

DS #: 5107-1

APN: 125-07-211-002

PROJECT: Skye Canyon II - Parcel 2.06 Update #1

SUBMITTAL: 5th

SCANNED BY/DATE:

CHECKED BY/DATE:

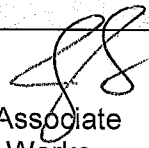


CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM

DATE:

November 20, 2019

TO:
Land Development Services
Department of Building & Safety

FROM:
Jennifer Shinn, P.E. 
Flood Control, Engr. Associate
Department of Public Works

SUBJECT: Drainage Study for:
Skye Canyon II – Parcel 2.06 Update #1

COPIES TO:

Slater Hanifan Group

Cross Streets: Skye Canyon Park Dr. & Skye Village Rd.

Ninety-Five Management

File Number: F:\Depot\DSMemos\DS5107E.doc

Bart Anderson, P.E., DevCo

Parcel Number: 125-07-211-002

CCRFGD

Zoning Action: TMP-75348; VAC-75349

FEMA Flood Zone YES NO **X**

Proposed Storm Drain YES **X** NO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/4/2019	3/28/2019	See Comments Below	\$400.00	\$400
2 nd Submittal	7/18/2019	8/5/2019		\$400.00	3497195: \$400
3 rd Submittal	8/15/2019	8/29/2019		\$400.00	3532563: \$400
4 th Submittal	9/4/2019	9/25/2019		\$100.00	3555471: \$100
5 th Submittal	11/20/2019	11/20/2019	Approved	N/C	N/C
TOTAL FEES (LDDRS):				\$1300.00	----

REMARKS:

Update #1: Plugging of the 72" RCP in Skye Village Road per Phase 3A Update.

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

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

- The study assumes that all necessary perimeter roadway and drainage infrastructure improvements associated with Phase 3A are in place and functioning prior to the development of Skye Canyon II – Parcel 2.06.
- Skye Canyon II – Parcel 2.06 onsite development is to be flood protected by Skye Canyon Phase 3A. No occupancy permits within onsite Phase 3A will be issued prior to the substantial completion of Skye Canyon Phase 3A infrastructure.
- Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.
- With the development of Phase 2, existing draining easements no longer need for temporary facilities shall be vacated in order to map Lots 15-38.
- Structural plans for the storm drain improvements, including the deep drop inlets, custom storm drain manhole, and junction structures, must be submitted for review. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to

the Building Department for processing. The engineer must provide a copy of Building Department approval of the structures to Flood Control prior to final acceptance of the drainage study.

6. The project proposes to build temporary drainage facilities during Phase 1. Prior to final plan approval the developer must complete a Maintenance & Liability Agreement for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities and an exhibit that adequately shows the location and limits of the drainage facilities to City of Las Vegas Flood Control for approval. Once the drainage study is conditionally approved, the engineer should contact the City's Land Development Section (702-229-6371) to begin the agreement process.

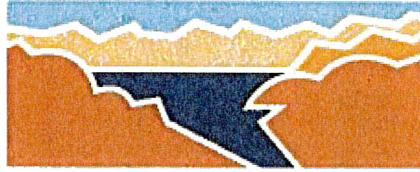
NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional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

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

END OF REMARKS
JKS

T/R/S: T19S/R60E/S07
AREA G-07

REGIONAL FLOOD
CONTROL DISTRICT



11/20/19
DS5107
N/C

Steven C. Parrish, P.E.
General Manager/Chief
Engineer

BOARD OF DIRECTORS

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November 20, 2019

Mr. Oh Sang Kwon, P.E.
City of Las Vegas Department of Public Works
333 North Rancho Drive
Las Vegas, NV 89106

**DISTRICT CONCURRENCE: SKYE CANYON II - PARCEL 2.06 UPDATE #1
(DS5107C) (RFCDD No. 19-11391)**

Dear Mr. Kwon:

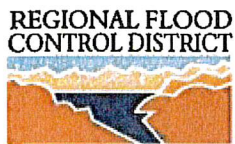
Clark County Regional Flood Control District (District) reviewed Technical Drainage Study dated February 28, 2019, Addendum No. 1 dated July 18, 2019, Addendum No. 2 dated August 15, 2019, Supplement No. 1 dated September 4, 2019 for above-mentioned project as submitted by SLATER HANIFAN GROUP. In addition, District is in receipt of the Conditional Letter of Acceptance from City of Las Vegas Department of Public Works dated September 26, 2019.

District concurs with acceptance of this Technical Drainage Study by City of Las Vegas Department of Public Works with the following condition:

Per District Policies and Procedures Manual, Section VIII.D.13 Uniform Regulations for the Control of Drainage, that Lead Entity shall provide As-Built plans or record drawings to the District after completion and final inspection of such privately installed flood control facilities that have a regional flood control significance.

District's review of this project was limited to issues of Regional Flood Control Significance as defined in *Uniform Regulations for the Control of Drainage*.

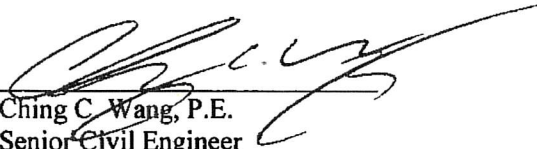
Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, information submitted by SLATER HANIFAN GROUP may be superseded. Compliance with regulatory elements and design standards specified in *Uniform Regulations for the Control of Drainage* does not imply a guarantee that properties will be free from flooding or flood damage. The District, its officials, or employees assume no liability for information, data, or conclusions presented by consulting engineers. We, therefore, make no warranties, either expressed or implied, in conducting this review.



Mr. Oh Sang Kwon, P.E.
November 20, 2019
Page 2

STEVEN C. PARRISH, P.E.
General Manager/Chief Engineer

BY:


Ching C. Wang, P.E.
Senior Civil Engineer

CCW:cr

c: Stanley Okey Amadi, P.E., Slater Hanifan Group

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TECHNICAL DRAINAGE STUDY
Update
Skye Canyon II - Parcel 2.06 Phase 2

City of Las Vegas, Nevada

Job No.: OLY1813.000

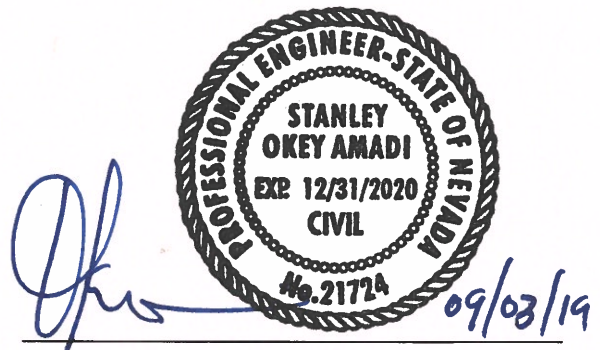
Date: September 2019

Prepared By:

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

Prepared For:

Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Stanley Okey Amadi, P.E., CFM
NV Professional Engineer No. 21724



OLY1813.000

September 03, 2019

Jennifer Shinn, P.E.
City of Las Vegas
333 N. Rancho Drive
Las Vegas, NV 89106

Subject: Technical Drainage Study Update for Skye Canyon II – Parcel 2.06 Phase 2 (DS5107)

Ms. Shinn:

This letter certifies that all items provided in the *Technical Drainage Study Update for Skye Canyon II – Parcel 2.06 Phase 2* submittal CD match the paper version bound into the study.

Respectfully Submitted,
SLATER HANIFAN GROUP A WESTWOOD TEAM

Stanley Okey Amadi, P.E., CFM
Project Manager – Flood Control Division

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon II - Parcel 2.06 Phase 2 - Update Date: September 03, 2019
 Location of Development: a) Descriptive (Cross Streets): North/South: Skye Canyon Park Drive
East/West: Skye Village Road
 b) Section: 7 Township: 19 South Range: 60 East
 c) APN: 125-07-211-002

Name of Owner: MF Land, LLC/Ninety-Five Management, LLC
 Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com
 Address: 11411 Southern Highlands Parkway, Suite 300 Las Vegas NV 89141

Contact Person – Name: Stanley Okey Amadi, P.E., CFM Telephone No.: (702) 284-5300
 *E-mail Address: stanley.amadi@westwoodps.com Fax No.: (702) 284-5399
 Firm: Slater Hanifan Group, A Westwood Team
 Address: 5740 S. Arville St. Las Vegas NV 89118

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 21.97 +/- Acres Being Developed/Disturbed: 21.97 +/- Acres

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

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

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

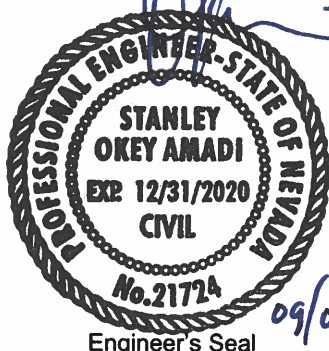
5. Approximate upstream land area which drains to the subject site: 704 acres

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

Skye Canyon II Parcel 2.06 (SHG, DS5107); Skye Canyon II Phase 3A (SHG, DS4931); Master Drainage Study for Skye Canyon (SHG, DS4420)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Onsite storm drain to existing storm drain in Skye Park Drive

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



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

***Newly Required Field**

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

Revision	Date

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1

Updated 05/01/2008



OLY1813.000

9/3/2019

Jennifer Shinn, P.E. – Flood Control, Engineering Associate
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Technical Drainage Study Update for Skye Canyon II – Parcel 2.06 Phase 2 (DS5107)

Dear Ms. Shinn:

Submitted for your review is this *Technical Drainage Study Update for Skye Canyon Parcel 2.06 Phase 2*. The site had been previously analyzed and designed within a Technical Drainage Study for Skye Canyon Parcel 2.06, prepared by Slater Hanifan Group and hereinafter referred to as the Original Study. The study was approved on September 03, 2019 and addressed the development of the Phase 1 portion of the site including all the interior roadways and utilities. The study also proposed an interim riprap channel within the Phase 2 area. The approval letter has been included in Appendix A of this submittal.

Purpose

This update study addresses the development of the remainder Phase 2 portion of the site which comprises of Lots 15 thru 38. The riprap channel proposed within the Phase 2 area will be filled in to allow construction of the lots. Note that the *Technical Drainage Study Update No.2 for Skye Canyon Phase 3A Infrastructure* (DS 4931); hereinafter referred to as the Phase 3A Update Study which addressed removal of the existing 72" RCP that discharges into the site from Skye Village Road is currently under review. It is understood that the subject Phase 2 improvements is reliant on the removal and diversion of the flows discharging into the site from the existing 72" RCP. Therefore, approval of the subject will be conditioned on the approval of the Phase 3A Update Study. Excerpts from the Phase 3A Update Study has been included in Appendix B for reference.

Street Flow & Finished Floor Analysis

The design and hydraulic analysis of Street 'F' which provides access to the proposed Phase 2 lots was addressed with the original Study. Hydraulic Section 3 along Street 'F' indicates a maximum flow depth of 0.43-ft during the 100-year storm event. The flow depth was utilized in Addendum No.1 of the Original Study submittal to analyze the finished floor elevations of the Phase 2 lots and all the finished floors were determined to meet the required flood protection criteria. The same finished floor elevations established and approved with the Original study have been maintained for the Phase 2 lots; therefore, revised finished floor analyses have not been provided with this update. Excerpts from the Original Study including the street calculation and finished floor analyses have been included in Appendix C for reference.

