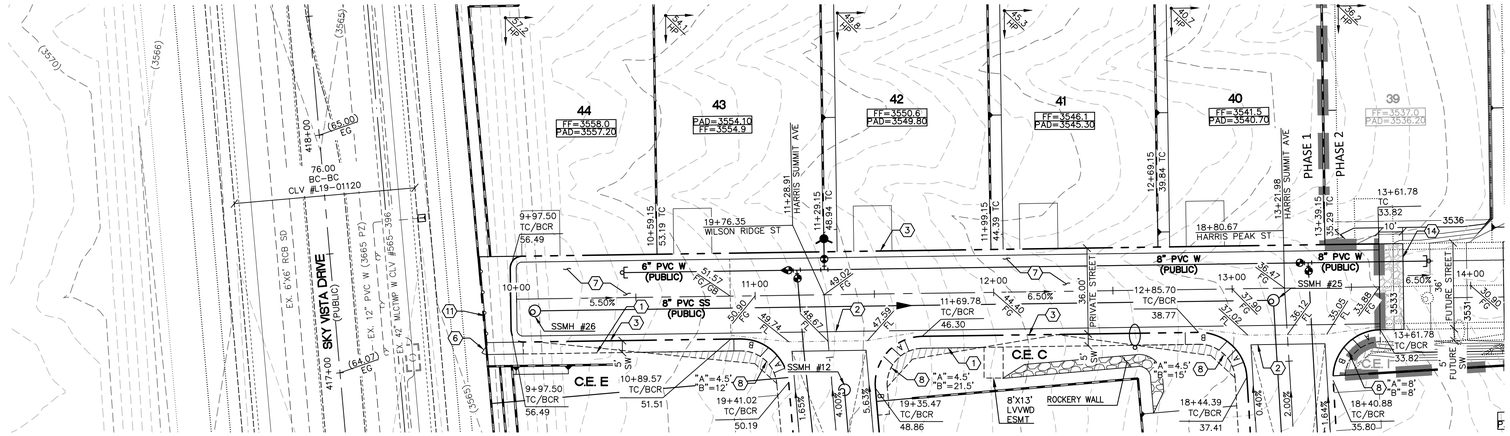
PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:04:25
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Nicholas DeRosa

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PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

WILSON RIDGE ST PLAN & PROFILE 14+50 TO 20+00

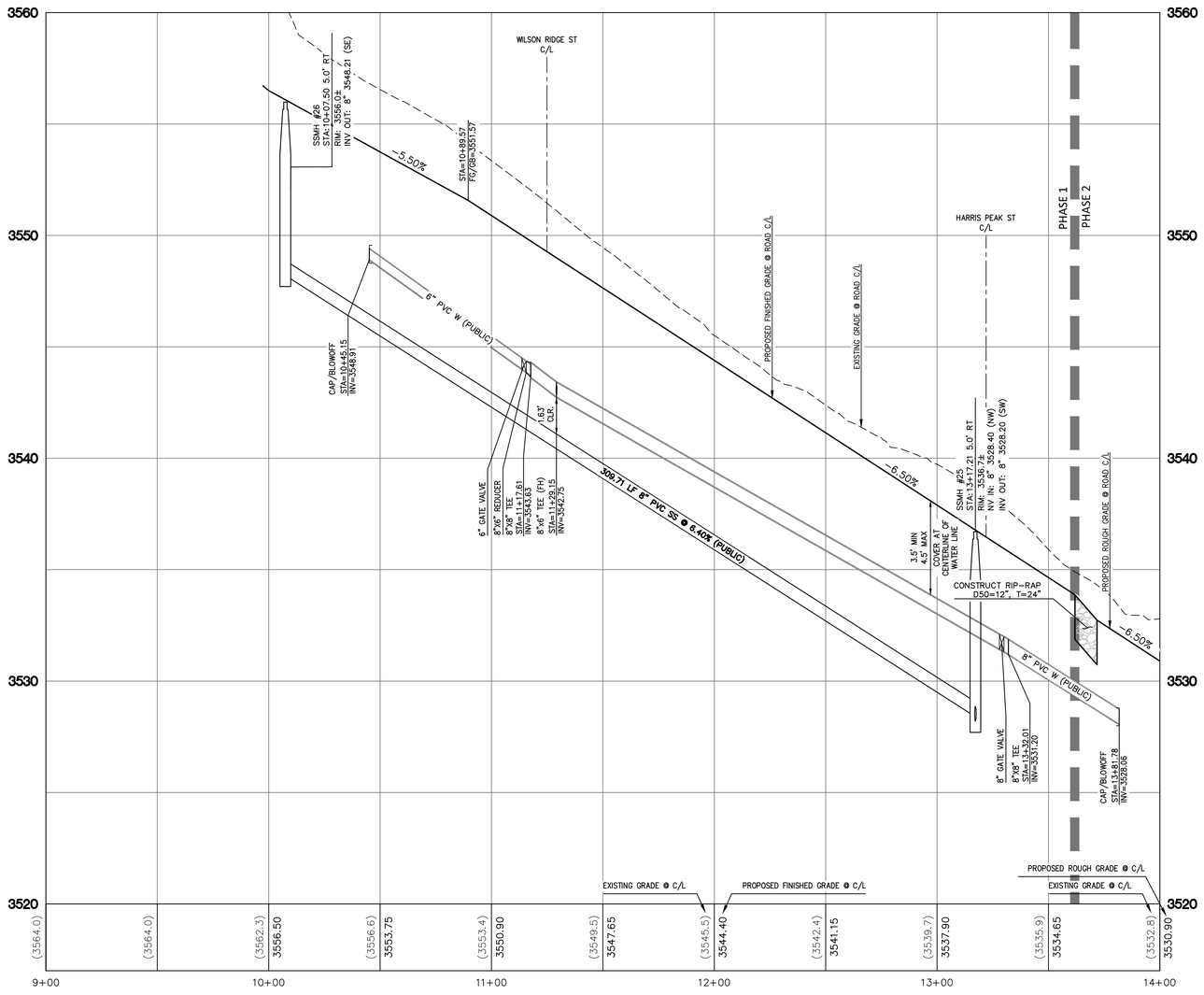
DRAWING P6
17 OF 33 SHTS

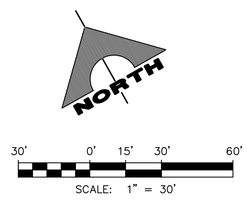


WILSON RIDGE ST
(PRIVATE)
SEE SHEET P6

HARRIS SUMMIT AVE
(PRIVATE)

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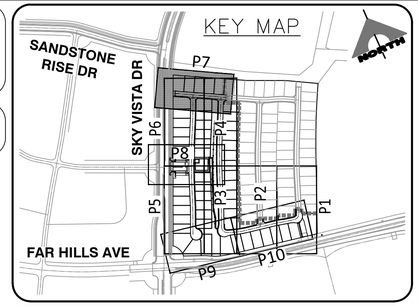
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DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
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WESLEY T. PETTY
No. 16369
PROFESSIONAL ENGINEER
1/31/2021
DATE: 07–16–20
BID SET

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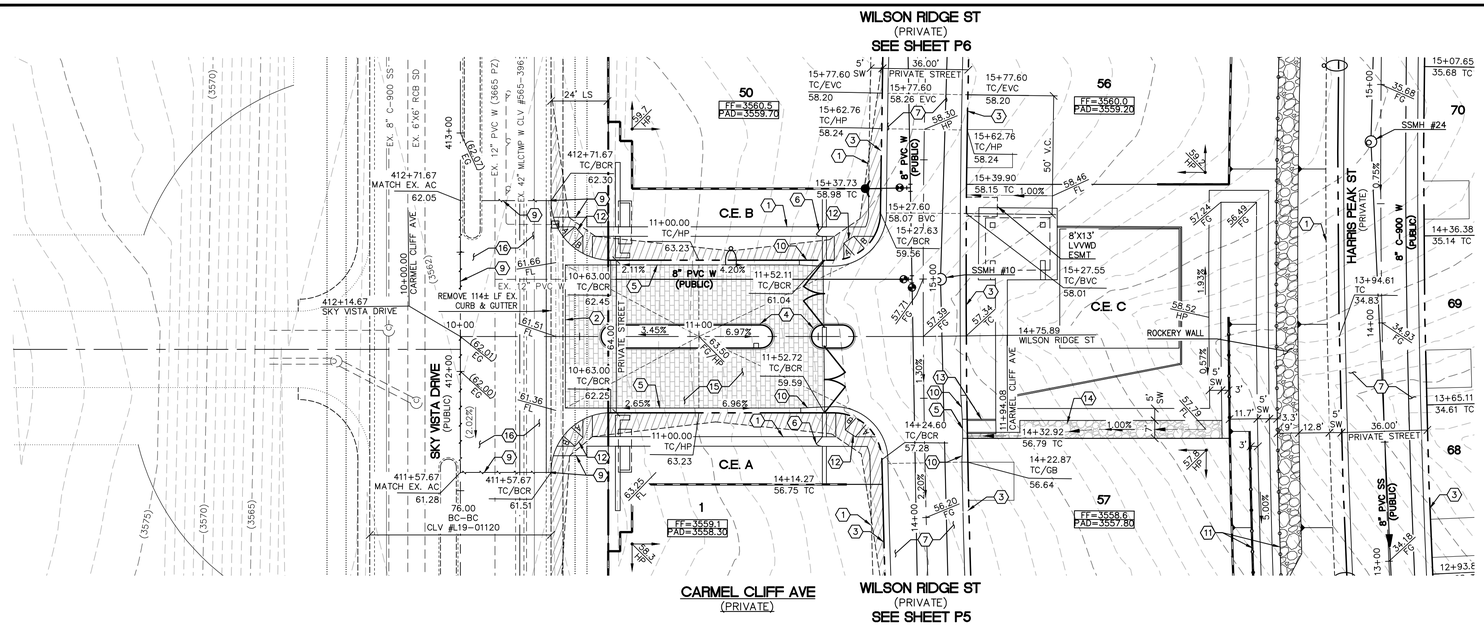
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DESIGN:
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PLOT DATE: 07–16–20
PLOT TIME: 10:05:53

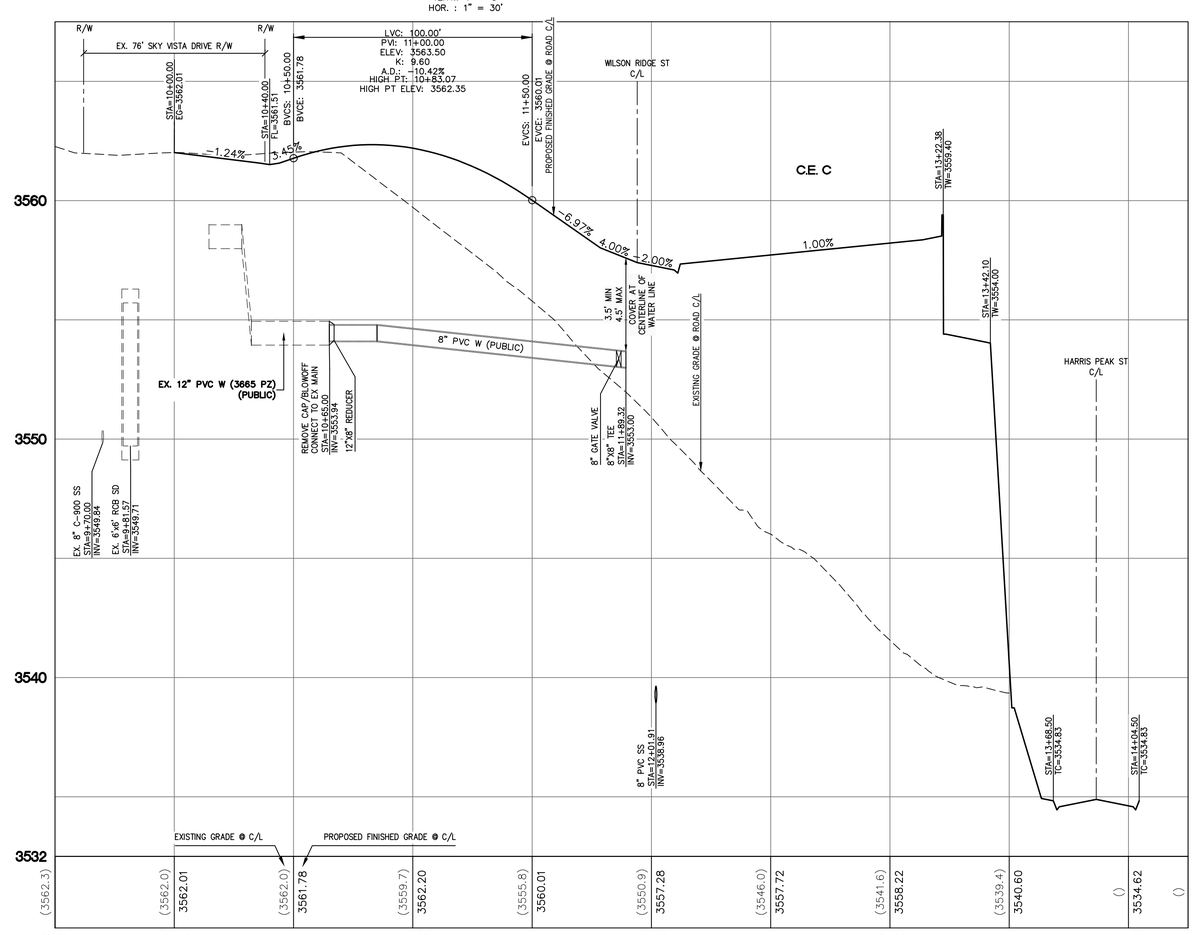
GCW
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I:\Projects\700\764-a173-001\GWC\production\Phase 1\764-A173-PP-WE-P7.dwg
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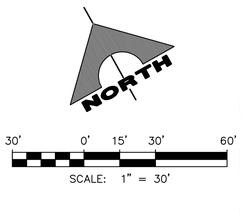
PULTE HOMES
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DRAWING
P7
18 OF 33 SHTS







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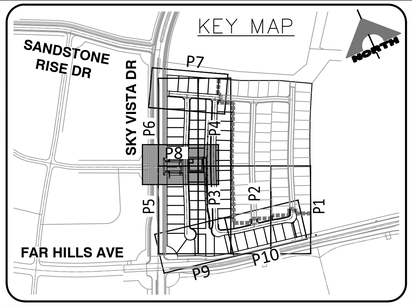
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BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV093-4DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX-XXXXX | CLV DWG#

STATE OF NEVADA PROFESSIONAL ENGINEER
WESLEY T. PETTY
No. 16369
07/31/2021
DATE: 07-16-20
BID SET

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:06:16

GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

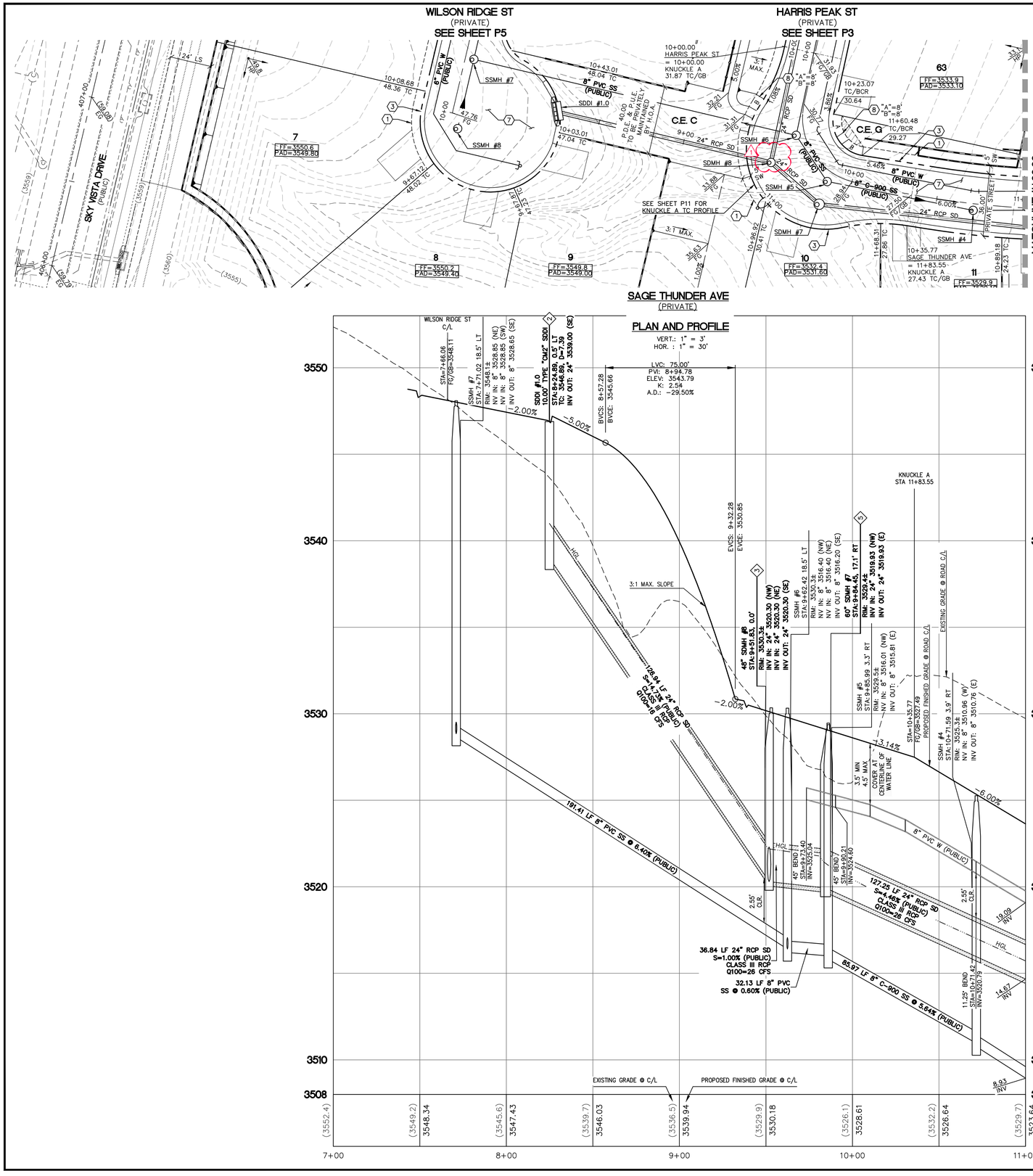
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Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

CARMEL CLIFF AVE PLAN & PROFILE 9+50 TO 12+50

DRAWING
P8
19 OF 33 SHTS



DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

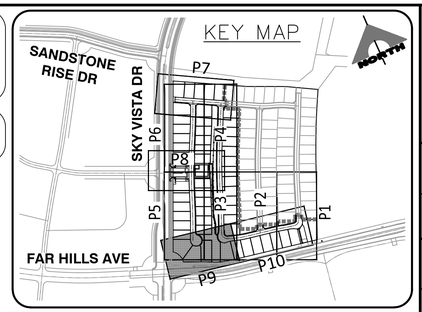
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Avoid cutting underground utility lines. It's costly.
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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CONSTRUCTION NOTES

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2. CONSTRUCT 8' WIDE VALLEY GUTTER PER SUMMERLIN STD DWG NO. S-64.
3. CONSTRUCT ROLL CURB PER SUMMERLIN STD DWG NO. S-48.
4. CONSTRUCT MEDIAN "A" TYPE PER SUMMERLIN STD DWG NO. S-50.
5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244–LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
9. SAWCUT & MATCH TO EXISTING PAVEMENT. CONTRACTOR SHALL VERIFY EX. LOCATION & PAVEMENT PRIOR TO CONSTRUCTION.
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3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
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DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

ENGINEER – STATE OF NEVADA
WESLEY L. PETTY
No. 16369
PROFESSIONAL ENGINEER
DATE: 07–16–20

BID SET

REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SSMH RELOCATION PER CLV				

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07–16–20
PLOT TIME: 10:06:36

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

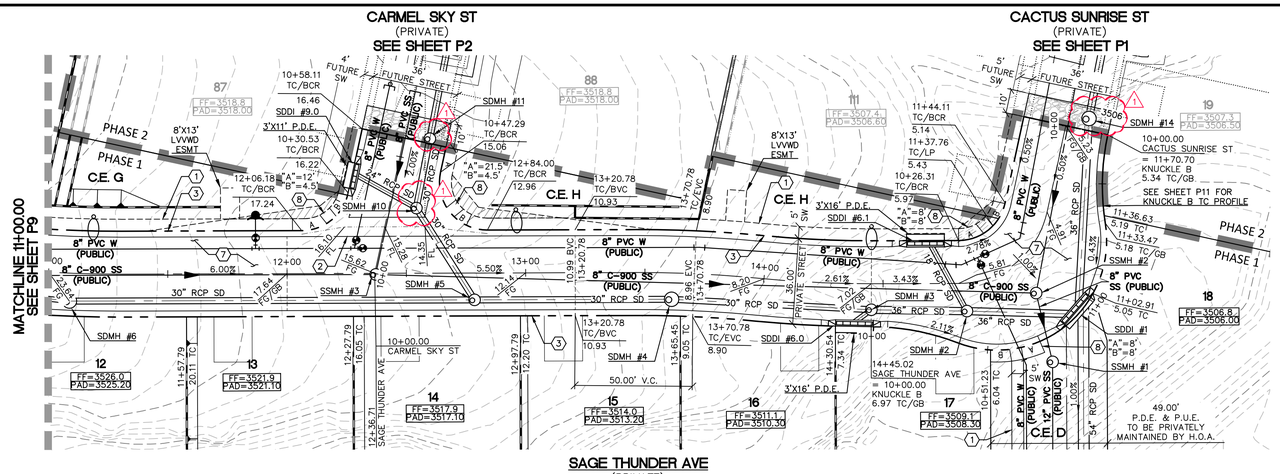
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Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

SAGE THUNDER AVE PLAN & PROFILE 7+00 TO 11+00

DRAWING
P9
20 OF 33 SHTS



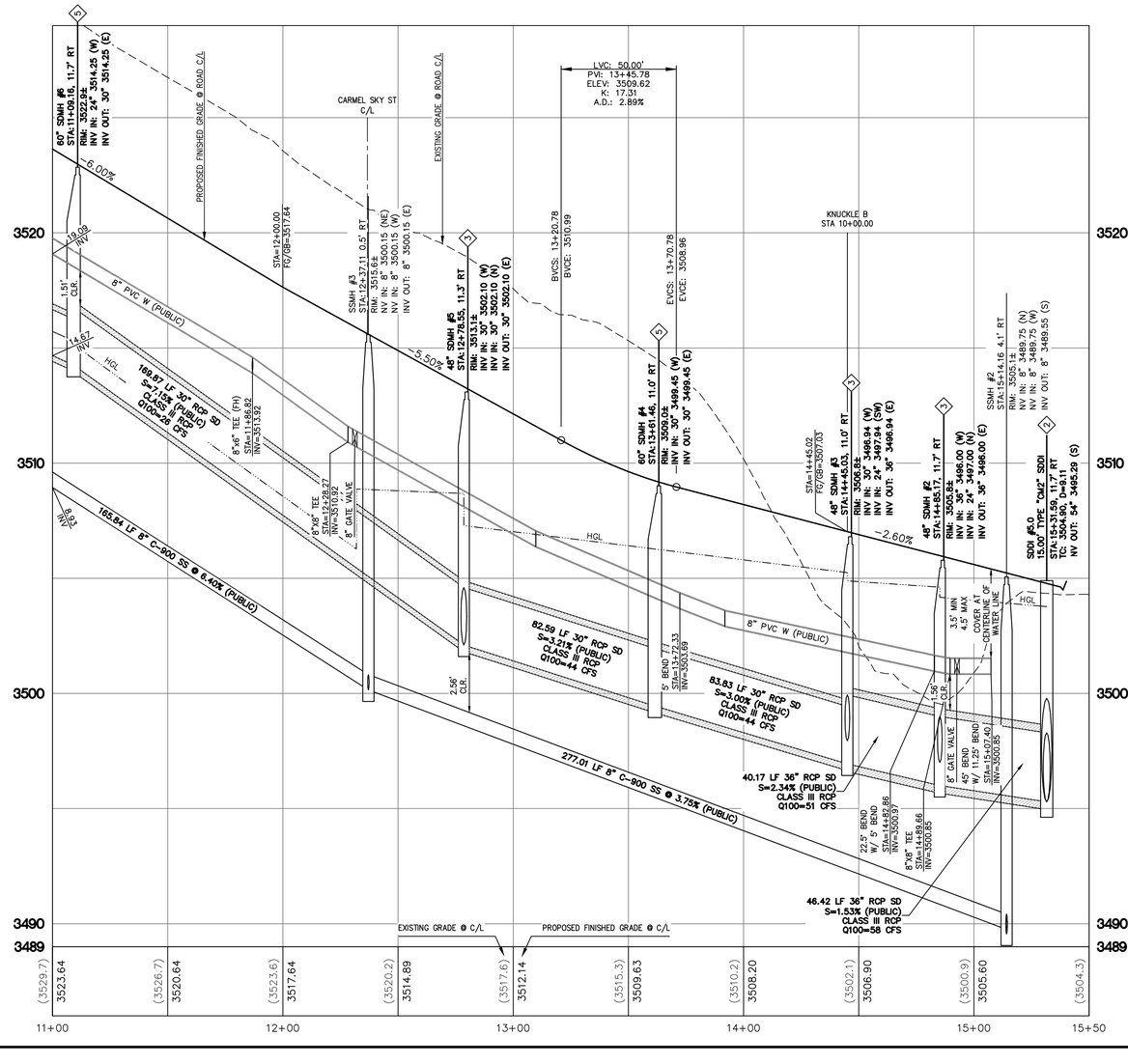
SAGE THUNDER AVE
(PRIVATE)
PLAN AND PROFILE

VERT.: 1" = 3'
HOR. : 1" = 30'

30' 0' 15' 30' 60'

SCALE: 1" = 30'

NORTH



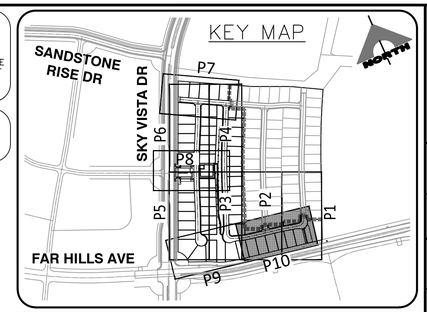
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LINEAR UNIT: US SURVEY FOOT (FTUS)
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UTILITY APPROVAL
SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
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L# XXX–XXXXX | CLV DWG#

BID SET

ENGINEER – STATE OF NEVADA – WESLEY T. PETTY – No. 16369 – 1/31/2021 – PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SDMH RELOCATION PER CLV				