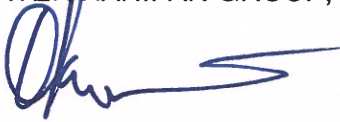
Conclusion

The proposed Phase 2 improvements are in conformance with the design concept provided in the Original Study. The proposed finished floor elevations for the Phase 2 lots will be adequately flood protected from flows due to the 100-year storm event. As previously stated, it is acknowledged that the Phase 2 improvements will be reliant on removal of the existing 72 RCP that discharges into the site from Skye Village Road. Therefore, final approval of this update is expected to be contingent on the approval of the Phase 3A Update Study.

The updated improvement plans, including the grading and detail sheets for the Phase 2 improvements have been included in Appendix D. If you have any questions or require additional information, please do not hesitate to contact us at (702) 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP, A WESTWOOD TEAM



Stanley Okey Amadi, P.E., CFM
Project Manager – Flood Control Division

cc: Mark Failla, P.E., CFM – SHG
Josh Johnson, P.E. – SHG

APPENDIX

Appendix A Approval Letter

Appendix B Reference Material – Skye Canyon Phase 3A Update Study

Appendix C Reference Material – Skye Canyon Parcel 2.06 (Original Study)

Appendix D CD of Electronic Files & Revised Improvement Plans

APPENDIX A

Approval Letter

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: September 3, 2019		
TO: Land Development Services Department of Building & Safety			FROM: Jennifer Shinn, P.E. Flood Control, Engr. Associate Department of Public Works		
SUBJECT: Drainage Study for: Skye Canyon II – Parcel 2.06			COPIES TO: Slater Hanifan Group		
Cross Streets: Skye Canyon Park Dr. & Skye Village Rd.			Ninety-Five Management		
File Number: F:\Depot\DSMemos\DS5107C.doc			Bart Anderson, P.E., DevCo		
Parcel Number: 125-07-211-002			CCRFC		
Zoning Action: TMP-75348; VAC-75349					
FEMA Flood Zone		YES NO X			
Proposed Storm Drain		YES X NO			

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	3/4/2019	3/28/2019	See Comments Below	\$400.00	\$400
2 nd Submittal	7/18/2019	8/5/2019		\$400.00	3497195: \$400
3 rd Submittal	8/15/2019	8/29/2019		\$400.00	
TOTAL FEES (LDDRS):				\$1200.00	----

REMARKS:

*****The Conditional Approval of this Drainage Study is to allow the engineer/developer to submit the Improvement Plans to Land Development Only.**

*****Do no submit the Drainage Study to Clark County Regional Flood Control District (CCRFC) prior to the Structural Design and Calculations being approved by the City Building & Safety Department.**

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

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

- This drainage study is acceptable in concept;** however, City of Las Vegas will not formally accept the study until the Clark County Regional Flood Control District (CCRFC) has issued a letter of concurrence. The engineer should contact the CCRFC to confirm they have begun their review.

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

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

When it is applicable, structural calculations of facilities must be approved by the City prior to submittal to the *Clark County Regional Flood Control District* for their review and concurrence.

2. The study assumes that all necessary perimeter roadway and drainage infrastructure improvements associated with Phase 3A are in place and functioning prior to the development of Skye Canyon II – Parcel 2.06.
3. Skye Canyon II – Parcel 2.06 onsite development is to be flood protected by Skye Canyon Phase 3A. No occupancy permits within onsite Phase 3A will be issued prior to the substantial completion of Skye Canyon Phase 3A infrastructure.
4. The development of Lots 15 through 38, including the plugging of the 72" RCP, the removal of the interim channel, and the vacation of easements will require an update to the drainage study or be analyzed as 'Phase 2'. Said Update or 'Phase 2' is contingent upon the substantial completion of the Ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility (US95/Kyle Canyon Road Interchange to Moccasin Road).
5. An update for Skye Canyon Phase 3A will be required to address the plugging of the 72" RCP prior to the completion of the ultimate MPU facilities per Moccasin Road CCRFCD Flood Control Facility. The Phase 2 improvements of this project will be dependent on the plugging of the 72" RCP.
6. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map.
7. Structural plans for the storm drain improvements, including the deep drop inlets, custom storm drain manhole, and junction structures, must be submitted for review. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to the Building Department for processing. The engineer must provide a copy of Building Department approval of the structures to Flood Control prior to final acceptance of the drainage study.
8. The project proposes to build temporary drainage facilities during Phase 1. Prior to final plan approval the developer must complete a Maintenance & Liability Agreement for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities and an exhibit that adequately shows the location and limits of the drainage facilities to City of Las Vegas Flood Control for approval. Once the drainage study is conditionally approved, the engineer should contact the City's Land Development Section (702-229-6371) to begin the agreement process.

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

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

END OF REMARKS

JKS

T/R/S: T19S/R60E/S07

AREA G-07

APPENDIX B

Reference Material – Skye Canyon Phase 3A Update Study

TECHNICAL DRAINAGE STUDY
UPDATE No. 2
Skye Canyon Phase 3A Infrastructure
City of Las Vegas, Nevada

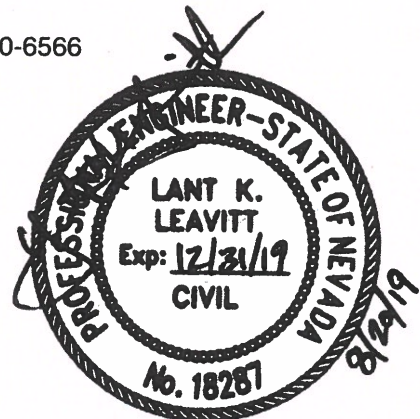
Job No.: OLY1609.000
Date: August 2019

Prepared By:

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

Prepared For:

Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, Nevada 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Lant Leavitt, P.E.
NV Professional Engineer No. 18287

Assisted By: D'Amato Hyche



OLY1609.000

August 20, 2019

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

**Subject: Technical Drainage Study Update No. 2 for Skye Canyon Phase 3A Infrastructure
(DS 4931)**

Mr. Sung:

Submitted for your review is this *Technical Drainage Study Update #2 for Skye Canyon Phase 3A Infrastructure* (hereinafter referred to as the Update Study). The original *Technical Drainage Study for Skye Canyon Phase 3A Infrastructure* (hereinafter referred to as the Original Study) prepared by Slater Hanifan Group (SHG) was approved by the City of Las Vegas (City) on January 31, 2019. The approval letter for the Original Study is provided in Appendix A. The Original Study addressed the development of roadway and infrastructure improvements intended to support the development of approximately 85 acres in the Skye Canyon master planned development, labeled as Phase 3A. Since the approval of the Original Study, improvements plans have been approved and construction has begun. Design of onsite parcel development has also started. To better facilitate onsite stubs with the proposed parcel developments, *TDS Update #1* was prepared and was approved on June 25, 2019, see approval letter in Appendix A.

Purpose: The Phase 3A project includes a regional storm drain facility in Skye Village Road. Until downstream regional facilities are in place, the Skye Village Road facility will discharge down the Iron Mountain Road alignment. To avoid exceeding existing patterns in Iron Mountain Road, temporary storm drain facilities were previously proposed to discharge flow through Parcel 2.06 and Canyon View Lane. Per coordination meeting with the City (see email in Appendix A), the City conceptually concurs with a design that removes these flow diversions through parcels and routes all offsite flow north to the temporary channel in Grand Canyon Drive. The purpose of this Update Study is to demonstrate that removing these temporary storm drain facilities does not adversely impact existing downstream flow patterns. To accomplish this, instead of discharging flow through parcels, existing flow patterns in Iron Mountain Road are proposed to be met by conveying flow south from the existing sediment basin at Iron Mountain/US 95 to the existing 66-inch storm drain facility in Grand Canyon Drive. The existing 66-inch storm drain in Grand Canyon Drive discharges to the same existing wash that Parcel 2.06 and Canyon View Lane discharge to, and therefore allows for existing flow patterns to be maintained. The following elements of the Original Study are revised with this update:

- Revised Proposed Condition Hydrology Model
- Revised Proposed Condition Storm Drain Hydraulic Models
- Revised Subbasin and Facility Maps
- Revised Improvement Plans

Hydrology

The proposed condition hydrology model from the Original Study routed offsite flows at the intersection of Skye Canyon Park Drive/Skye Village Road east through Parcel 2.06. Also, a portion of offsite flows at the intersection of Canyon View Lane/Skye Village Road were routed east through Canyon View Lane. The proposed condition model (see Appendix C) for this update study removes these routings and instead routes all offsite flow north and east around the Phase 3A site. Offsite flow impacting the west edge of the site is routed north in Skye Village Road to Iron Mountain Road, then east to the existing sediment basin at US 95/Iron Mountain Road. To

avoid increasing flows beyond the existing condition in the Iron Mountain alignment, 456 cfs is proposed to be routed south out of the sediment basin in an earthen ditch to an existing wash in the Brent Lane alignment. At the Brent Lane alignment, a flow diversion is proposed to route 229 cfs of this flow to the existing 66-inch storm drain in Grand Canyon Road, and 381 cfs to the existing 5-ft x 5-ft RCB MPU facility and Brent Lane culvert crossing at US 95. The proposed flow diversion is designed to maximize the use of both the existing Grand Canyon Drive storm drain and the existing 5-ft x 5-ft RCB MPU facility, while keeping flow rates discharged from the site less than existing conditions.

Flowrate Comparison

Refer to Exhibit G included in Appendix B for an illustration of the proposed condition drainage pattern and summary of the 100-year and 10-year storm event flowrates. This proposed update study meets allowable downstream discharge flow rates as shown in the comparison table below.

Phase 3A Downstream Discharges 100-Year Flow Rate Comparison Table			
Concentration Point/ Location	Update 2 Proposed Q ₁₀₀ (cfs)	Original Study Proposed Q ₁₀₀ (cfs)	Existing (Historic) Condition Q ₁₀₀ (cfs)
CP10 Iron Mountain / US 95	583 (CP10 minus DIV1)*	588	780
CP11 Brent Lane / US 95	151 (CP11 minus DIV2 & MPU 5x5 capacity)**	148	153
CP12 Downstream of Smith's	519	697	1044

* Flow discharged to Iron Mt equals CP10 (1039 cfs) minus DIV1 (456 cfs)

** Flow discharged to Brent Ln equals CP11 (610 cfs) minus DIV2 (229 cfs) minus flow to MPU 5x5 RCB (230 cfs)

Hydraulics

Refer to Exhibit I included in Appendix B for a map of existing and proposed facilities. Revised facility hydraulic models are described below.

WSPG Model (Skye Village Road)

Due to the proposed Parcel 2.06 and Canyon View Lane storm drains being removed, the flow rate in the Skye Village Road MPU facility is increased in the proposed condition. The WSPG model for the Skye Village Road facility has been re-run with the revised proposed condition flow rate. The proposed condition flow rate is still less than the ultimate condition flow rate, and no adverse impacts occur in the Skye Village Road facility due to the increased proposed condition flow rate. The revised WSPG model is included in Appendix D.

WSPG Model (Canyon View Lane and Skye Park Drive)

Due to the proposed Parcel 2.06 and Canyon View Lane storm drains being removed, the proposed storm drain pipe in Canyon View Lane is not needed until the drop inlet upstream of Skye Park Drive. In addition, the remaining storm drain facility in Canyon View Lane and Skye Park Drive has been re-sized to account for the elimination of offsite flow to this facility. The revised WSPG model for this storm drain is included in Appendix D.

WSPG Model (Grand Canyon)

A portion of flow diverted south from the Iron Mountain sediment basin is conveyed by a proposed storm drain to the existing 66-inch storm drain in Grand Canyon Drive. The proposed storm drain is not intended to be an ultimate condition facility, as it is not needed in the ultimate condition. In the ultimate condition the Moccasin MPU facility (anticipated to begin construction in the next 6 months) will cut off all offsite flows from the Skye Village Road MPU facility and convey them northeast to the Upper Las Vegas Wash. The WSPG model for the proposed Grand Canyon Drive storm drain is included in Appendix D.