DATE: 07-16-20

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:06:56

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
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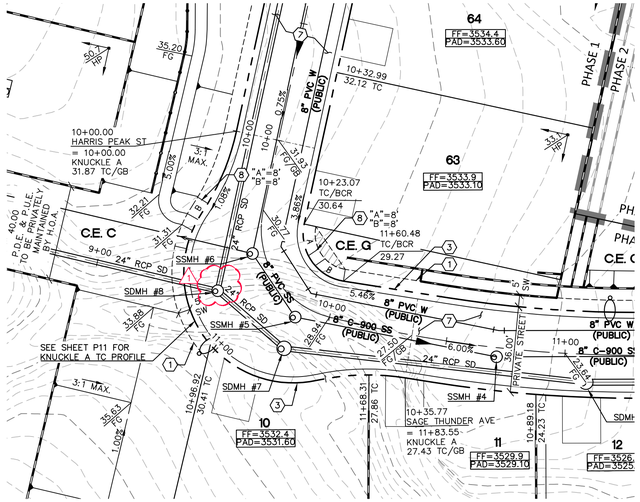
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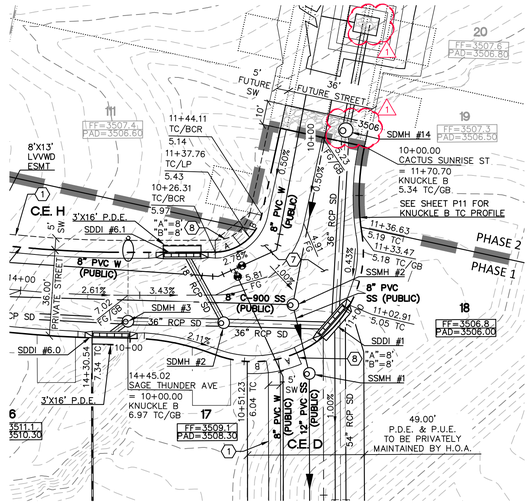
SAGE THUNDER AVE PLAN & PROFILE 11+00 TO 15+50

DRAWING
P10
21 OF 33 SHTS



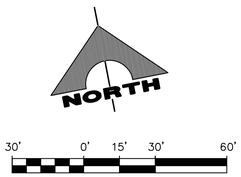
KNUCKLE A TC PLAN AND PROFILE

VERT.: 1" = 3'
HOR. : 1" = 30'



KNUCKLE B TC PLAN AND PROFILE

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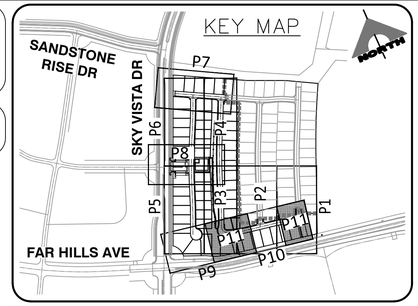
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BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T30S,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX–XXXXX | CLV DWG#

GCW
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
ENGINEERS \ SURVEYORS
gcwengineering.com

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

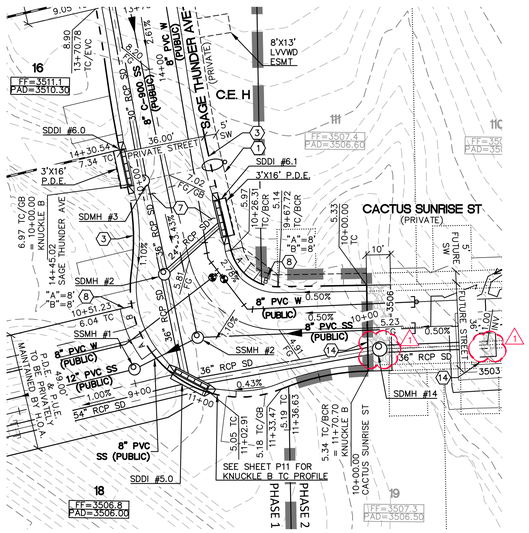
KNUCKLE A AND KNUCKLE B TC PLAN & PROFILES

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:07:31
f: \Projects \700 \764-a173-001 \DWG \production \Phase 1 \764-A173-PP-WE-P11.dwg
Nicholas DeRosa

REV	DATE	DESCRIPTION	ACEN APP	DATE	GCW APP	DATE
1	07/16/20	SDMH RELOCATION PER CLV				

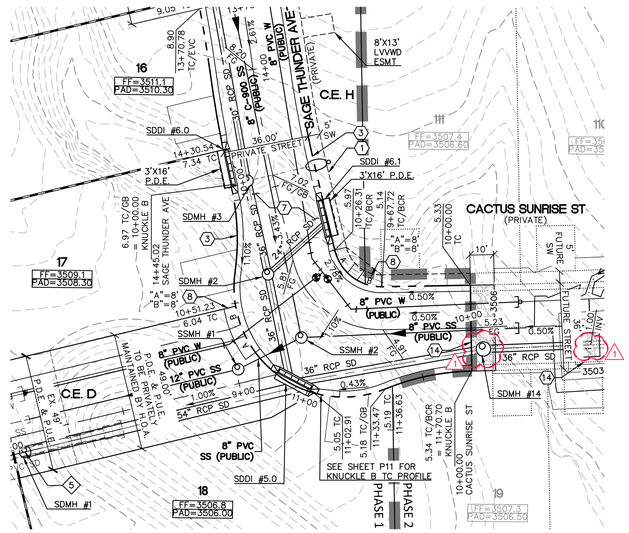
BID SET

DRAWING P11
22 OF 33 SHTS



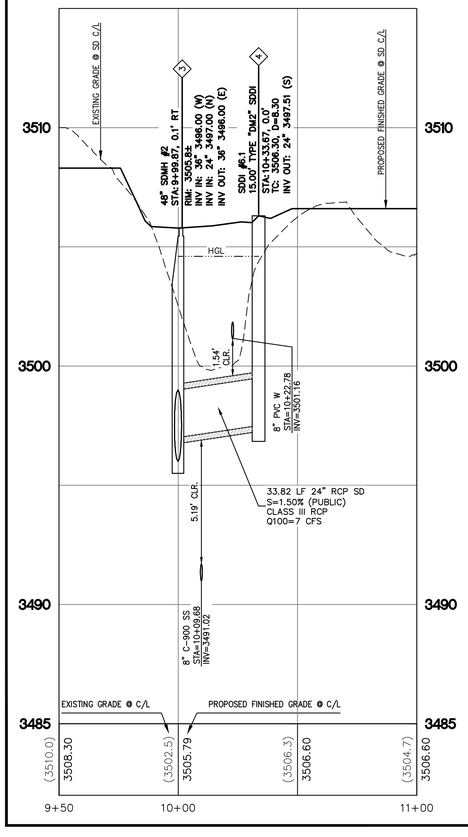
LATERAL A

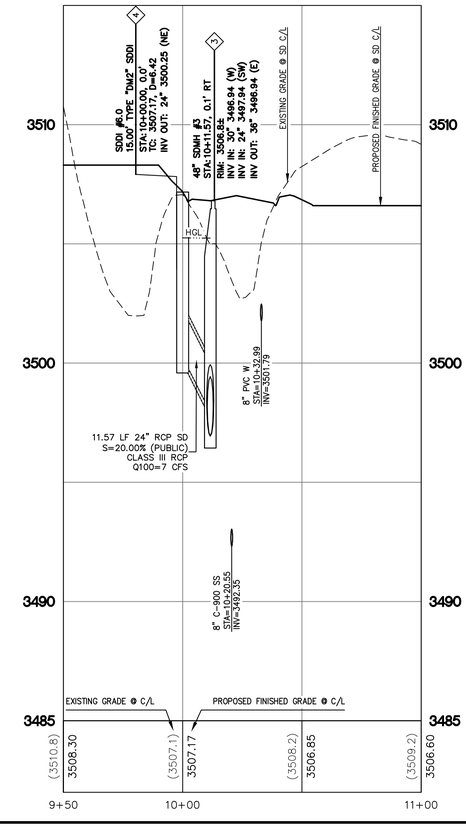
VERT.: 1" = 3'
HOR. : 1" = 30'

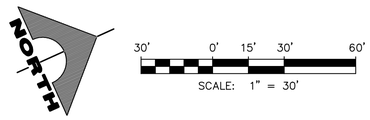


LATERAL B

VERT.: 1" = 3'
HOR. : 1" = 30'







DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

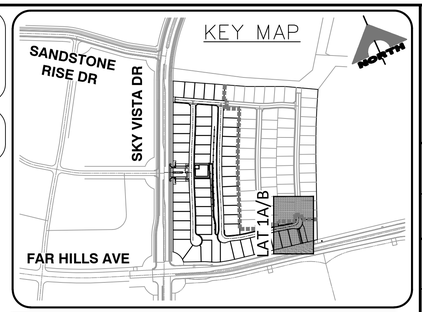
DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN MINUMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
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FAST
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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CONSTRUCTION NOTES

1. CONSTRUCT CONCRETE SIDEWALK PER SUMMERLIN STD DWG NO. S-72 & S-48.
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3. CONSTRUCT ROLL CURB PER SUMMERLIN STD DWG NO. S-48.
4. CONSTRUCT MEDIAN "A" TYPE PER SUMMERLIN STD DWG NO. S-50.
5. CONSTRUCT "L" CURB PER SUMMERLIN STD DWG NO. S-47.
6. INSTALL GATE – SEE LANDSCAPE.
7. CONSTRUCT 2" AC OVER 4" TYPE II BASE. SEE SOIL REPORT PREPARED BY GEOTEK RESIDENTIAL, LLC PROJ. #15244-LVR FOR MORE DETAIL.
8. CONSTRUCT HANDICAP RAMP PER USDCCA NO. 235 CASE I. SEE PLAN FOR "A" & "B" DIMENSION.
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STORM DRAIN CONSTRUCTION NOTES

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3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
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DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
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UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 137540 FIRST APPROVED DATE:
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PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

STORM DRAIN LATERAL PLAN & PROFILE

DRAWING
LAT1
23 OF 33 SHTS

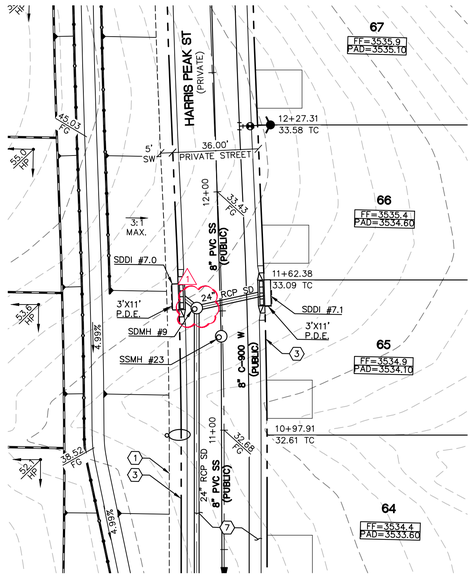
PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
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REV	DATE	DESCRIPTION
1	07/16/20	SDMH RELOCATION PER CLV

DATE | AGEN APP | DATE | GCW APP | DATE: 07-16-20

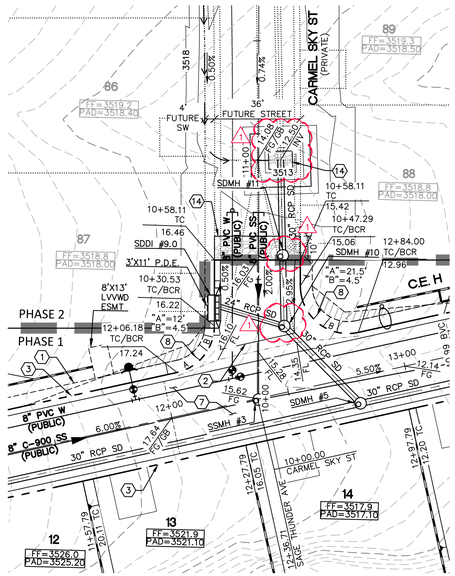
BID SET

f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-LAT1-Phase 1.dwg
Nicholas DeRosa



LATERAL A

VERT.: 1" = 3'
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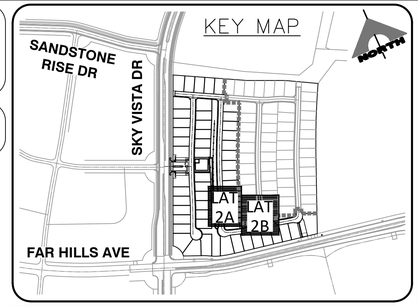
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NORTH

30' 0' 15' 30' 60'
SCALE: 1" = 30'

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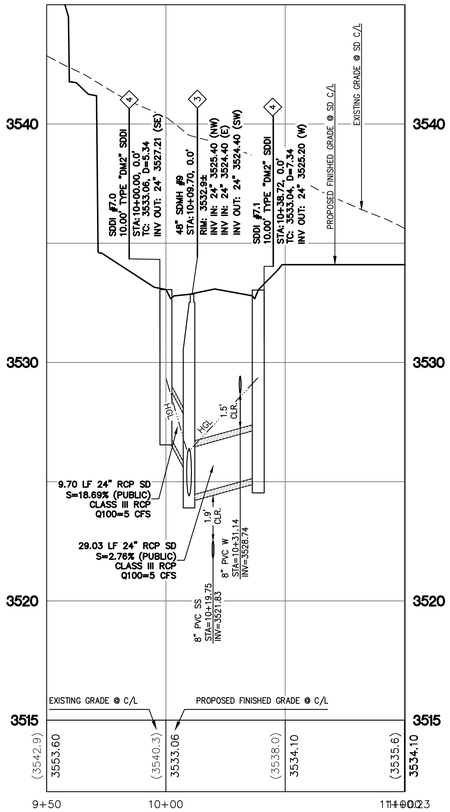
SOUTHWEST GAS CORP. DATE:

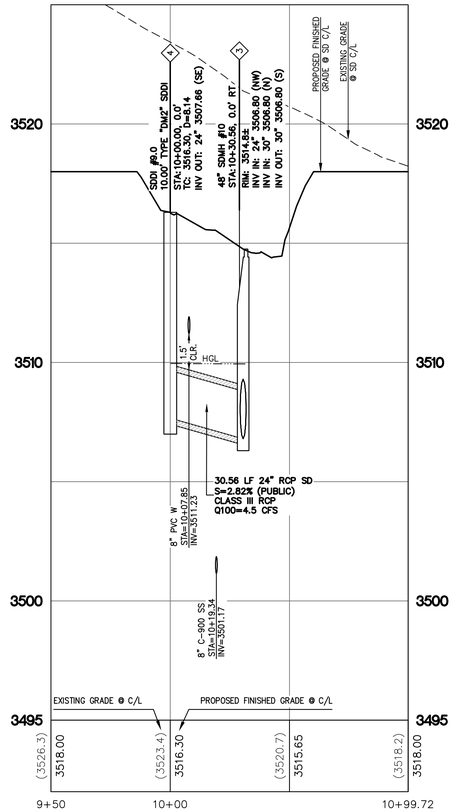
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L# XXX-XXXXX | CLV DWG#





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T: 702.804.2000
F: 702.804.2299
gcvengineering.com

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:10:21
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Nicholas DeRosa

PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

STORM DRAIN LATERAL PLAN & PROFILE

DRAWING
LAT2
24 OF 33 SHTS

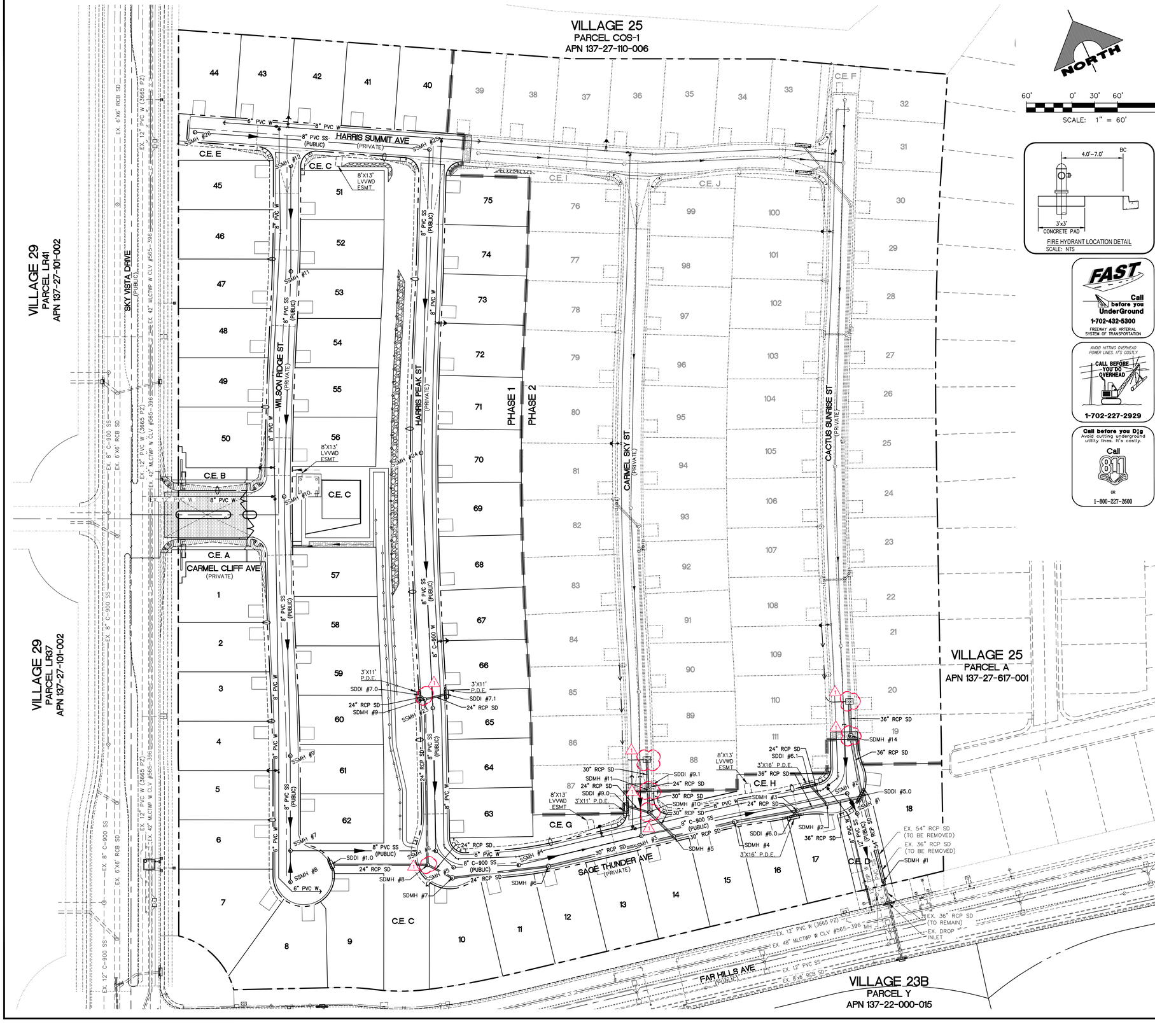
REV	DATE	DESCRIPTION
1	07/16/20	SSMH RELOCATION PER CLV

	DATE	AGEN APP	DATE	GCW APP

BID SET

DATE: 07-16-20

ENGINEER - STATE OF NEVADA
WESLEY T. PETTY
7/31/2021
No. 16369



4.0'-7.0' BC
3'x3' CONCRETE PAD
FIRE HYDRANT LOCATION DETAIL
SCALE: NTS

FAST
Call before you UnderGround
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES IT'S COSTLY
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NOTE:

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FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING
- MAINTAIN MINIMUM 3' PARALLEL SEPARATION.
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FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED

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2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENTS IS 1,000 GPM @ 20 PSI RESIDUAL FOR HOMES WITH SQUARE FOOTAGES LESS THAN 3,000 S.F.

FIRE FLOW REQUIREMENTS IS 1,500 GPM @ 20 PSI RESIDUAL FOR HOMES WITH SQUARE FOOTAGES GREATER THAN 3,001 S.F.

BASED ON:
SQUARE FOOTAGE: 3,000 SQUARE FEET
NUMBER OF STORIES/FLOORS: 2

AUTOMATIC FIRE SPRINKLER SYSTEM: YES ☒ NO ☐

ANTICIPATED FIRE SPRINKLER FLOW DEMAND: 30 GPM

OF HYDRANTS PROVIDED: 10

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE
FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

L# XXX-XXXXX | CLV DWG#

GCW ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com
f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-MU-Ph1.dwg
Nicholas DeRosa

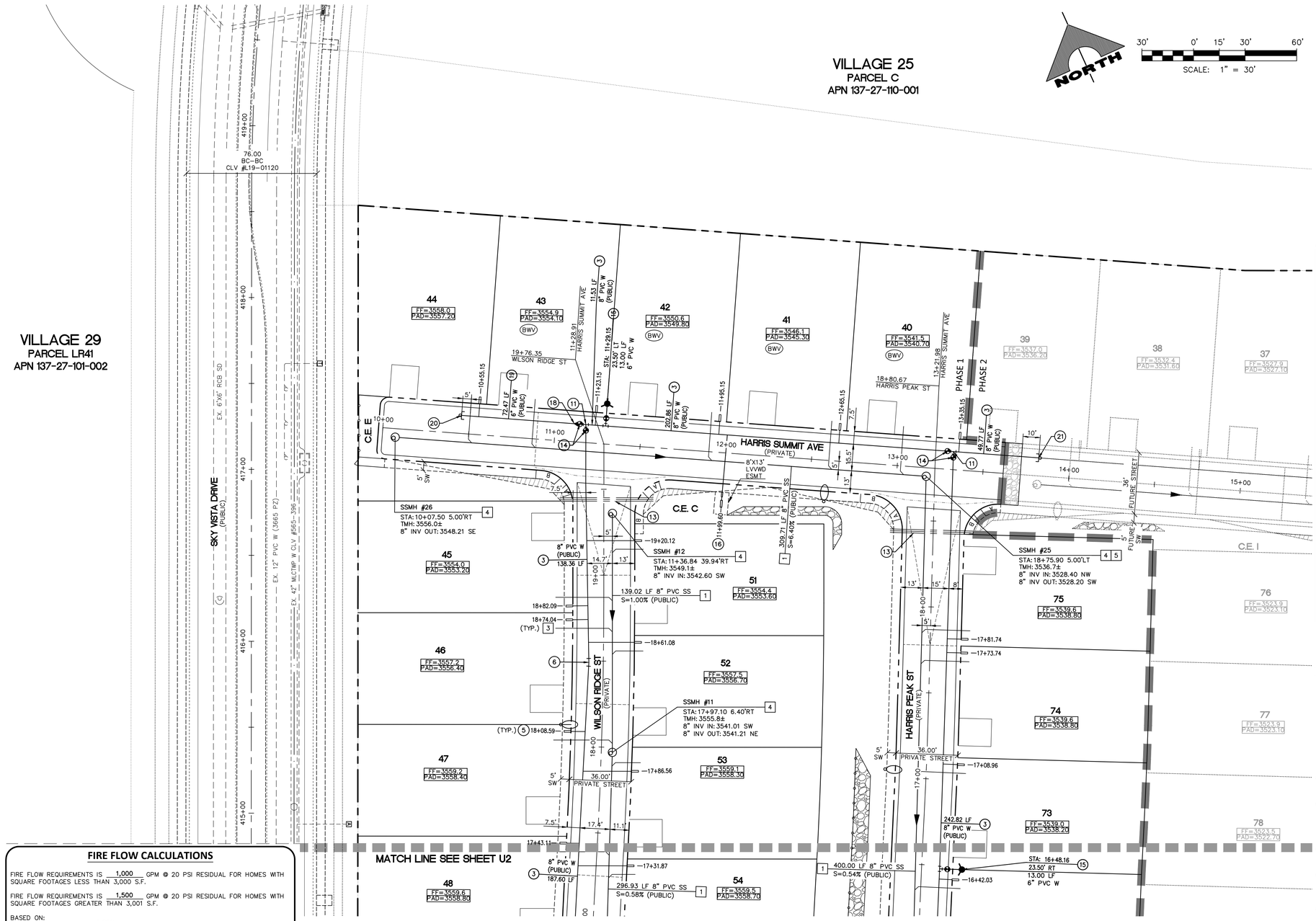
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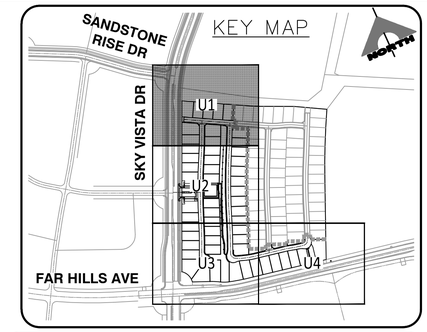
REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SSMH RELOCATION PER CLV				

BID SET

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
MASTER UTILITY PLAN

DRAWING MU
25 OF 33 SHTS





CONSTRUCTION NOTES

WATER

1. REMOVE CAP/BLOW-OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXIST MAIN.
2. INSTALL 8" DIP WATER PIPE PER UDACS PLATE 17.
3. INSTALL 8" PVC WATER PIPE PER UDACS PLATE 17.
4. INSTALL 12" PVC WATER PIPE PER UDACS PLATE 17.
5. INSTALL 1" WATER SERVICE WITH 3/4" WATER METER PER UDACS PLATE NO. 1
6. INSTALL 5' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
7. INSTALL 11.25' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
8. INSTALL 22.5' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
9. INSTALL 45' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
10. INSTALL 90' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
11. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31.
12. INSTALL 12" X 8" REDUCER PER UDACS PLATE NO. 30.
13. INSTALL IRRIGATION SLEEVES 1-6" AND 2-4" SCH. 40 PVC (VERIFIY ALL IRRIGATION CROSSING WITH LANDSCAPE PLANS.
14. INSTALL GATE VALVE SAME SIZE AS LINE, BOX, AND COVER PER UDACS PLATE NO. 30 & 39.
15. INSTALL FIRE HYDRANT, VALVES, TEE, & 6" WATER LINE PER UDACS PLATE NO. 39 & 40.
16. INSTALL 3/4" IRRIGATION METER WITH 1" RPPA PER UDACS PLATE NO. 4 AND 8. MAINTAIN A SLOPE OF NO GREATER THAN 2%, FREE OF SHRUBBERY AND OBSTRUCTIONS, WITHIN AT LEAST THREE (3) FEET ADJACENT TO THE BACKFLOW ASSEMBLY PAD.
17. INSTALL 6" CAP & 2" BLOW-OFF PER UDACS PLATE NO. 31.
18. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30.
19. INSTALL 6" PVC WATER PIPE PER UDACS PLATE 17.
20. INSTALL 6" CAP PER UDACS PLATE NO. 31.
21. INSTALL 8" CAP PER UDACS PLATE NO. 31.

SEWER

1. INSTALL 8" SANITARY SEWER PIPE.
2. REMOVE CAP AND CONNECT TO EXISTING 8" SEWER STUB. CONTRACTOR TO VERIFY LOCATION AND ELEVATION.
3. INSTALL 4" SEWER LATERAL PER DCSWCS SD-20. (TYP).
4. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH SINGLE 24" LID PER DCSWCS SD-3.
5. CONSTRUCT CORROSION PROTECTION PER 3.16.8 OF DCSWCS.
6. INSTALL STUB AND CAP FOR FUTURE DEVELOPMENT
7. CONTRACTOR SHALL PROVIDE FULL STRENGTH GROUT PER SECTION 3.21.2, WATER TIGHT JOINTS USING INTERNAL ELASTOMERIC JOINT SEALANT OR JOINT GASKETS, AND A MINIMUM OF 4" OF CEMENT SLURRY PER UDACS 2.22.01.B.2.c (2)

STORM DRAIN

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
5. CONSTRUCT 60" TYPE III STORM DRAIN MANHOLE PER STD. DWG 406.1.