Ditch Section Computations

Revised ditch section computations are included for the proposed channel downstream of Skye Village Road and the proposed channel downstream (south) of the Iron Mountain sediment basin. Computations are included for both riprap (immediately downstream of facilities) and earthen sections. Ditch section computations are included in Appendix D.

Inlet Control Nomographs

Inlet control nomographs are included for the proposed 8-ft x 5-ft RCB at the Iron Mountain sediment basin, the 72-inch RCP and 8-ft x 5-ft RCB downstream of the proposed earthen ditch at the Brent Lane alignment, and to verify the capacity of the existing 5-ft x 5-ft RCB MPU facility in US 95 near Brent Lane.

Conclusion

This update proposes to eliminate interim flow routing through the Phase 3A parcels, and instead routes this flow north and east around the site to the Iron Mountain Road (Grand Canyon Drive) alignment. This flow routing is consistent with the concept agreed upon in the coordination meeting with the City. To avoid increasing flow rates beyond existing conditions at Iron Mountain Road, this study proposes a ditch and storm drain facilities south from the Iron Mountain Road alignment to distribute the flow back to its historical flow patterns. This update is in compliance with the following:

- This project is in compliance with all the applicable drainage laws as recognized by the state of Nevada as well as all the applicable design standards stipulated in the CCRFCD *"Hydrologic Criteria and Drainage Design Manual"*.
- This project is in compliance with the 2018 CCRFCD "Master Plan Update." The project includes a CCRFCD master planned facility. The ultimate condition flow rate and facility design has not changed with this update, only a change to the proposed condition flow rate. The proposed condition does not control the size or design of the facility.
- The entire project site is located outside of the FEMA designated Special Flood Hazard Area (SFHA). The site and the proposed improvements are located within a FEMA flood Zone "X" (unshaded). Therefore, notification and/or coordination with FEMA will not be required for this project.
- The changes proposed in this update are in compliance with the previously approved Original Study. The proposed changes do not alter the previously established offsite flow rates; thus, the minor changes in onsite basin flow patterns is considered acceptable.

The revised improvement plan set has been included in Appendix E to support the drainage patterns and conclusions detailed in this study. If you have any questions or require additional information, please contact us at (702) 284-5300.

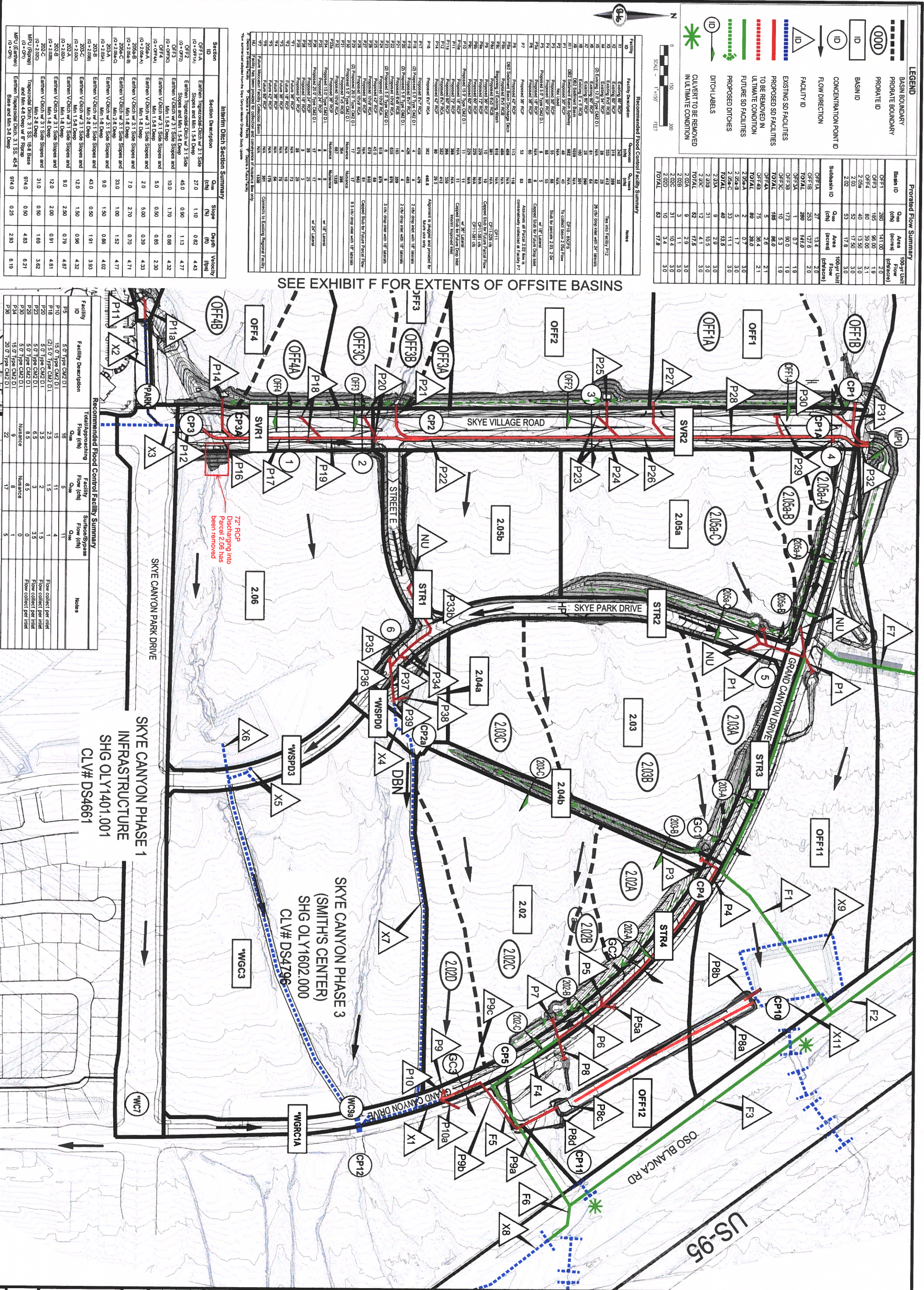
Respectfully Submitted,

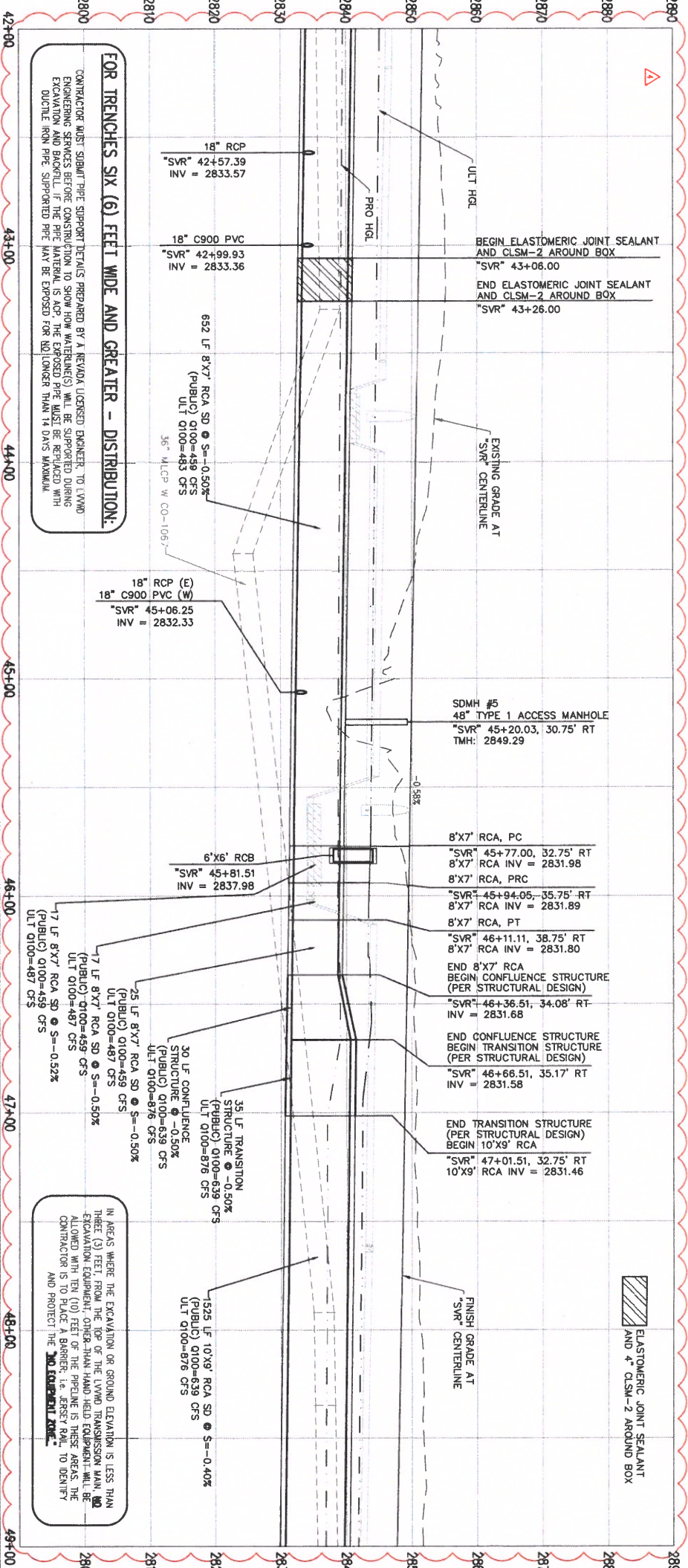
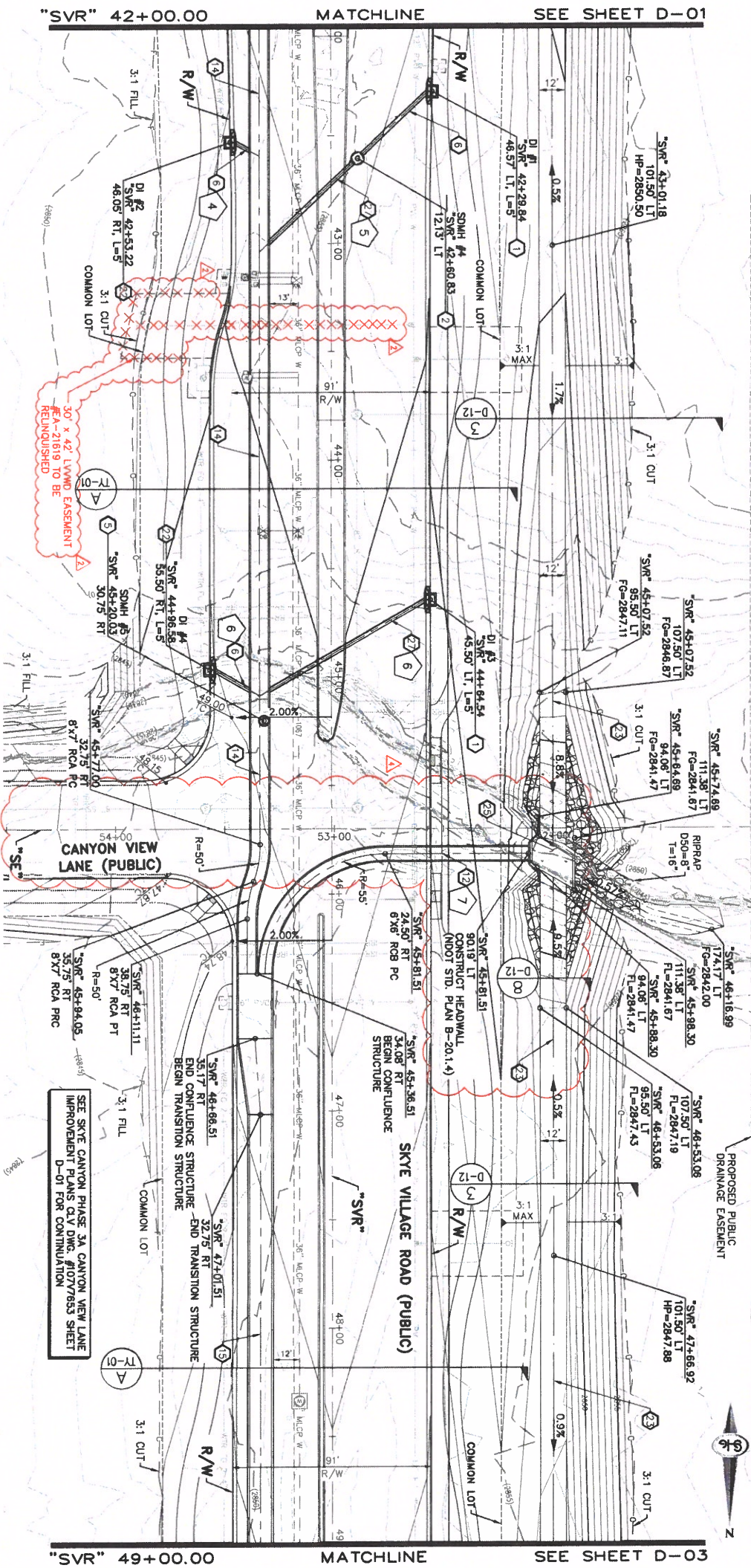
SLATER HANIFAN GROUP
A WESTWOOD TEAM



Lant Leavitt, P.E.
Flood Control Division

pc: Mark Failla, P.E., CFM – SHG
Jerry Slater, P.E. – SHG
Rhonda Miller – SHG





STORM DRAIN NOTES

1. CONSTRUCT TYPE "C" DROP INLET (USDOCA STD. DWG. NO. 412.1 & 421)
2. CONSTRUCT 60" TYPE III MANHOLE (USDOCA STD. DWG. NO. 406.1)
3. CONSTRUCT 60" TYPE III MANHOLE WITH TYPE I-A RISER (USDOCA STD. DWG. NO. 404.1 AND 406.1)
4. CONSTRUCT NOTOT TYPE 4 MANHOLE (NOTOT STD. PLAN R-4.3.2)
5. CONSTRUCT 48" TYPE I R/A ACCESS MANHOLE (SEE SHEET S112)
6. INSTALL 18" RCP (USDOCA STD. DWG. NO. 503.2)
7. INSTALL 36" RCP (USDOCA STD. DWG. NO. 503.2)
8. INSTALL 36" RCP (USDOCA STD. DWG. NO. 503.2)
9. INSTALL 42" RCP (USDOCA STD. DWG. NO. 503.2)
10. INSTALL 60" RCP (USDOCA STD. DWG. NO. 503.2)
11. INSTALL 72" RCP (USDOCA STD. DWG. NO. 503.2)
12. CONSTRUCT 6' X 8' ROB (NOTOT STD. PLAN B-20.1.2)
13. CONSTRUCT 7' X 5' ROB (NOTOT STD. PLAN B-20.1.2)
14. CONSTRUCT 10' X 9' R/A (SEE DETAIL 1, SHEET S4.10)
15. CONSTRUCT 10' X 9' R/A (SEE DETAIL 2, SHEET S4.10)
16. INSTALL 30" RCP END SECTION (NOTOT STD. PLAN R-2.3.1)
17. INSTALL 42" RCP END SECTION (NOTOT STD. PLAN R-2.3.1)
18. CONSTRUCT BRICK AND MORTAR PILE (SEE DETAIL 3, DRAWING D-12)
19. NOT USED
20. CONSTRUCT CULVERT HEADWALL (NOTOT STD. PLAN R-2.3.2 & R-2.3.2.1)
21. CONSTRUCT CONCRETE COLLAR (SEE DETAIL 1, DRAWING D-12)
22. CONSTRUCT DROP INLET (SEE DETAIL 10, SHEET S1.10)
23. TYPE II MAINTENANCE ACCESS PAVI
24. CONSTRUCT HEADWALL (SEE SHEET S2.10)
25. CONSTRUCT CONCRETE PAD WITH 3' CULVERT WALL (SEE DETAIL 9, DRAWING D-12)
26. CONSTRUCT 3' CULVERT WALL (SEE DETAIL 10, DRAWING D-12)
27. INSTALL 18" WATER QUALITY C905 (USDOCA STD. DWG. NO. 503.2)
28. INSTALL 42" WATER QUALITY C905 (USDOCA STD. DWG. NO. 503.2)
29. CONSTRUCT TYPE R PEDIESTRIAN RAIL PER NOTOT STD. PLAN B-25.1.5

NOTES

1. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
2. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR ROB/RCA.
3. ALL DROP INLETS SHALL INCLUDE STORM WALK MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
4. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
5. ALL PIPES IN PUBLIC ROW ARE PUBLICLY MAINTAINED.
6. ADD SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SAGROCK CONCRETE.
7. SEE UTILITY PLAN AND PROFILE SHEETS FOR UTILITY ADJUSTMENTS AND RELOCATIONS.
8. ALL INTERIOR DRAINAGE FACILITIES TO BE PRIVATELY MAINTAINED

DROP INLET NOTE

WHERE TO 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).

LEGEND

1. STORM DRAIN LATERAL, # (SEE SHEETS D-08 THRU D-11)

FLOOD ZONE

1. LOCATE THIS GRADING PLAN IN THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE. (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE PROJECT. (SEE SHEET S1.100)

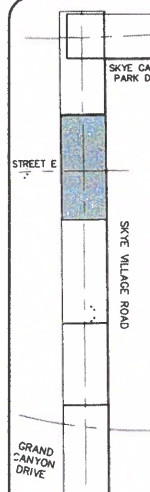
NOTE:

PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES. PROPERTY OWNER SHALL BE RESPONSIBLE TO THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

APPROVED FOR CONSTRUCTION

PROJECT NO. 126441
DATE: 1/28/19
DESIGNER: DAM
CHECKED: SIR

KEY MAP



SCALE
0 30 60
FEET

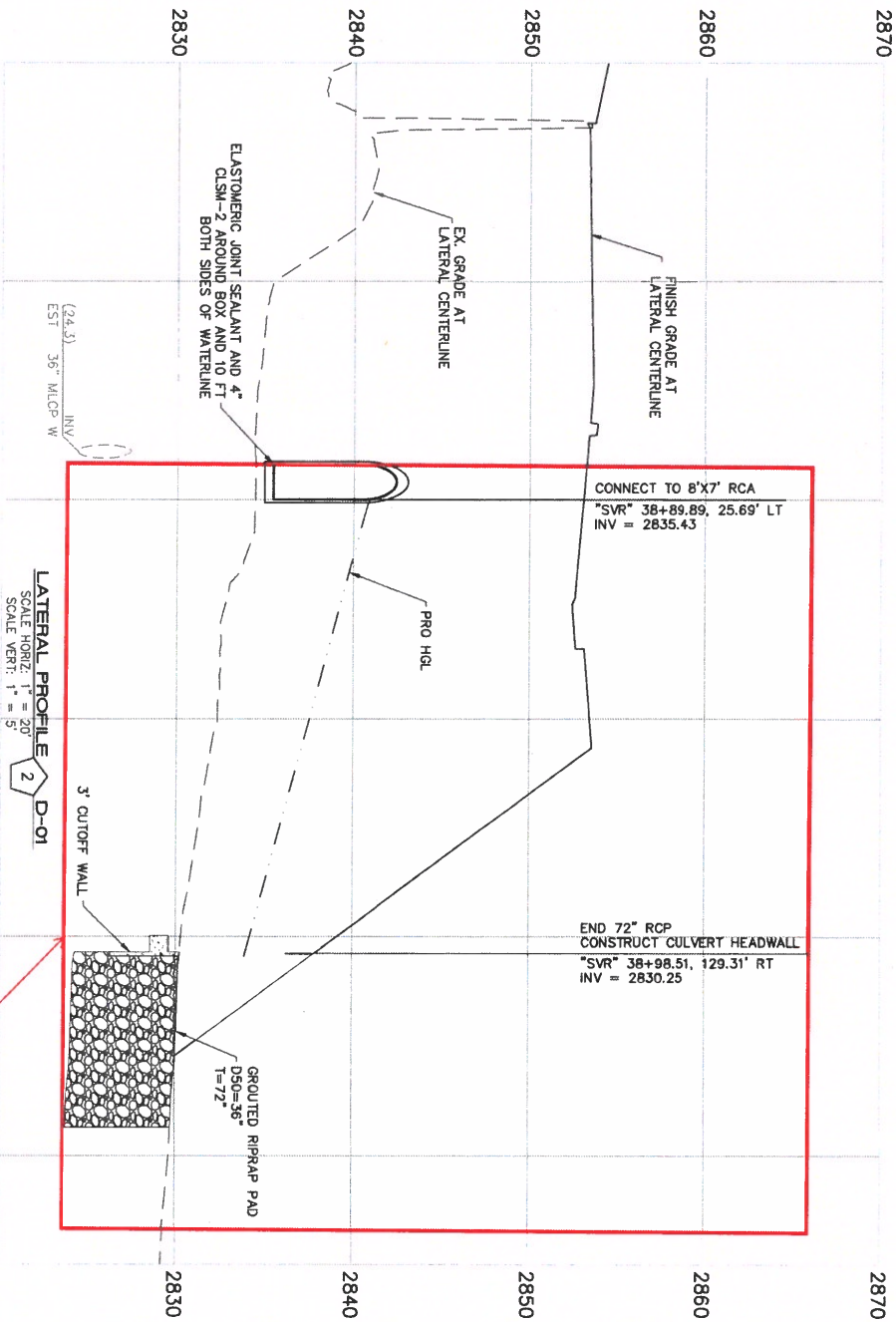
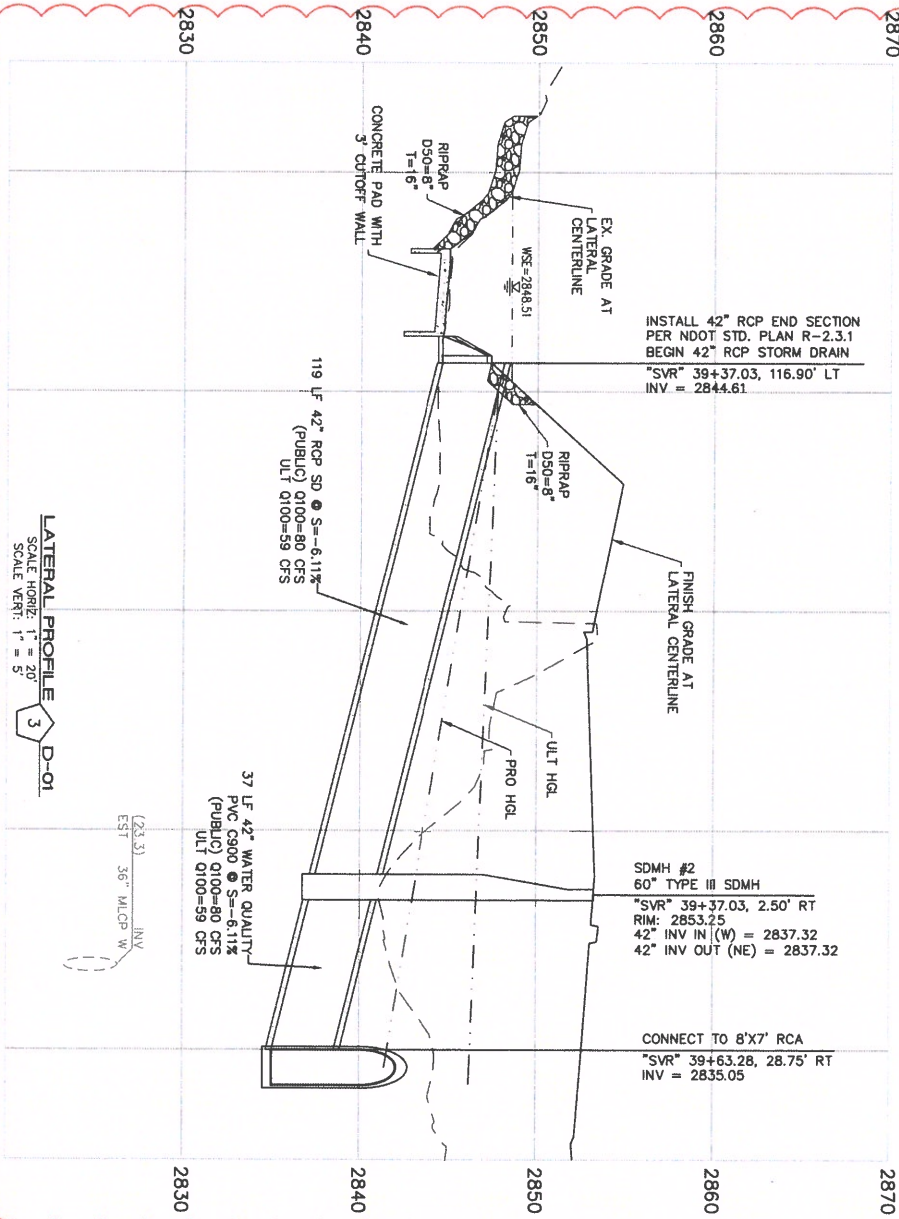