NOTE TO CONTRACTOR

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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

NOTE

ALL ONSITE STORM DRAINS AND ASSOCIATED STORM FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA.

ALL PRIVATE STREETS ARE P.U.E., PUBLIC DRAINAGE EASEMENT AND PUBLIC SEWER EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE
FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

L# XXX-XXXXX | CLV DWG#

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENTS IS 1,000 GPM @ 20 PSI RESIDUAL FOR HOMES WITH SQUARE FOOTAGES LESS THAN 3,000 S.F.

FIRE FLOW REQUIREMENTS IS 1,500 GPM @ 20 PSI RESIDUAL FOR HOMES WITH SQUARE FOOTAGES GREATER THAN 3,001 S.F.

BASED ON:
SQUARE FOOTAGE: 3,000 SQUARE FEET
NUMBER OF STORIES/FLOORS: 2

AUTOMATIC FIRE SPRINKLER SYSTEM: YES ☒ NO ☐

ANTICIPATED FIRE SPRINKLER FLOW DEMAND: 30 GPM

OF HYDRANTS PROVIDED: 10

LVVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN,

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

ESTIMATE WASTEWATER DEMAND

111 UNITS X 250 GPD/UNIT = 27,750 GPD

TOTAL AVERAGE CONTRIBUTION = 27,750 GPD = 0.027750 MGD

TOTAL PEAK FLOW = 0.027750 MGD X 3.76 (PEAK FACTOR) = 0.1043 MGD

SEWER CONNECTION NOTE

ONE OR MORE SEGMENTS OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING
- MAINTAIN MINIMUM 3" PARALLEL SEPARATION
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

CONTRACTOR NOTE:

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CLARK COUNTY'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02.
3. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
6. ALL NEW MANHOLES TO HAVE PRE-CAST BASES.
7. INSTALL PIPELINE MARKER BALLS, PER UDACTS PLATE NO. 15.

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCE/ WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

GCW, INC. ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN OR NOT SHOWN. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM RECORD INFORMATION AND ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND DEPTH OF ALL RELEVANT UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. IF A CONFLICT OR DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY.

CONTRACTOR NOTE:

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD 1-702-227-2929

ENGINEER - STATE OF NEVADA
WESLEY T. PETTY
8/31/2021
No. 16369
PROFESSIONAL ENGINEER
DATE: 07-16-20

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

BID SET

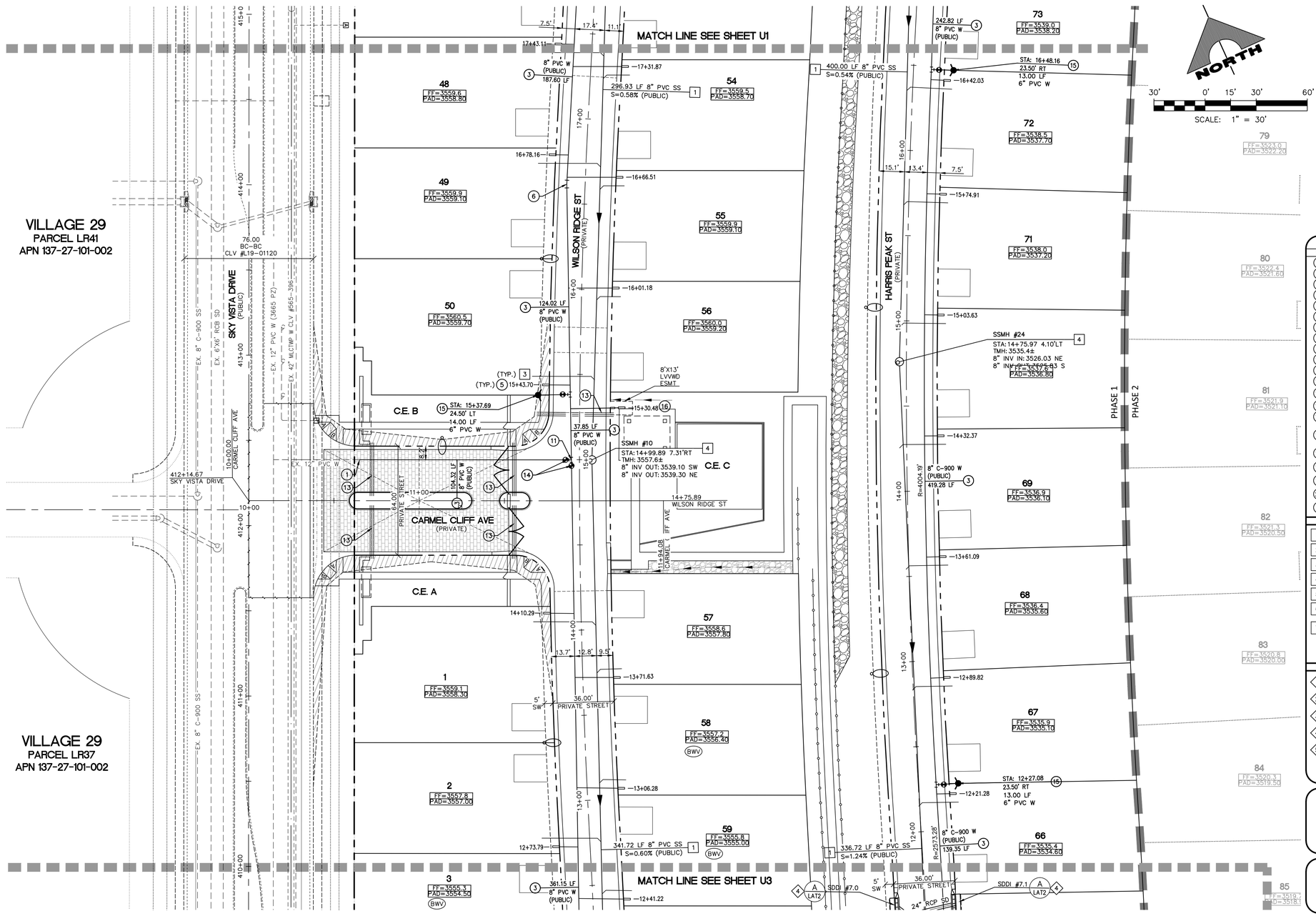
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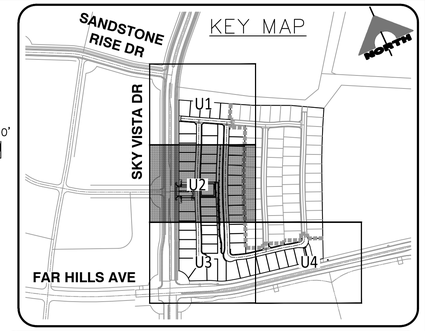
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PLOT DATE: 07-16-20
PLOT TIME: 10:12:22

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Nicholas DeRosa

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
UTILITY PLAN 1

DRAWING
U1
26 OF 33 SHTS





CONSTRUCTION NOTES

WATER

1. REMOVE CAP/BLOW-OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXIST MAIN.
2. INSTALL 8" DIP WATER PIPE PER UDACS PLATE 17.
3. INSTALL 8" PVC WATER PIPE PER UDACS PLATE 17.
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7. CONTRACTOR SHALL PROVIDE FULL STRENGTH GROUT PER SECTION 3.21.2. WATER TIGHT JOINTS USING INTERNAL ELASTOMERIC JOINT SEALANT OR JOINT GASKETS, AND A MINIMUM OF 4" OF CEMENT SLURRY PER UDACS 2.22.01.B.2.c (2)

STORM DRAIN

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
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UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE
FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

L# XXX-XXXXX | CLV DWG#

(BWV) SEWER BACKWATER VALVE (PRIVATE)
(PRV) WATER PRESSURE-REDUCING VALVE (PRIVATE)

LVVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN,

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

ESTIMATE WASTEWATER DEMAND

111 UNITS X 250 GPD/UNIT = 27,750 GPD

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TOTAL PEAK FLOW = 0.027750 MGD X 3.76 (PEAK FACTOR) = 0.1043 MGD

SEWER CONNECTION NOTE

ONE OR MORE SEGMENTS OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

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5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
6. ALL NEW MANHOLES TO HAVE PRE-CAST BASES.
7. INSTALL PIPELINE MARKER BALLS, PER UDACTS PLATE NO. 15.

DROP INLET NOTE

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CONTRACTOR NOTE:

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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

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD 1-702-227-2929

ENGINEER - STATE OF NEVADA — WESLEY T. PETTY — 16369 — 1/31/2021 — CIVIL — PROFESSIONAL ENGINEER
DATE: 07-16-20
BID SET

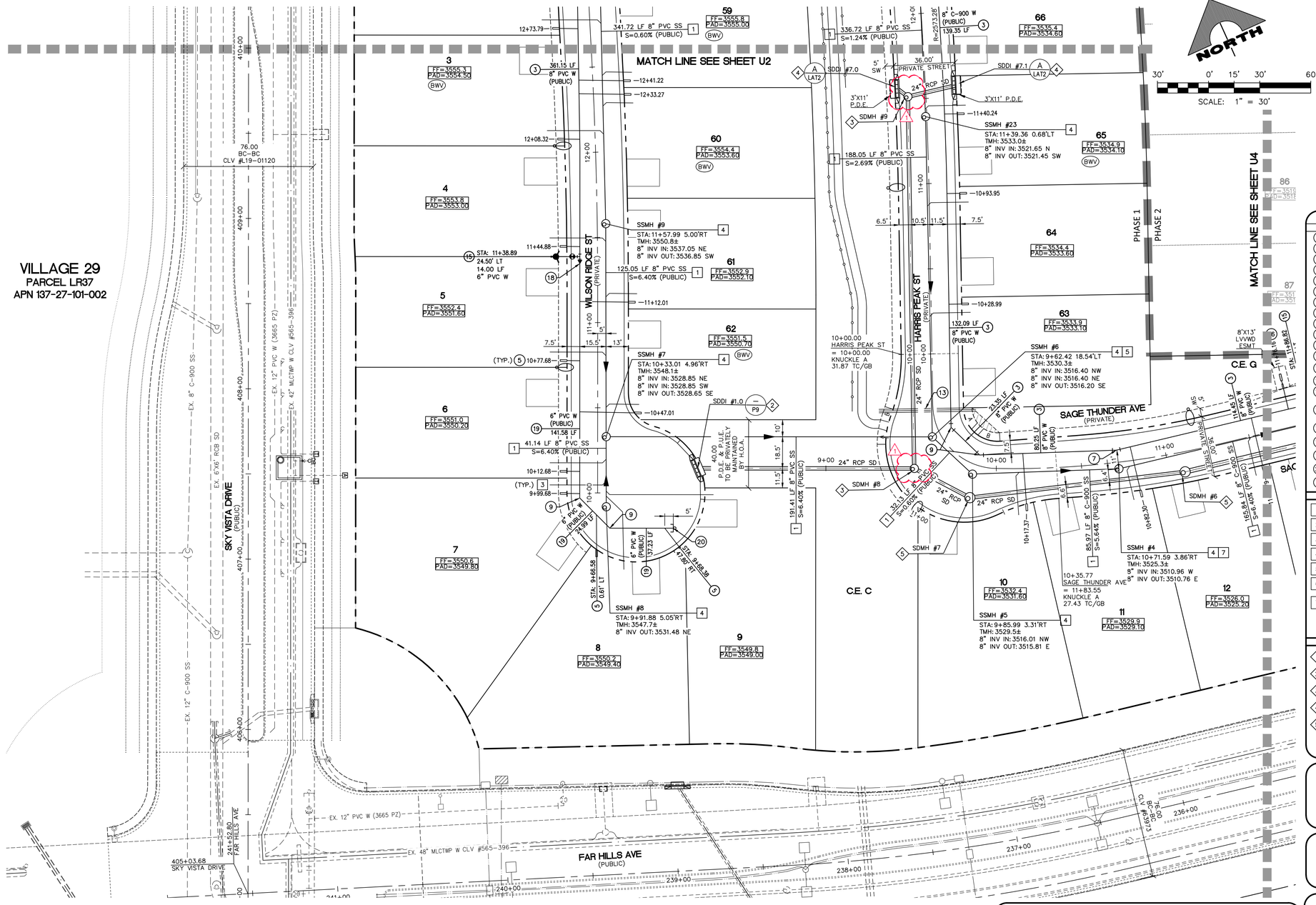
GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
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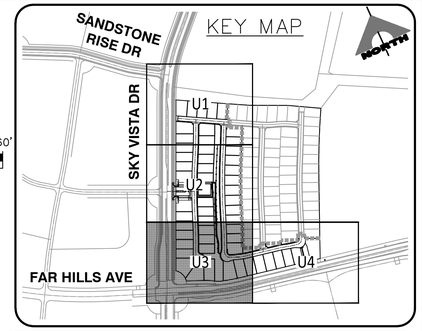
REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001
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PLOT DATE: 07-16-20
PLOT TIME: 10:12:39
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Nicholas DeRosa

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
UTILITY PLAN 2

DRAWING
U2
27 OF 33 SHTS





CONSTRUCTION NOTES

WATER

1. REMOVE CAP/BLOW-OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXIST MAIN.
2. INSTALL 8" DIP WATER PIPE PER UDACS PLATE 17.
3. INSTALL 8" PVC WATER PIPE PER UDACS PLATE 17.
4. INSTALL 12" PVC WATER PIPE PER UDACS PLATE 17.
5. INSTALL 1" WATER SERVICE WITH 3/4" WATER METER PER UDACS PLATE NO. 1
6. INSTALL 5' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
7. INSTALL 11.25' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
8. INSTALL 22.5' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
9. INSTALL 45' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
10. INSTALL 90' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
11. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31.
12. INSTALL 12" X 8" REDUCER PER UDACS PLATE NO. 30.
13. INSTALL IRRIGATION SLEEVES 1-6" AND 2-4" SCH. 40 PVC (VERIFIY ALL IRRIGATION CROSSING WITH LANDSCAPE PLANS.
14. INSTALL GATE VALVE SAME SIZE AS LINE, BOX, AND COVER PER UDACS PLATE NO. 30 & 39.
15. INSTALL FIRE HYDRANT, VALVES, TEE, & 6" WATER LINE PER UDACS PLATE NO. 39 & 40.
16. INSTALL 3/4" IRRIGATION METER WITH 1" RPPA PER UDACS PLATE NO. 4 AND 8. MAINTAIN A SLOPE OF NO GREATER THAN 2%, FREE OF SHRUBBERY AND OBSTRUCTIONS, WITHIN AT LEAST THREE (3) FEET ADJACENT TO THE BACKFLOW ASSEMBLY PAD.
17. INSTALL 6" CAP & 2" BLOW-OFF PER UDACS PLATE NO. 31.
18. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30.
19. INSTALL 6" PVC WATER PIPE PER UDACS PLATE 17.
20. INSTALL 6" CAP PER UDACS PLATE NO. 31.
21. INSTALL 8" CAP PER UDACS PLATE NO. 31.