S-I-G
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC
SKYE CANYON II PHASE 3A
SKYE VILLAGE ROAD
STORM DRAIN PLAN AND PROFILE - "SVR" 42+00.00 TO "SVR" 49+00.00

PROJECT NO. OLY1609-000
DATE: 1/28/19
DESIGNER: DAM
CHECKED: SIR
SHEET 12 OF 61
DWG NO. 107V1650



Ex. 72" RCP and
Headwall removed

FOR TRENCHES SIX (6) FEET WIDE AND GREATER - DISTRIBUTION:
CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAILS PREPARED BY A NEVADA LICENSED ENGINEER TO LAND ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINES WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL. IF THE PIPE WATERLINES ARE NOT SUPPORTED DURING EXCAVATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 14 DAYS MAXIMUM.

IN AREAS WHERE THE EXCAVATION OR GROUND ELEVATION IS LESS THAN THREE (3) FEET FROM THE TOP OF THE LAND TRANSMISSION DRAIN, NO EXCAVATION EQUIPMENT OTHER THAN HAND HEED EQUIPMENT WILL BE ALLOWED WITH TEN (10) FEET OF THE PRELINE IS THESE AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE TRANSMISSION DRAIN.

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 128441
FIRST APPROVED DATE: _____

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON II PHASE 3A
SKYE VILLAGE ROAD
STORM DRAIN LATERAL PROFILE

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

REVISED STORM DRAIN

SLATER HANIFAN GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

DATE: 1/28/19
DRAFTER: DAW
DESIGNER: DAW
CHECKED: JSR
PROJECT NO.
OLY1609-000



D-08
SHEET 18 OF 61
DMG NO. 1077650

APPENDIX C

Reference Material – Skye Canyon Parcel 2.06 (Original Study)

**TECHNICAL DRAINAGE STUDY
ADDENDUM #2
Skye Canyon II - Parcel 2.06**

City of Las Vegas, Nevada

Job No.: OLY1813.000

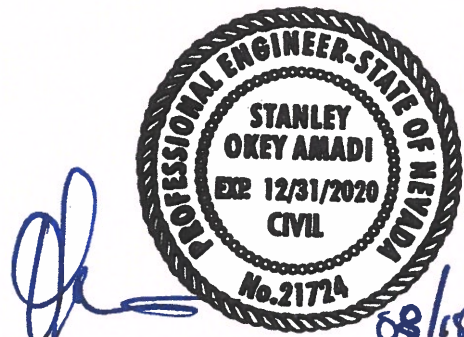
Date: August 2019

Prepared By:

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

Prepared For:

Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Stanley Okey Amadi, P.E., CFM
NV Professional Engineer No. 21724

Assisted by: D'Amato C. Hyche

**TECHNICAL DRAINAGE STUDY
ADDENDUM
Skye Canyon II - Parcel 2.06**

City of Las Vegas, Nevada

Job No.: OLY1813.000

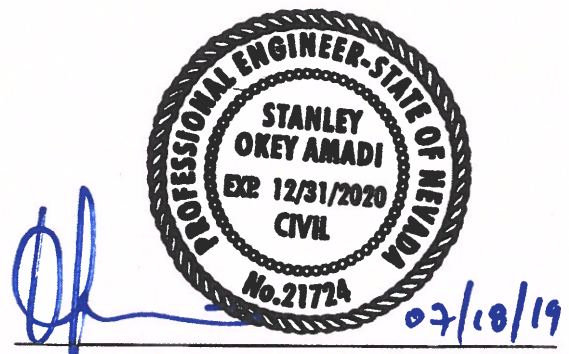
Date: July 2019

Prepared By:

Slater Hanifan Group, a Westwood Team
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Prepared For:

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11411 Southern Highlands Parkway, Suite 300
Las Vegas, NV 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Stanley Okey Amadi, P.E., CFM
NV Professional Engineer No. 21724

Assisted by: D'Amato C. Hyche

Project Description

Manning Formula

Normal Depth

Input Data

1.50 %

12.80 ft³/s

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.38
0+00.38	0.38
0+01.50	0.00
0+02.50	0.08
0+02.50	0.12
0+15.50	0.38
0+28.50	0.12
0+28.50	0.08
0+29.50	0.00
0+30.62	0.38
0+31.00	0.38
0+36.00	0.48

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.38)	(0+02.50, 0.08)	0.013
(0+02.50, 0.08)	(0+28.50, 0.08)	0.016
(0+28.50, 0.08)	(0+36.00, 0.48)	0.013

Options

Pavlovskii's Method

Pavlovskii's Method

Pavlovskii's Method

Worksheet for 3 - 100-Yr Onsite Street Sections (min)

Results

Normal Depth	0.37	ft
Elevation Range	0.00 to 0.48 ft	
Flow Area	4.07	ft ²
Wetted Perimeter	28.95	ft
Hydraulic Radius	0.14	ft
Top Width	28.74	ft
Normal Depth	0.37	ft
Critical Depth	0.41	ft
Critical Slope	0.00648	ft/ft
Velocity	3.15	ft/s
Velocity Head	0.15	ft
Specific Energy	0.52	ft
Froude Number	1.48	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.37	ft
Critical Depth	0.41	ft
Channel Slope	1.50	%
Critical Slope	0.00648	ft/ft

Cross Section for 3 - 100-Yr Onsite Street Sections (min)

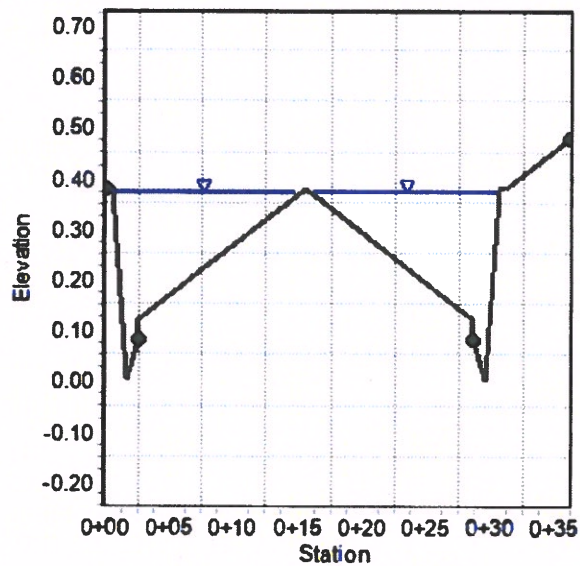
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 1.50 %
Normal Depth 0.37 ft
Discharge 12.80 ft³/s

Cross Section Image



Worksheet for 3 - 100-Yr Onsite Street Sections (max)

Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 3.81 %
Discharge 12.80 ft³/s
Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.38
0+00.38	0.38
0+01.50	0.00
0+02.50	0.08
0+02.50	0.12
0+15.50	0.38
0+28.50	0.12
0+28.50	0.08
0+29.50	0.00
0+30.62	0.38
0+31.00	0.38
0+36.00	0.48

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.38)	(0+02.50, 0.08)	0.013
(0+02.50, 0.08)	(0+28.50, 0.08)	0.016
(0+28.50, 0.08)	(0+36.00, 0.48)	0.013

Options

Current Roughness Weighted Method Pavlovskii's Method
Open Channel Weighting Method Pavlovskii's Method
Closed Channel Weighting Method Pavlovskii's Method

Worksheet for 3 - 100-Yr Onsite Street Sections (max)

Results

Normal Depth	0.32	ft
Elevation Range	0.00 to 0.48	ft
Flow Area	2.84	ft ²
Wetted Perimeter	23.98	ft
Hydraulic Radius	0.12	ft
Top Width	23.79	ft
Normal Depth	0.32	ft
Critical Depth	0.41	ft
Critical Slope	0.00643	ft/ft
Velocity	4.51	ft/s
Velocity Head	0.32	ft
Specific Energy	0.63	ft
Froude Number	2.30	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.32	ft
Critical Depth	0.41	ft
Channel Slope	3.81	%
Critical Slope	0.00643	ft/ft

Cross Section for 3 - 100-Yr Onsite Street Sections (max)