SEWER

1. INSTALL 8" SANITARY SEWER PIPE.
2. REMOVE CAP AND CONNECT TO EXISTING 8" SEWER STUB. CONTRACTOR TO VERIFY LOCATION AND ELEVATION.
3. INSTALL 4" SEWER LATERAL PER DCSWCS SD-20. (TYP).
4. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH SINGLE 24" LID PER DCSWCS SD-3.
5. CONSTRUCT CORROSION PROTECTION PER 3.16.8 OF DCSWCS.
6. INSTALL STUB AND CAP FOR FUTURE DEVELOPMENT
7. CONTRACTOR SHALL PROVIDE FULL STRENGTH GROUT PER SECTION 3.21.2. WATER TIGHT JOINTS USING INTERNAL ELASTOMERIC JOINT SEALANT OR JOINT GASKETS, AND A MINIMUM OF 4" OF CEMENT SLURRY PER UDACS 2.22.01.B.2.c (2)

STORM DRAIN

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
5. CONSTRUCT 60" TYPE III STORM DRAIN MANHOLE PER STD. DWG 406.1.

NOTE TO CONTRACTOR

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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

NOTE

ALL ONSITE STORM DRAINS AND ASSOCIATED STORM FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA.

ALL PRIVATE STREETS ARE P.U.E., PUBLIC DRAINAGE EASEMENT AND PUBLIC SEWER EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE
FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

L# XXX-XXXXX | CLV DWG#

(BWV) SEWER BACKWATER VALVE (PRIVATE)
(PRV) WATER PRESSURE-REDUCING VALVE (PRIVATE)

LVVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN,

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

ESTIMATE WASTEWATER DEMAND

111 UNITS X 250 GPD/UNIT = 27,750 GPD

TOTAL AVERAGE CONTRIBUTION = 27,750 GPD = 0.027750 MGD

TOTAL PEAK FLOW = 0.027750 MGD X 3.76 (PEAK FACTOR) = 0.1043 MGD

SEWER CONNECTION NOTE

ONE OR MORE SEGMENTS OF THE DOWNSTREAM SEWER SYSTEM THAT WILL SERVE THIS PROJECT HAS NOT BEEN COMPLETED AND/OR ACCEPTED FOR MAINTENANCE BY THE CITY OF LAS VEGAS. ANY WORK DONE ON THIS PROJECT PRIOR TO THE COMPLETION AND/OR ACCEPTANCE OF THE DOWNSTREAM SEWER SYSTEM(S) SHALL BE DONE AT THE DEVELOPER'S OWN RISK. THE CITY OF LAS VEGAS RESERVES THE RIGHT TO PREVENT THE PHYSICAL CONNECTION OF THIS PROJECT INTO THE DOWNSTREAM SEWER SYSTEM UNTIL ALL SEGMENTS HAVE BEEN COMPLETED AND ACCEPTED FOR MAINTENANCE, OR UNTIL SUCH TIME AS THEY ARE DEEMED AVAILABLE FOR SERVICE.

FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING
- MAINTAIN MINIMUM 3" PARALLEL SEPARATION
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

CONTRACTOR NOTE:

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CLARK COUNTY'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.0.01.02.
3. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
6. ALL NEW MANHOLES TO HAVE PRE-CAST BASES.
7. INSTALL PIPELINE MARKER BALLS, PER UDACTS PLATE NO. 15.

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

FIRE SPRINKLER SYSTEM SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCE/ WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

GCW, INC. ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN OR NOT SHOWN. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM RECORD INFORMATION AND ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND DEPTH OF ALL RELEVANT UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. IF A CONFLICT OR DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY.

CONTRACTOR NOTE:

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

GCW
ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
UTILITY PLAN 3

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:12:54

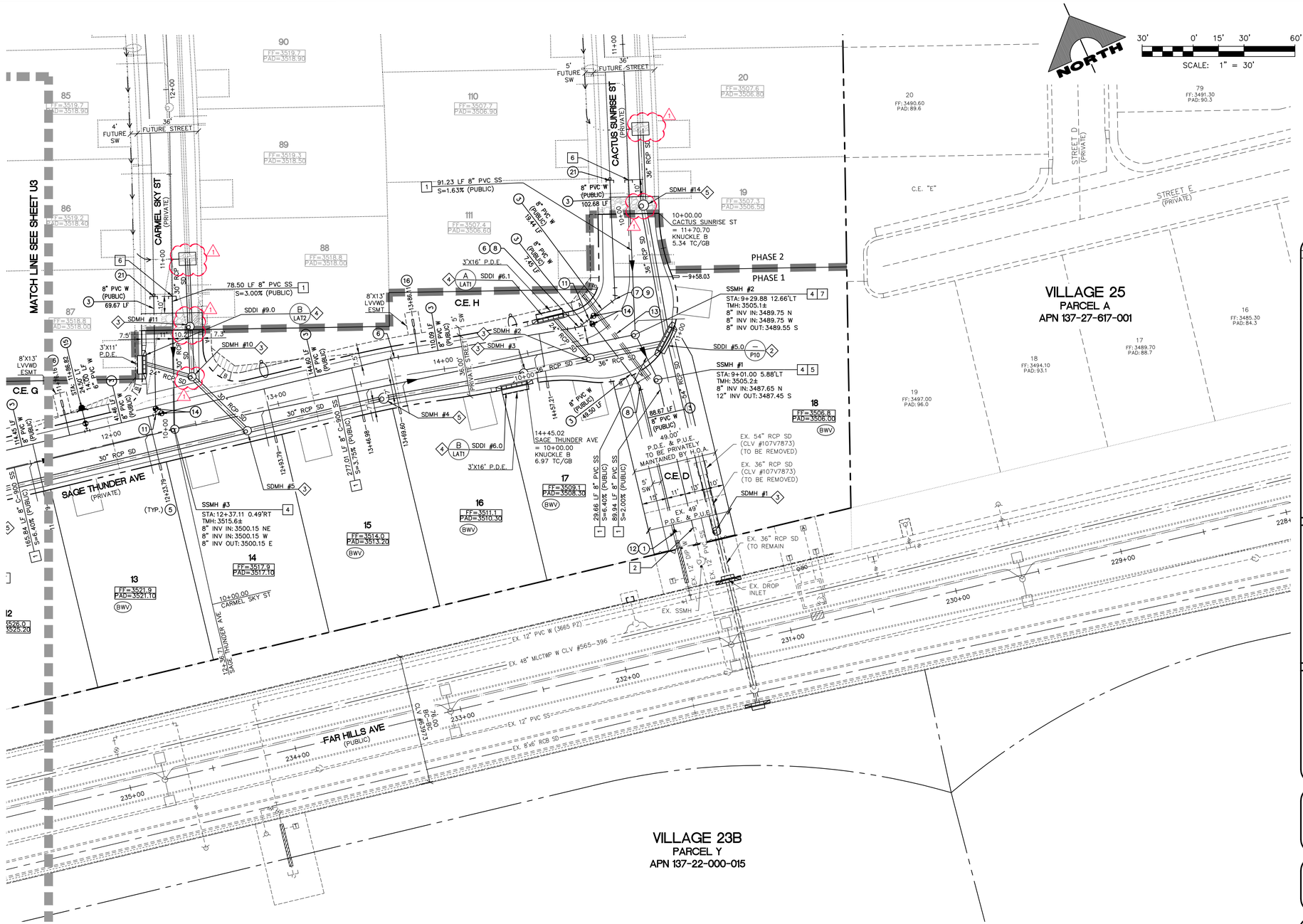
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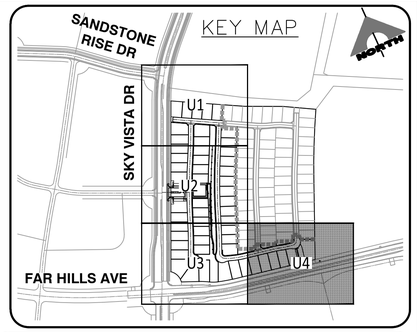
	DATE	GCW APP
		AGEN APP
		DATE
		DATE

ENGINEER - STATE OF NEVADA - WESLEY T. PETTY - 16369 - 7/31/2020 - PROFESSIONAL ENGINEER
DATE: 07-16-20
BID SET

f: \Projects \700 \764-a173-001 \DWG \production \Phase 1 \764-a173-UT-Ph1.dwg
Nicholas DeRosa

DRAWING
U3
28 OF 33 SHTS





CONSTRUCTION NOTES

WATER

1. REMOVE CAP/BLOW-OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXIST MAIN.
2. INSTALL 8" DIP WATER PIPE PER UDACS PLATE 17.
3. INSTALL 8" PVC WATER PIPE PER UDACS PLATE 17.
4. INSTALL 12" PVC WATER PIPE PER UDACS PLATE 17.
5. INSTALL 1" WATER SERVICE WITH 3/4" WATER METER PER UDACS PLATE NO. 1
6. INSTALL 5' BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
7. INSTALL 11.25° BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
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9. INSTALL 45° BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
10. INSTALL 90° BEND PER UDACS PLATE NO. 31, SIZE PER PLAN.
11. INSTALL 8" X 8" TEE PER UDACS PLATE NO. 31.
12. INSTALL 12" X 8" REDUCER PER UDACS PLATE NO. 30.
13. INSTALL IRRIGATION SLEEVES 1-6" AND 2-4" SCH. 40 PVC (VERIFIY ALL IRRIGATION CROSSING WITH LANDSCAPE PLANS.
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20. INSTALL 6" CAP PER UDACS PLATE NO. 31.
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1. INSTALL 8" SANITARY SEWER PIPE.
2. REMOVE CAP AND CONNECT TO EXISTING 8" SEWER STUB. CONTRACTOR TO VERIFY LOCATION AND ELEVATION.
3. INSTALL 4" SEWER LATERAL PER DCSWCS SD-20. (TYP).
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6. INSTALL STUB AND CAP FOR FUTURE DEVELOPMENT
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STORM DRAIN

1. CONNECT TO EXISTING STORM DRAIN.
2. CONSTRUCT MODIFIED TYPE "CM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
3. CONSTRUCT 48" TYPE II STORM DRAIN MANHOLE PER STD. DWG 405.
4. CONSTRUCT MODIFIED TYPE "DM2" PER STD DWG 412.1 & 421. SEE PLAN PER SIZE.
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UTILITY APPROVAL

SOUTHWEST GAS CORP. DATE:

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 137540 FIRST APPROVED DATE:
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE
FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL

L# XXX-XXXXX | CLV DWG#

(BWV) SEWER BACKWATER VALVE (PRIVATE)
PRV WATER PRESSURE-REDUCING VALVE (PRIVATE)







LVVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN,

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

ESTIMATE WASTEWATER DEMAND

111 UNITS X 250 GPD/UNIT = 27,750 GPD

TOTAL AVERAGE CONTRIBUTION = 27,750 GPD = 0.027750 MGD

TOTAL PEAK FLOW = 0.027750 MGD X 3.76 (PEAK FACTOR) = 0.1043 MGD

SEWER CONNECTION NOTE

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FOR ALL DRY UTILITY CROSSINGS

- MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING
- MAINTAIN MINIMUM 3" PARALLEL SEPARATION
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

CONTRACTOR NOTE:

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CLARK COUNTY'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL BE AN APPROVED EQUIVALENT.
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3. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.
6. ALL NEW MANHOLES TO HAVE PRE-CAST BASES.
7. INSTALL PIPELINE MARKER BALLS, PER UDACTS PLATE NO. 15.