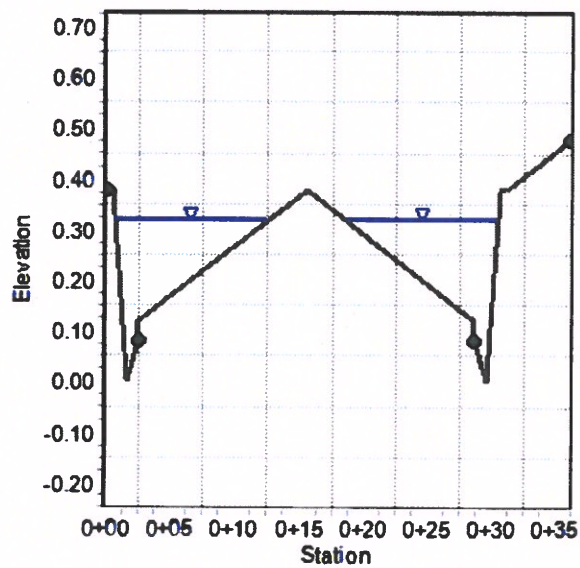
Project Description

Friction Method Manning Formula
Solve For Normal Depth

Input Data

Channel Slope 3.81 %
Normal Depth 0.32 ft
Discharge 12.80 ft³/s

Cross Section Image



Phase 2 – Finished Floor Analysis

**SKYE CANYON II - PARCEL 2.06 PHASE 2 ADDENDUM
FINISH FLOOR - CITY OF LAS VEGAS JURISDICTION**

INPUT INFORMATION					FINISHED FLOORS					NOTES
Lot Number	Hydraulic Section Utilized	T/C ¹ (ft)	F/L ² (ft)	D ₁₀₀ (ft)	Flowline F.F. _{min} ³ (ft)	T/C + 6" F.F. _{min} ⁴ (ft)	F.F. _{Design} (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
15	3	2842.60	2842.22	0.43	2843.08	2843.10	2844.6	OK	OK	
16	3	2841.92	2841.54	0.43	2842.40	2842.42	2843.7	OK	OK	
17	3	2841.17	2840.79	0.43	2841.65	2841.67	2843.0	OK	OK	
18	3	2840.41	2840.03	0.43	2840.89	2840.91	2842.2	OK	OK	
19	3	2839.33	2838.95	0.43	2839.81	2839.83	2841.1	OK	OK	
20	3	2837.75	2837.37	0.43	2838.23	2838.25	2839.6	OK	OK	
21	3	2835.85	2835.47	0.43	2836.33	2836.35	2837.7	OK	OK	
22	3	2833.94	2833.56	0.43	2834.42	2834.44	2835.7	OK	OK	
23	3	2832.03	2831.65	0.43	2832.51	2832.53	2833.8	OK	OK	
24	3	2830.13	2829.75	0.43	2830.61	2830.63	2831.9	OK	OK	
25	3	2828.23	2827.85	0.43	2828.71	2828.73	2830.0	OK	OK	
26	3	2826.33	2825.95	0.43	2826.81	2826.83	2828.1	OK	OK	
27	3	2824.42	2824.04	0.43	2824.90	2824.92	2826.2	OK	OK	
28	3	2822.51	2822.13	0.43	2822.99	2823.01	2824.3	OK	OK	
29	3	2820.61	2820.23	0.43	2821.09	2821.11	2822.4	OK	OK	
30	3	2818.70	2818.32	0.43	2819.18	2819.20	2820.5	OK	OK	
31	3	2816.80	2816.42	0.43	2817.28	2817.30	2818.6	OK	OK	
32	3	2814.89	2814.51	0.43	2815.37	2815.39	2816.7	OK	OK	
33	3	2813.08	2812.70	0.43	2813.56	2813.58	2814.9	OK	OK	
34	3	2811.32	2810.94	0.43	2811.80	2811.82	2813.1	OK	OK	

SKYE CANYON II - PARCEL 2.06 PHASE 2 ADDENDUM FINISH FLOOR - CITY OF LAS VEGAS JURISDICTION										
INPUT INFORMATION				FINISHED FLOORS				NOTES		
Lot Number	Hydraulic Section Utilized	T/C ¹ (ft)	F/L ² (ft)	D ₁₀₀ (ft)	Flowline F.F. _{-min} ³ (ft)	T/C + 6" F.F. _{-min} ⁴ (ft)	F.F. ⁵ -Design (ft)	Flowline Check	T/C + 6" Check	See References on Last Sheet
35	3	2809.63	2809.25	0.43	2810.11	2810.13	2811.4	OK	OK	
36	3	2809.05	2808.67	0.43	2809.53	2809.55	2810.9	OK	OK	
37	3	2809.64	2809.26	0.43	2810.12	2810.14	2811.7	OK	OK	
38	3	2808.19	2807.81	0.43	2808.67	2808.69	2809.9	OK	OK	
Where:										
1: Top of Curb at High Side of Lot										
2: TC-0.38 (For Roll Curb), TC-0.5 (For L Curb)										
3: Minimum Allowable Finished Floor Elevation above flowline elevation @ high side of lot = (2 x D ₁₀₀) + F/L										
4: City of Las Vegas minimum allowable finished floor elevation = T.C. @ high side of lot + 6-inches										
5: These lots have an adjacent solid grouted wall that protects the FF.										
City of Las Vegas Finished Floor Criteria:										
-The finished floor shall be set a vertical distance above the gutter flowline of at least twice the depth of flow in the gutter flowline up to a maximum of 18 inches above the WSEL in the street.										
-The finished floor shall be set a vertical distance of at least 6-inches above the highest adjacent top of curb.										

Supplemental Finished Floor Checks

Adjacent/Perimeter Street Check									
Lot Number	Street	High TC ¹	High FL ²	Section	Flow Depth ³	Min FF ⁴	Design FF	Check	Solid Grout
15	Skye Village	2853.70	2853.20	*6	0.42	2854.04	2844.6	CHECK	Yes
15	Skye Canyon	2853.00	2852.62	*H	0.37	2853.36	2844.6	CHECK	Yes
16	Skye Canyon	2851.88	2851.50	*H	0.37	2852.24	2843.7	CHECK	Yes
17	Skye Canyon	2849.88	2849.50	*H	0.37	2850.24	2843.0	CHECK	Yes
18	Skye Canyon	2848.64	2848.26	*H	0.37	2849.00	2842.2	CHECK	Yes
19	Skye Canyon	2847.45	2847.07	*H	0.37	2847.81	2841.1	CHECK	Yes
20	Skye Canyon	2846.23	2845.85	*H	0.37	2846.59	2839.6	CHECK	Yes
21	Skye Canyon	2844.02	2843.64	*H	0.37	2844.38	2837.7	CHECK	Yes
22	Skye Canyon	2842.01	2841.63	*H	0.37	2842.37	2835.7	CHECK	Yes
23	Skye Canyon	2840.00	2839.62	*H	0.37	2840.36	2833.8	CHECK	Yes
24	Skye Canyon	2839.00	2838.62	*H	0.37	2839.36	2831.9	CHECK	Yes
25	Skye Canyon	2835.10	2834.72	*H	0.37	2835.46	2830.0	CHECK	Yes
26	Skye Canyon	2833.03	2832.65	*H	0.37	2833.39	2828.1	CHECK	Yes
27	Skye Canyon	2830.96	2830.58	*H	0.37	2831.32	2826.2	CHECK	Yes
28	Skye Canyon	2828.41	2828.03	*H	0.37	2828.77	2824.3	CHECK	Yes
29	Skye Canyon	2826.01	2825.63	*H	0.37	2826.37	2822.4	CHECK	Yes
30	Skye Canyon	2824.00	2823.62	*H	0.37	2824.36	2820.5	CHECK	Yes
31	Skye Canyon	2822.00	2821.62	*H	0.37	2822.36	2818.6	CHECK	Yes
32	Skye Canyon	2820.02	2819.64	*H	0.37	2820.38	2816.7	CHECK	Yes
33	Skye Canyon	2818.26	2817.88	*H	0.37	2818.62	2814.9	CHECK	Yes
34	Skye Canyon	2816.58	2816.20	*H	0.37	2816.94	2813.1	CHECK	Yes
35	Skye Canyon	2814.92	2814.54	*H	0.37	2815.28	2811.4	CHECK	Yes
36	Skye Canyon	2813.04	2812.66	*H	0.37	2813.40	2810.9	CHECK	Yes
37	Skye Canyon	2811.65	2811.27	*H	0.37	2812.01	2811.7	CHECK	Yes
37	Skye Park	2809.44	2808.96	*SP2	0.54	2810.04	2811.7	OK	No
38	Street F	2809.95	2809.57	4	0.46	2810.49	2809.9	CHECK	Yes
38	Skye Park	2808.19	2807.71	*SP2	0.54	2808.79	2809.9	OK	No

1: High TC is the elevation at the high side of the adjacent perimeter street

2: 0.38-ft is subtracted from the High TC to obtain the High FL elevation

3: Flow depth is the normal depth in adjacent perimeter street

4: Min FF is the High FL plus twice the depth of flow.

Specific Energy Check							
Lot Number	High TC ¹	High FL ²	Section	Specific Energy ³	Min FF ⁴	Design FF	Check
17	2841.17	2840.79	3	0.79	2841.58	2843.00	OK

1: High TC is the elevation at the high side of the adjacent perimeter street

2: 0.38-ft is subtracted from the High TC to obtain the High FL elevation

2: Specific energy depth is taken from FlowMaster calculation for street directing flow toward lot.

3: Min FF is the High FL plus the specific energy depth.

Emergency Overflow Finished Floor Checks

Drainage Easements Check - Emergency Overflow						
Lot Number	High TC/FL ¹	Section	Flow Depth ²	Min FF ³	Design FF	Solid Grout
38	2807.18	EO1	0.98	2808.16	2809.90	No
39	2807.18	EO1	0.98	2808.16	2809.40	No

1: High TC/FL is at the high side of the drainage easement flowline or the highest TC adjacent to the easement if flow is weiring over the curb.

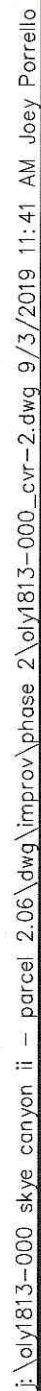
2: Flow depth is either normal depth or weir depth (whichever is higher) of the emergency overflow.

3: Min FF is the High TC/FL plus the emergency overflow depth.

Note: Although lot 39 is a part of Phase 1, it is analyzed with the emergency overflow in Phase 2

APPENDIX D

CD of Electronic Files & Improvement Plans



CITY OF LAS VEGAS, NEVADA
RESIDENTIAL SUBDIVISION
APN: 125-07-211-002



FAST

Call before you
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

S-I-E
SLATER
HANIFAN
GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5300

**CITY OF LAS VEGAS
NINETY FIVE MANAGEMENT, LLC
SKYE CANYON II PARCEL 2.06 - PHASE 2
COVER SHEET**

STORMWATER RUNOFF MANAGEMENT

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY, REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE, AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR FOLLOWING A DISTURBED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

LEGAL DESCRIPTION

THE PORTIONS OF GOVERNMENT LOT 17 OF SECTION 6 AND GOVERNMENT LOTS 7, 9, 10, 11 OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

BENCHMARK

USDA BRASS CAP ON AN IRON PIPE, 140' SOUTHWEST OF TELEPHONE POLE #269941, SOUTHWEST CORNER OF THE U.S. 95/KYLE CANYON TURNOFF.

ELEVATION = 2817.62 FEET, 858.813 METERS
N.A.V.D. 88
PER THE CLARK COUNTY VERTICAL CONTROL LAST REVISION 2003

BASIS OF BEARING

SOUTH 072°21'21" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

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 UTILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRICAL 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 NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND STRUCTURES CONTACT 702-365-2099

SOUTHWEST GAS APPROVAL

SOUTHWEST GAS CORPORATION DATE

2.2 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 AN AMENDMENT TO 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 "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLY(VINYL CHLORIDE) (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 SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER, CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES, IN LINE "Y" "S" SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # _____ ADD FIELD (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, NOTICES 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 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 258-3502, 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 SHUTDOW. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCTS 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 PATCH 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 REPAIRED BY LVVWD WITH AN APPROPRIATELY SIZED PLAN 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.

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY SOUTHWEST GEOTECHNICAL, PROJECT NO. 175337, DATED 10/17/2018.
6. EARTHWORK QUANTITIES (RAW):
- CUT = 128,656 CUBIC YARDS
- FILL = 58,338 CUBIC YARDS

A) THE ABOVE QUANTITIES DO NOT REFLECT LOSSES DUE TO SUBSIDENCE OR SHRINKAGE.
B) THE ABOVE QUANTITIES DO REFLECT USING NATIVE MATERIAL IN LIEU OF TYPE I GRAVEL BASE MATERIAL FOR STREET SECTIONS.
C) THE ABOVE QUANTITIES DO NOT REFLECT ANY EARTHWORK WHICH MAY BE REQUIRED BY THE ENGINEER TO CONSTRUCT ADDITIONAL PROTECTIVE DITCHES OR BERMS NOT SHOWN ON THESE DRAWINGS.

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 6841 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 § 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 § 331.0, § 331.2
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. IFC § 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 § 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 § 507.2.1, N.P.A.
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 § 507
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. IFC § 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 § 507
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: IFC § 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 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE FIRE PROTECTED 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 § 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 § 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 § 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 § C102.7
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. IFC § 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 FIRE 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 OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. IFC § 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 § 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 § 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 13FT 6 INS. IFC § 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 BE NOT LESS THAN 24 FT. IFC § 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 § 503.1.1
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR A 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 § 503.3
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. IFC § 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 THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

2.5 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 ACHIEVE 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 CAUSING 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

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 PUBLICLY 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 HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

UTILITY LOCATION NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREIN 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 LOCATIONS. CALL BEFORE YOU DIG: 1 (800) 227-2600; SOUTHWEST GAS CORPORATION: 702-400-1789 (STANDBY CONTACT NUMBER)

2.1 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 EDITION, 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 THE AVAILABLE 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 INTERFERENCES 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 DESIGN-TYPE 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 (1/2") ABOVE TOP 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 SOUTHWEST GEOTECHNICAL, REPORT #175337, 10/17/2018 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. 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. 625.360 & 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.
16. WALL NOTES:

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. 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 THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF THE PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND 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 MAP(S) MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION ELECTRIC CONDUIT 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 ADDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADES, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON CONSTRUCTION TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS. THESE WARNING SIGNS SHALL BE INSTALLED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN STOP SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKINGS, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DIAMOND GRADE, VIP CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 OR APPROVED EQUIVALENT ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5) FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ON THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO ENSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR MSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3449) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO REOPENING DRIVEWAYS TO REOPEN DRIVEWAYS FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAYS. THE CONTRACTOR SHALL PROVIDE A DETAILED APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

2.4 CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
5. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 89 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USS NO. 320A, WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
7. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION. PRIOR TO ANY PRE-FINAL INSPECTION, THE AS-BUILT DRAWINGS NEED TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
8. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLIANT COT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

DEVIATIONS FROM STANDARDS

NONE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. _____ FIRST APPROVED DATE: _____



SLATER
HANIFAN
GROUP
a Westwood team

936
S-16

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

DATE: 9/3/19

DRAFTER: BKS

DESIGNER: BKS

CHECKED: JJ

PROJECT NO. OLY1813-000

9/3/19

C-2

ABBREVIATIONS

ACG	ASPHALTIC CONCRETE OR ACRE	FL	FLOWLINE	PW	POINT OF VERTICAL INTERSECTION
AGG	AGGREGATE BASE	FT	FEET OR FOOT	QTY	QUANTITY
APN	ASSESSOR'S PARCEL NUMBER	FUT	FUTURE	R	RADIUS
APPROX OR ~	APPROXIMATE	GRD	GRADE OR GROUND	RCA	REINFORCED CONCRETE ARCH
AVE	AVENUE	GRD BREAK	GRADE BREAK OR GRADE CHANGE	RCB	REINFORCED CONCRETE BOX
Ø	Ø	GATE	GATE VALVE	RPC	REINFORCED CONCRETE PIPE
B	BEIN CURVE OR BACK OF CURB	HDPE	HIGH DENSITY POLYETHYLENE	RD	ROADWAY
BCR	BEGINNING OF CURB RETURN	HMA	HOME OWNERS ASSOCIATION	RDWY ESMT	ROADWAY EASEMENT
BHW	BOTTOM OF HEADWALL	HORZ	HORIZONTAL	REQD	REQUIRED
BLDG	BUILDING	HP	HIGH POINT	REV	REVISION
BLVD	BOULEVARD	HWL	HIGH WATER LEVEL	RT	ROUGH GRADE
BVC	BEGINNING OF VERTICAL CURVE	HWM	HEADWALL	R/L	RIGHT OF WAY
BWV	BACK WATER VALVE	HYD	HYDRAULIC OR HYDRANT	R/W, ROW	RIGHT OF WAY
CA	CLARK COUNTY	ID	INSIDE DIAMETER	SCD	SCOUR
CAUSED	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS	IN	IN	SD	STORM DRAIN
CCPW	CLARK COUNTY PUBLIC WORKS	INT	INTERSECTION	SDI	STORM DRAIN DROP INLET
CONFID	CLARK COUNTY REGIONAL FLOOD DISTRICT	IP	IRON PIPE	SDMH	STORM DRAIN MANHOLE
CONFID	CLARK COUNTY WATER RECLAMATION DISTRICT	IRRG	IRRIGATION	SEC	SECTION
CE	COMMON ELEMENT	LF	LINEAR FEET	SFT	SQUARE FEET
C/LC	CENTERLINE	LFC	LANDSCAPE MAINTENANCE CORPORATION	SH	SHEET
CLR	CLEAR OR CLEARANCE	LOW	LOW POINT	SHC	STREET LIGHT & TRAFFIC CONTROL ESMT
CL	CONTROLLED LOW STRENGTH MATERIAL	LT OR L	LEFT	SNWA	SOUTHERN NEVADA WATER AUTHORITY
CLV	CITY OF LAS VEGAS	LVWMD	LAS VEGAS VALLEY WATER DISTRICT	SPECS	SPECIFICATIONS
QML&C	CEMENT MORTAR LINED AND COATED	LWL	LOW WATER LEVEL	SSM	SANITARY SEWER MANHOLE
CONC	CONCRETE MASONRY UNIT	MAX	MAXIMUM	SSMH	STATION
ONLV	CITY OF NORTH LAS VEGAS	MECH	MECHANICAL	STD	STANDARD
COH	CITY OF HENDERSON	MH	MANHOLE	STL	STEEL
CONC	CONCRETE	MN	MISCELLANEOUS	STD	STREET LIGHT
CT	COURT	MISC	MISCELLANEOUS	SW	SIDEWALK
CU OR CU YD	CUBIC YARD	MUNE	MUNICIPAL UTILITY EASEMENT	SWR	SOUTHWEST GAS
DCWCS	DESIGN AND CONSTRUCTION FOR WASTEWATER	NDOT	NEVADA DEPARTMENT OF TRANSPORTATION	SWR OR SS	SANITARY SEWER
	COLLECTION SYSTEMS	NIS	NOT TO SCALE	SY	SQUARE YARD
DET	DETAIL	NVE	NONEXCLUSIVE UTILITY EASEMENT	TAN	TANGENT
DI	DUCTILE IRON OR DRAIN INLET	NVC	NV ENERGY	TOP	TOP OF CURB
DI Ø	DIAMETER	OC	ON CENTER	TF	TOP OF FLOOR OR TOP OF FOOTING
DI Ø	DUCTILE IRON PIPE	OD	OUTSIDE DIAMETER OR OVERALL DIMENSION	TH	THROUGH
DR	DRIVE	OFF	OFFSET	THW	TOP OF HEADWALL
DWG(S)	DRAWING	ORG	ORIGINAL	TP	TOP OF PIPE
EA	DRIVEWAY	PAE	PUBLIC OR PEDESTRIAN ACCESS EASEMENT	TW	TOP OF WALL
EACH	EACH	PB	PULL BOX	TWP	TOP OF WORK
EQR	END CURB RETURN	PC	POINT OF CURVE	TSW	TOP OF SCREEN WALL
EGR	EXISTING GROUND	PCC	POINT OF COMPOUND CURVE	TYD	TYPICAL
ELEV	ELEVATION	PDC	PUBLIC DRAINAGE EASEMENT	UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
ESMT	EASEMENT	R OR PL	PROPERTY LINE	VC	VERTICAL
EP	EDGE OF PAVEMENT	POB	POINT OF BEGINNING	VCT	VERTICAL
EQ	EQUIVALENT RESIDENTIAL UNIT	POC	POINT OF CURVATURE	VFL	VALVE FLUTTER
EVC	END VERTICAL CURVE	PDE	POINT OF ENDING	W	WROUGHT IRON
EX OR EXIST	EXISTING	POE	POINT OF REVERSE CURVATURE	WL	WATER LINE
FC	FACE OF CURB	PRELIM	PRELIMINARY	WPZ	WATER PRESSURE ZONE
FF	FINISHED FLOOR	PROP	PROPOSED	WTR	WEIGHT
FG	FINISHED GRADE	PRV	PRESSURE REDUCING VALVE	WTR	WATER LINE
FGH	FINISHED GRADE, HIGH SIDE	PUC	PUBLIC UTILITY EASEMENT		
FL	FINISHED GRADE, LOW SIDE	PT	POINT OF TANGENT OR POINT		
FH	FIRE HYDRANT	PVC	POLYVINYL CHLORIDE		

SPECIAL NOTE

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

NOTICE TO CONTRACTOR

-QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

-EXISTING UTILITY LOCATIONS SHOWN HEREIN 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 LOCATIONS. CALL BEFORE YOU DIG: (800) 227-2600

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		5' CONTOUR
		1' CONTOUR
		STRIPING
		SEWER MANHOLE
		CURB AND GUTTER
		SANITARY SEWER PIPE AND FLOW ARROW
		WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
		PAD ELEVATION
		FINISHED FLOOR ELEVATION
		ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE
		EXISTING GAS GATE VALVE
		EXISTING UNKNOWN MANHOLE
		EXISTING GAS, SIZE PER PLAN
		EXISTING POWER POLE
		EXISTING TRAFFIC SIGNAL
		EXISTING WALL
		WATER PIPE FITTING
		WATER POINT OF CONNECTION
		SEWER POINT OF CONNECTION
		DAYLIGHT LINE
		STREET CENTERLINE
		RIGHT-OF-WAY
		MATCHLINE
		BOUNDARY LINE
		PHASE LINE
		PROPERTY LINE
		FLOWLINE
		SAWCUT
		CUT/FILL TRANSITION LINE
		SIDEWALK
		EX STRIPING TO BE OBLITERATED
		GRADE BREAK LINE
		REFLECTIVE RAISED PAVEMENT MARKERS
		BACK WATER VALVE
		WROUGHT IRON FENCE
		PONY WALL
		DECORATIVE PERIMETER WALL
		DECORATIVE PERIMETER RETAINING WALL
		PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		PROPOSED SCARP AREA
		DRIVEWAY
		PROPOSED RIP RAP
		SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
		HANDICAP RAMP

QUANTITIES

DRAINAGE			
1.	48" TYPE I STORM DRAIN MANHOLE	EA	-
2.	48" TYPE II STORM DRAIN MANHOLE	EA	-
3.	10.0' TYPE "CM2" DROP INLET	EA	-
4.	12.5' TYPE "CM2" DROP INLET	EA	-
5.	20.0' TYPE "CM2" DROP INLET	EA	-
6.	6"x5" RCB CLASS III STORM DRAIN	LF	-
7.	24" RCP CLASS IV STORM DRAIN	LF	-
8.	30" RCP CLASS IV STORM DRAIN	LF	-
9.	36" RCP CLASS III STORM DRAIN	LF	-
10.	RIPRAP D50=8", THK=16"	SF	-
11.	8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	SF	-
12.	SIDEWALK UNDER DRAIN	SF	-
13.	CONCRETE CUSTOM JUNCTION STRUCTURE	EA	-

SEWER SYSTEM

1.	4" PVC SEWER LATERAL (PRIVATE)	LF	-	-
2.	8" PVC SEWER PIPE (PUBLIC)	LF	-	-
3.	STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	-	-
4.	8" SEWER PIPE CAP	EA	-	-
5.	BACK WATER VALVE	EA	-	-
6.	8" CS90 WATER QUALITY SEWER PIPE (PUBLIC)	EA	-	-
7.				