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE:

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

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CONTRACTOR NOTE:

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

GCW
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com
f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-UT-Ph1.dwg
Nicholas DeRosa

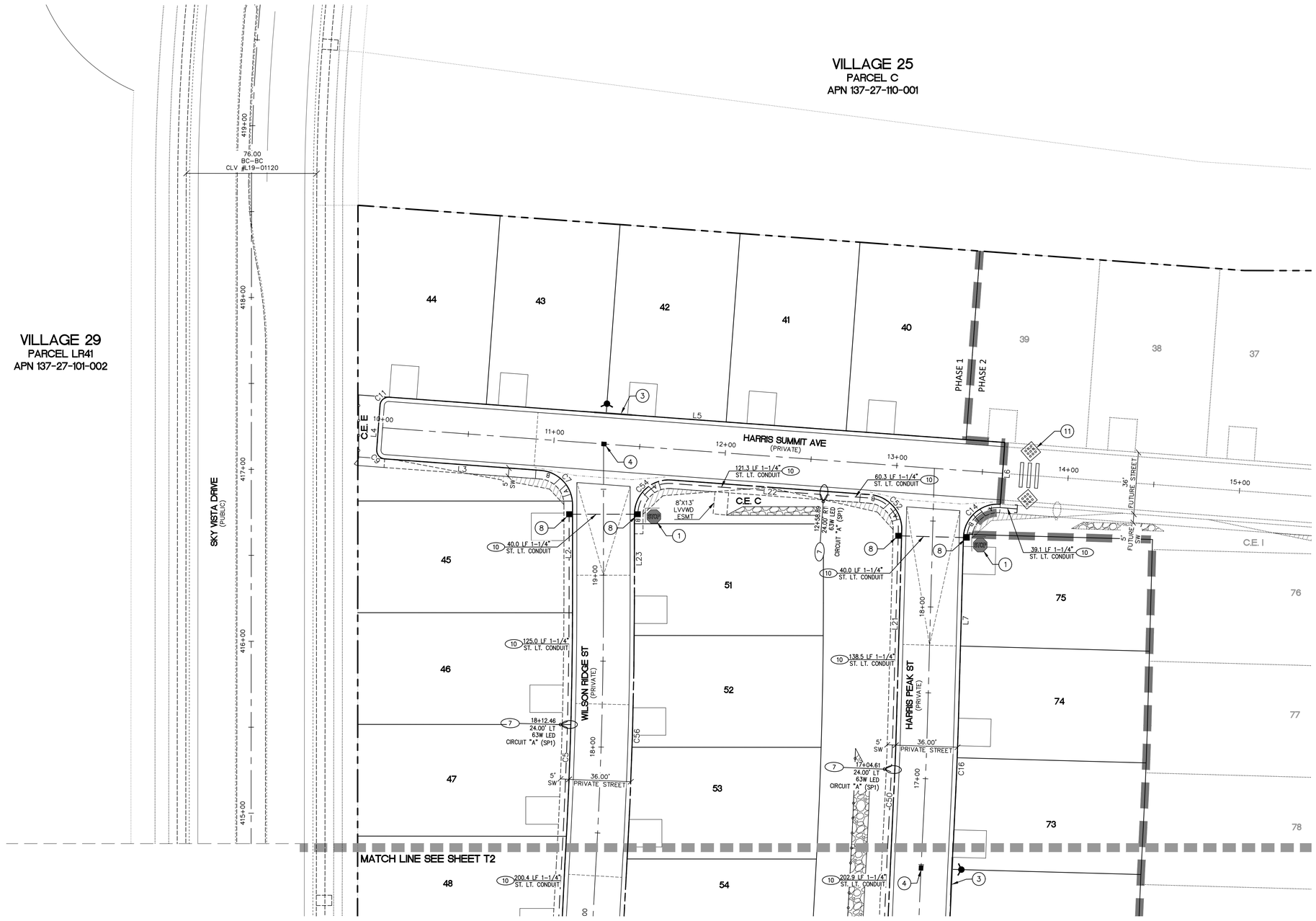
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PLOT TIME: 10:13:09

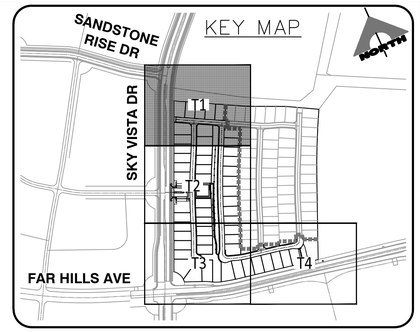
REV	DATE	DESCRIPTION	AGEN APP	DATE	GCW APP	DATE
1	07/16/20	SSMH RELOCATION PER CLV				

BID SET
DATE: 07-16-20

PULTE HOMES
SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1
UTILITY PLAN 4

DRAWING U4
29 OF 33 SHTS







30' 0' 15' 30'
SCALE: 1" = 30'

CONSTRUCTION NOTES

1. INSTALL (2) STREET NAME SIGN (D3)-BROWN BACK WITH WHITE LETTERS, WITH 30" STOP SIGN (R1-1) WITH THE WORDS "PRIVATELY MAINTAINED".
2. INSTALL (2) STREET NAME SIGN (D3)-BROWN BACK WITH WHITE LETTERS TO BE PRIVATELY MAINTAINED.
3. PAINT CURB RED (NO PARKING) 30' WIDE CENTERED ON HYDRANT EXCEPT DRIVEWAY.
4. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS.
5. INSTALL "ON-STREET PARKING IN MARKED FIRE LANES PROHIBITED" SIGN (TYPE B SIGNAGE)
6. PAINT CURB RED (NO PARKING FIRE LANE) FOR EMERGENCY ACCESS. (TYPE C SIGNAGE)
7. INSTALL SUMMERLIN TYPE 5 LED STREETLIGHT (MODEL #SUM-XGRM-LED-BL-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT) PER SUMMERLIN LED LIGHTING ANALYSIS DRAWING NC-9
8. INSTALL 3 ½ PULL BOX
9. INSTALL 100 AMP SERVICE PEDESTAL PER USDCCA STD DWG NO. 330, 331, 332.1
10. INSTALL 1-1/4" STREETLIGHT CONDUIT WITH 2-#4 AND 1-#8 THW COPPER CONDUCTORS
11. INSTALL BARRICADE PER CCAUSD DWG #601

LINE AND CURVE TABLE

SEE SHEET T4 FOR LINE AND CURVE TABLE

GENERAL NOTES

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CITY OF LAS VEGAS'S SATISFACTION. ALL MATERIAL USED SHALL MEET CITY OF LAS VEGAS'S SPECIFICATIONS OR WILL WILL BE AN APPROVED EQUIVALENT.
2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02
3. ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.

BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE — DATE

L# XXX-XXXXX | CLV DWG#

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

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. CALL BEFORE YOU DO OVERHEAD 1-702-227-2929

ENGINEER - STATE OF NEVADA — WESLEY T. PETTY — 6/21/2021 — CIVIL — No. 16369

BID SET

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	DATE: 07-16-20

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:13:34

GCW ENGINEERS \ SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

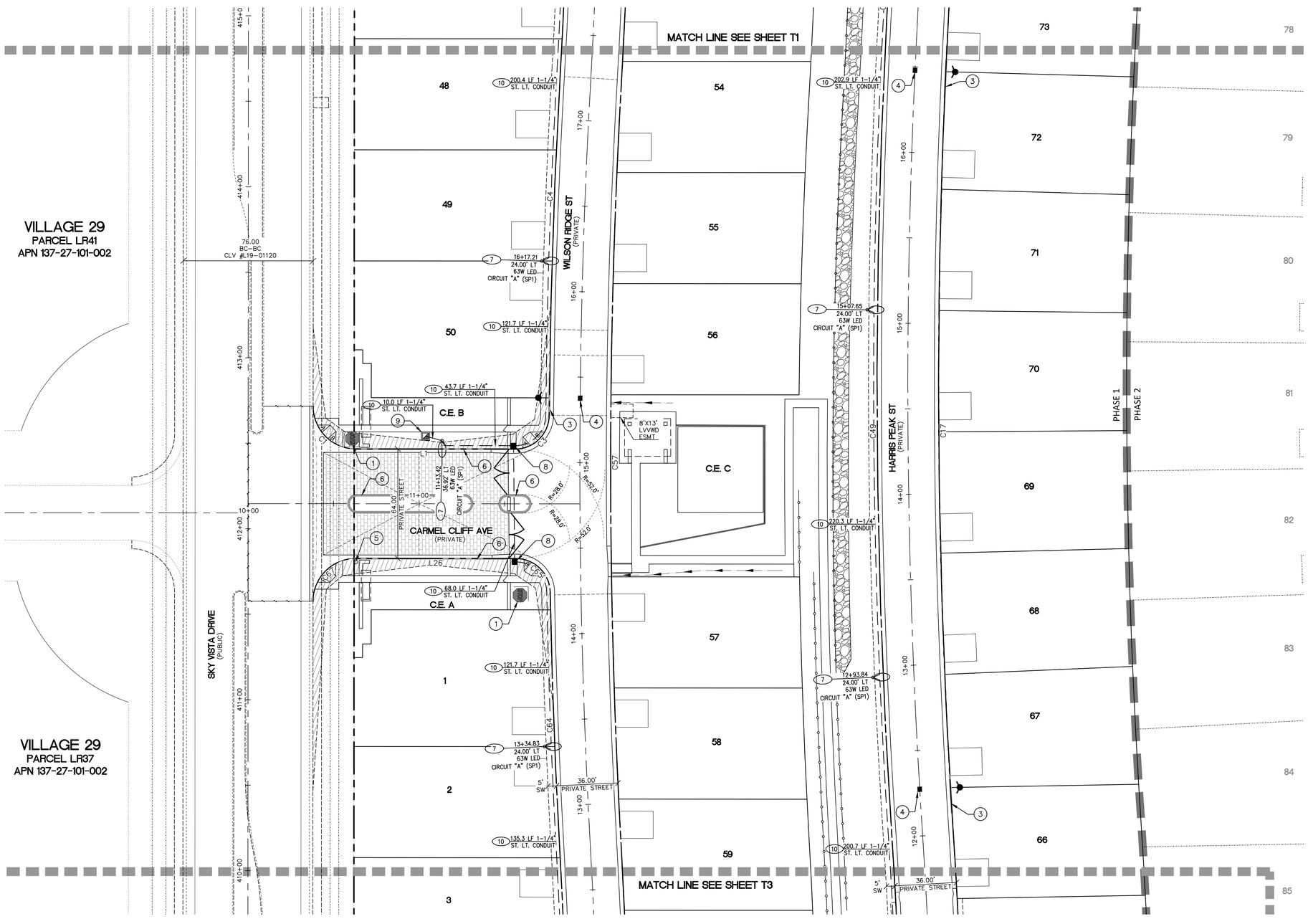
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Nicholas DeRosa

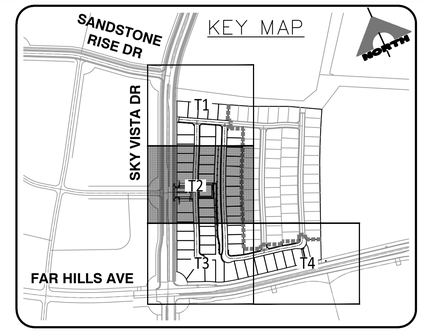
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

TRAFFIC PLAN 1

DRAWING
T1
30 OF 33 SHTS





NORTH

30' 0' 15' 30'
SCALE: 1" = 30'

CONSTRUCTION NOTES

1. INSTALL (2) STREET NAME SIGN (D3)-BROWN BACK WITH WHITE LETTERS, WITH 30" STOP SIGN (R1-1) WITH THE WORDS "PRIVATELY MAINTAINED".
2. INSTALL (2) STREET NAME SIGN (D3)-BROWN BACK WITH WHITE LETTERS TO BE PRIVATELY MAINTAINED.
3. PAINT CURB RED (NO PARKING) 30' WIDE CENTERED ON HYDRANT EXCEPT DRIVEWAY.
4. INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS.
5. INSTALL "ON-STREET PARKING IN MARKED FIRE LANES PROHIBITED" SIGN (TYPE B SIGNAGE)
6. PAINT CURB RED (NO PARKING FIRE LANE) FOR EMERGENCY ACCESS. (TYPE C SIGNAGE)
7. INSTALL SUMMERLIN TYPE 5 LED STREETLIGHT (MODEL #SUM-XQRM-LED-BL-SIL-2-UE-DIM-27-70CRI-BRZ-NR-4397-SMBRKT) PER SUMMERLIN LED LIGHTING ANALYSIS DRAWING NC-9
8. INSTALL 3 ½ PULL BOX
9. INSTALL 100 AMP SERVICE PEDESTAL PER USDCCA STD DWG NO. 330, 331, 332.1
10. INSTALL 1-1/4" STREETLIGHT CONDUIT WITH 2-#4 AND 1-#8 THW COPPER CONDUCTORS
11. INSTALL BARRICADE PER CCAUSD DWG #601

LINE AND CURVE TABLE

SEE SHEET T4 FOR LINE AND CURVE TABLE

GENERAL NOTES

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CITY OF LAS VEGAS'S SATISFACTION. ALL MATERIAL USED SHALL MEET CITY OF LAS VEGAS'S SPECIFICATIONS OR WILL WILL BE AN APPROVED EQUIVALENT.
2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02
3. ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.

BASIS OF BEARING AND COORDINATES

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE:LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV0934DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE DATE

L# XXX-XXXXX | CLV DWG#

FAST
Call before you Dig
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1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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Avoid cutting underground utility lines. It's costly.
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OR
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AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

EXPIRES 12/31/2021
ENGINEER - STATE OF NEVADA
WESLEY T. PETTY
No. 16369
PROFESSIONAL ENGINEER
DATE: 07-16-20

BID SET

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:
PLOT DATE: 07-16-20
PLOT TIME: 10:13:44

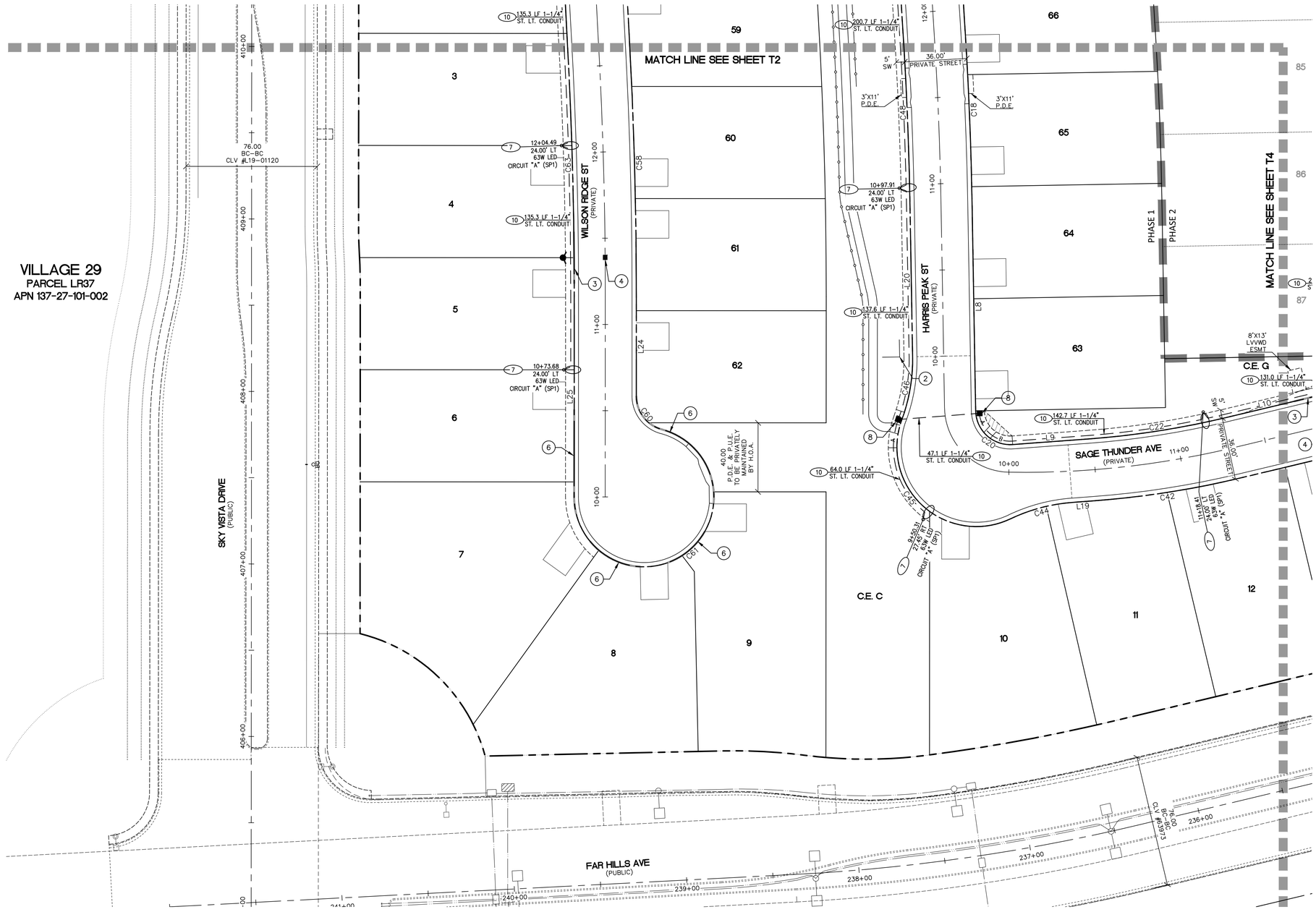
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gcwengineering.com
f:\Projects\700\764-a173-001\DWG\production\Phase 1\764-A173-T-Ph1.dwg
Nicholas DeRosa

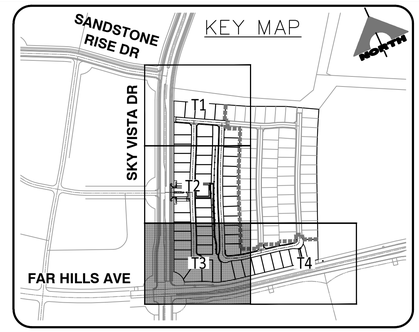
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

TRAFFIC PLAN 2

DRAWING
T2
31 OF 33 SHTS





NORTH

30' 0' 15' 30'
SCALE: 1" = 30'

CONSTRUCTION NOTES

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LINE AND CURVE TABLE

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LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
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APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE — DATE

L# XXX-XXXXX | CLV DWG#

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gcwengineering.com

f: \Projects \700\764-a173-001\DWG\production\Phase 1\764-a173-T-Ph1.dwg
Nicholas DeRosa

PLOT DATE: 07-16-20
PLOT TIME: 10:13:54

PROJECT NO. 764-A173-001
DESIGN:
DRAWN:
CHECK:

REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP

DATE: 07-16-20

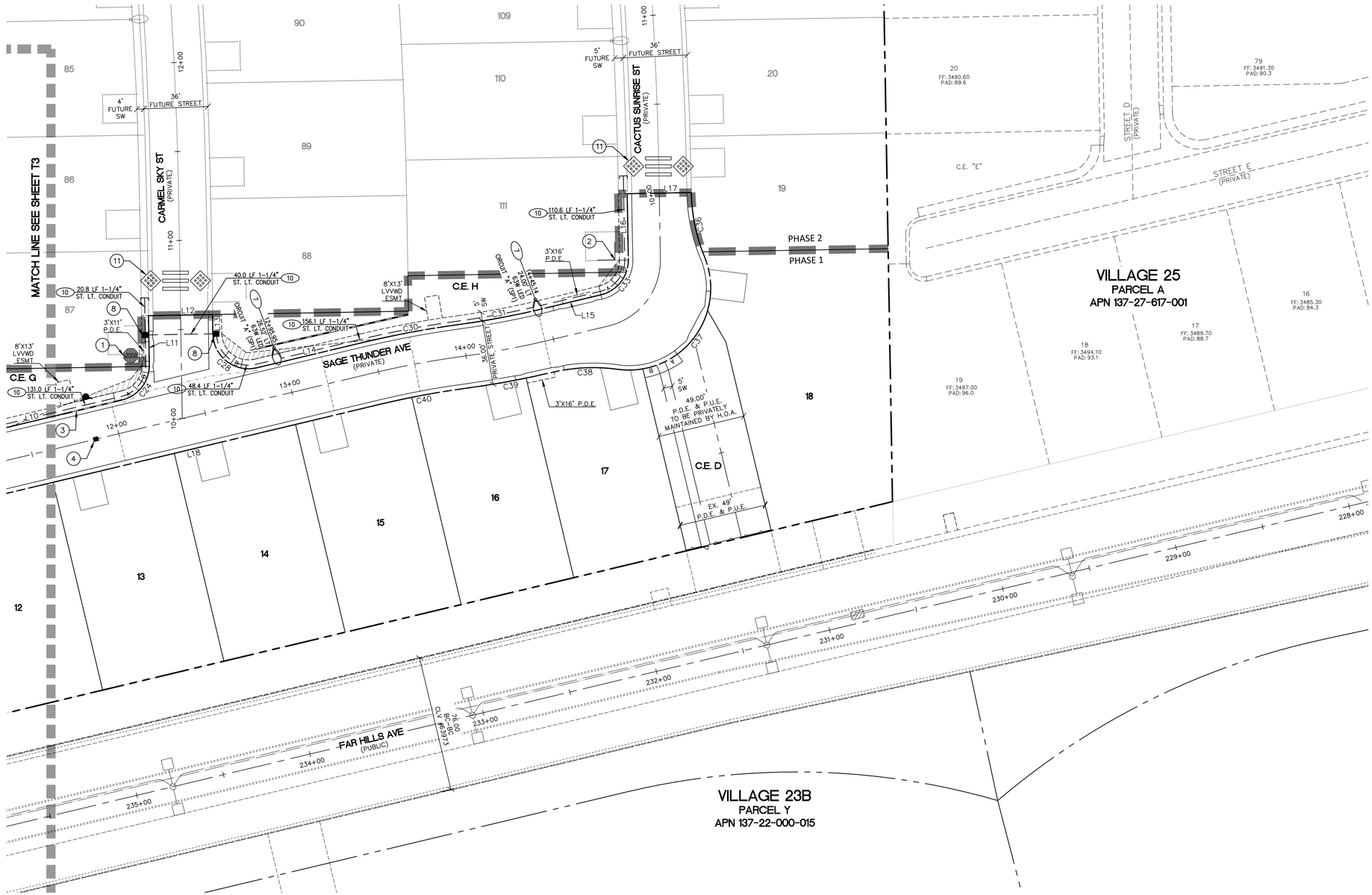
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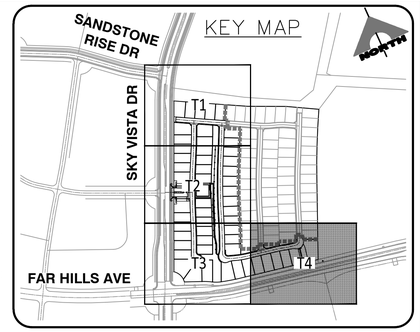
PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

TRAFFIC PLAN 3

DRAWING
T3
32 OF 33 SHTS







30' 0' 15' 30'
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BENCHMARK

BM#	DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CLV BM No. 7LV093DW6	FIND RIVET AND PLATE IN TOP OF CURB SE CORNER OF DESERT MOON RD. AND SKY VISTA DR. T5OS,R59E,S34	3318.31 (FEET)	1,011.422 (METERS)

APPROVED FOR CONSTRUCTION

LAS VEGAS FIRE AND RESCUE — DATE

L# XXX–XXXXX | CLV DWG#

LINE TABLE

#	LENGTH	BEARING
L1	93.11'	S65° 41' 13.82"E
L2	57.17'	N24° 18' 45.79"E
L3	91.08'	N61° 30' 43.92"W
L4	26.00'	N28° 29' 16.08"E
L5	359.28'	S61° 30' 43.92"E
L6	36.00'	S28° 29' 15.29"W
L7	106.30'	S25° 50' 43.24"W
L8	120.72'	S23° 17' 44.77"W
L9	43.96'	S69° 56' 02.57"E
L10	75.55'	S79° 08' 31.82"E
L11	27.58'	N23° 17' 44.77"E
L12	36.00'	S66° 42' 15.23"E
L13	10.82'	S23° 17' 44.77"W
L14	62.31'	S79° 08' 31.82"E
L15	35.38'	S79° 08' 31.82"E

LINE TABLE

#	LENGTH	BEARING
L16	37.03'	N23° 17' 44.77"E
L17	36.00'	S66° 42' 15.23"E
L18	215.68'	N79° 08' 31.82"W
L19	12.01'	N69° 56' 02.57"W
L20	88.77'	N23° 17' 44.77"E
L21	109.81'	N25° 50' 43.24"E
L22	115.91'	N61° 30' 43.92"W
L23	51.62'	S24° 18' 45.79"W
L24	57.80'	S24° 18' 45.79"W
L25	116.28'	N24° 18' 45.79"E
L26	93.73'	N65° 41' 13.82"W

CURVE TABLE

#	RADIUS	LENGTH	DELTA
C1	25.00'	39.27'	090°00'00"
C3	20.00'	31.28'	089°36'25"
C4	4036.00'	203.49'	002°53'20"
C5	2664.00'	152.60'	003°16'55"
C7	20.00'	29.96'	085°49'30"
C9	5.00'	7.85'	090°00'00"
C11	5.00'	7.85'	090°00'00"
C14	20.00'	32.34'	092°38'33"
C16	2160.00'	56.37'	001°29'43"
C17	4000.00'	481.25'	006°53'36"
C18	2160.00'	107.39'	002°50'55"
C20	20.00'	32.54'	093°13'47"
C22	500.00'	80.36'	009°12'29"
C24	20.00'	27.07'	077°33'43"
C28	20.00'	35.76'	102°26'17"

CURVE TABLE

#	RADIUS	LENGTH	DELTA
C30	536.00'	53.62'	005°43'55"
C31	464.00'	46.42'	005°43'55"
C33	20.00'	27.07'	077°33'43"
C36	100.00'	37.23'	021°19'45"
C37	46.00'	96.52'	120°13'22"
C38	100.00'	36.95'	021°10'22"
C39	500.00'	48.64'	005°34'24"
C40	500.00'	50.02'	005°43'55"
C42	536.00'	86.14'	009°12'29"
C44	100.00'	37.23'	021°19'45"
C45	46.00'	109.10'	135°53'17"
C46	100.00'	37.23'	021°19'45"
C48	2124.00'	105.60'	002°50'55"
C49	4036.00'	485.58'	006°53'36"
C50	2124.00'	55.43'	001°29'43"

CURVE TABLE

#	RADIUS	LENGTH	DELTA
C52	20.00'	30.49'	087°21'27"
C54	20.00'	32.87'	094°10'30"
C56	2700.00'	154.66'	003°16'55"
C57	4000.00'	458.25'	006°33'50"
C58	2700.00'	154.66'	003°16'55"
C60	20.00'	26.23'	075°09'19"
C61	40.50'	180.36'	255°09'20"
C63	2664.00'	152.60'	003°16'55"
C64	4036.00'	155.39'	002°12'21"
C65	20.00'	31.04'	088°55'26"
C67	25.00'	39.27'	089°59'59"

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Nicholas DeRosa

PROJECT NO. 764-A173-001
DESIGN:
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PULTE HOMES

SUMMERLIN VILLAGE 25
PARCEL D - PHASE 1

TRAFFIC PLAN 4

DRAWING
T4
33 OF 33 SHTS