WATER SYSTEM	
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1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	-	-
2.	6" PVC WATER PIPE (CLASS 150)	LF	-	-
3.	8" PVC WATER PIPE (CLASS 150)	LF	-	-
4.	8" DIP WATER PIPE (CLASS 53)	LF	-	-
5.	8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	-
6.	8" x 1" TAPPING SLEEVE W/1" TAPPING VALVE PER UDACS PLATE NO. 34, 39	EA	-	19
7.	6" x 1" TAPPING SLEEVE W/1" TAPPING VALVE PER UDACS PLATE NO. 34, 39	EA	-	5
8.	8" 5 DEGREE BEND WITH RESTRAINED JOINTS	EA	-	-
9.	8" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
10.	8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
11.	8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
12.	8" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
13.	CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	-	-
14.	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	-	24
15.	1" COPPER SERVICE W/ 1" METER PER UDACS PLATE NO. 4	EA	-	-
16.	1" COPPER SERVICE W/ 3/4" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	-	-

STREET IMPROVEMENTS

1.	2" A.C. PAVEMENT W/ 4" TYPE II OVER 6" TYPE I AGGREGATE BASE	SY	-	473
2.	STANDARD 18" TYPE "L" ISLAND CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	-	-
3.	STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	-	-
4.	STANDARD 30" TYPE "ROLL" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	-	-
5.	4' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	-	-
6.				
7.				

TRAFFIC SIGNALS

1	30" STOP SIGN WITH POST (R1-1)	EA	-	-
2	9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	-	-
3	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	-	-
4	CROSSWALK MARKINGS	LF	-	-
5				
6				
7				
8				

DRY UTILITIES

1.	100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	-	-
2.	1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #8 CONDUCTORS	LF	-	-
3.	NO. 3-1/2 PULL BOX W/METAL COVER	EA	-	-
4.	150 AMP SERVICE PEDESTAL (IRR)	EA	-	-
5.	200 AMP SERVICE PEDESTAL (STLT)	EA	-	-
6.				

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 000000 FIRST APPROVED DATE:



**SLATER
HANIFAN
GROUP**
a Westwood team
LAS VEGAS, NV 89118
FAX (702) 284-5399

16

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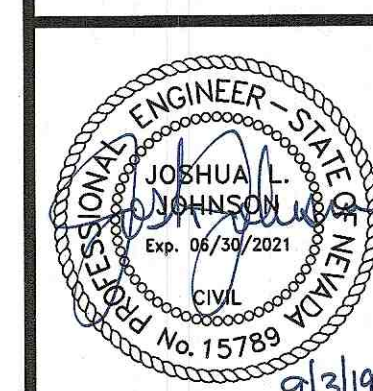
NINETY FIVE MANAGEMENT, LLC

SKYE CANYON II PARCEL 2.06 - PHASE 2

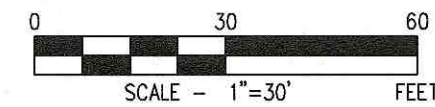
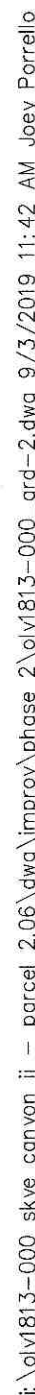
QUANTITIES, LEGEND, & ABBREVIATIONS

DATE:	9/3/19
DRAFTER:	BKS
DESIGNER:	BKS
CHECKED:	JJ

PROJECT NO.
OLY1813-000



C-3
SHEET 3 OF 14

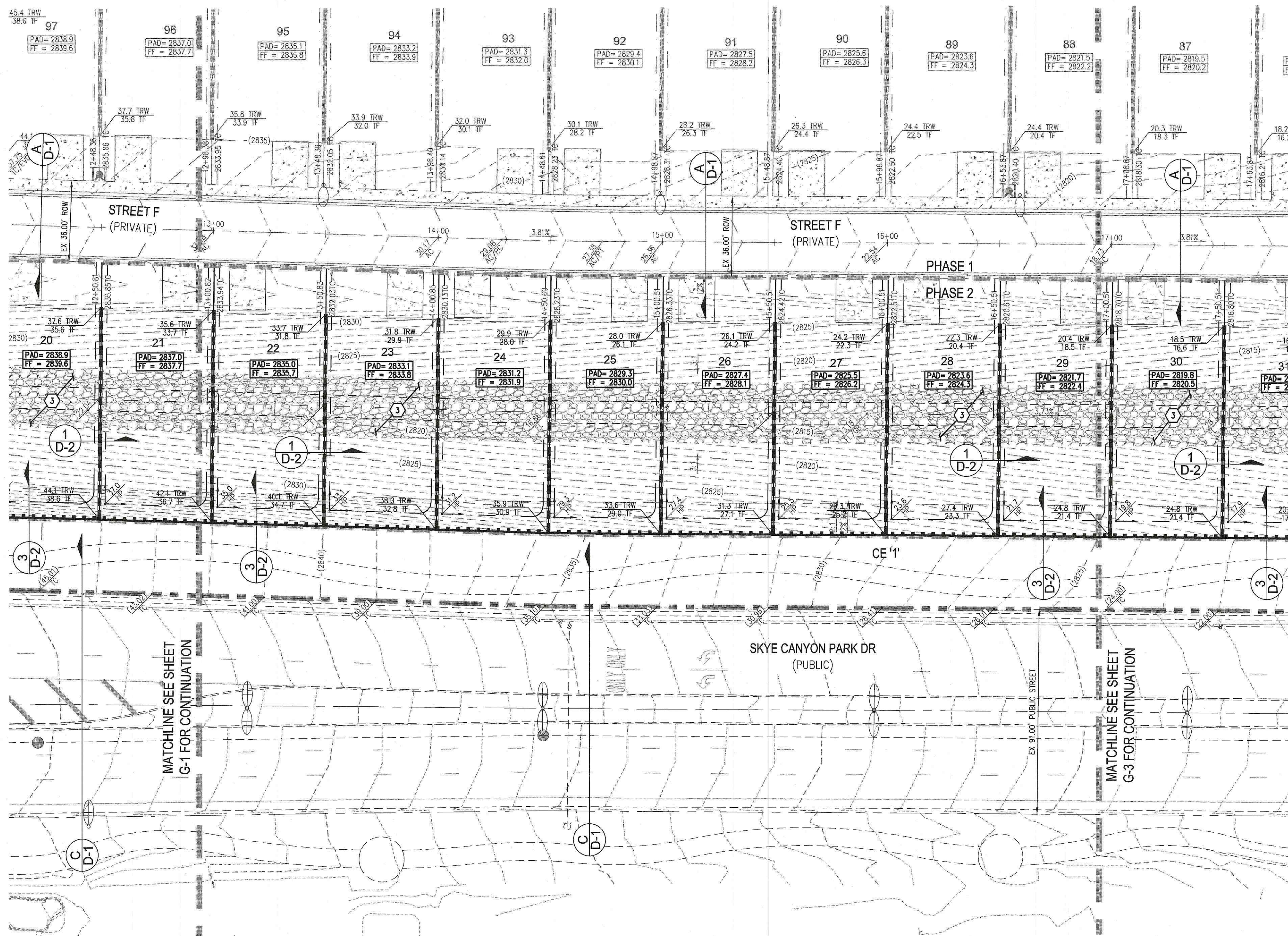


Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600



\\s01\1813-000_skye canyon ii - parcel 2.06\dwg\mpro\phase 2\9/18/13-000_grd-2.dwg 9/13/2018 11:42 AM bgy Porrello



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SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW):

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LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

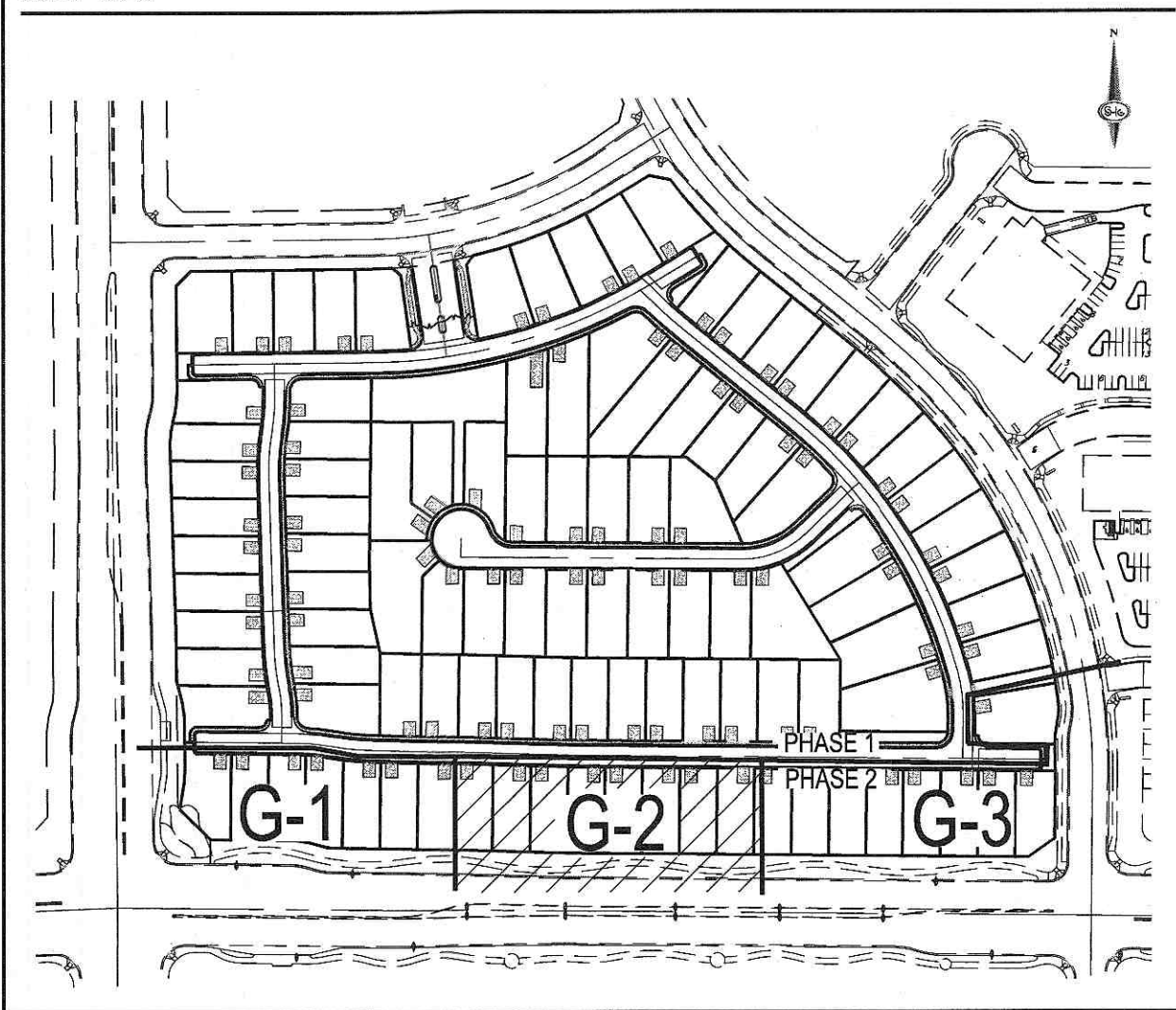
(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

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FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003031735E DATED SEPTEMBER 27, 2002. A ZONE "X" (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

KEY MAP



GRADING NOTES

- REMOVE EXISTING 72" RCP SD AND SDMH
- CONSTRUCT BRICK AND MORTAR RCP PLUG FOR EXISTING 72" RCP SD. SEE DETAIL 8, ON SHEET D-2
- REMOVE EXISTING RIP RAP AND FILL IN CHANNEL WITH 95% MINIMUM COMPACTION
- SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 500.1, 500.2, 500.3, 500.4, 500.5, & 503

PRIVATE STREET & COMMON ELEMENT NOTE

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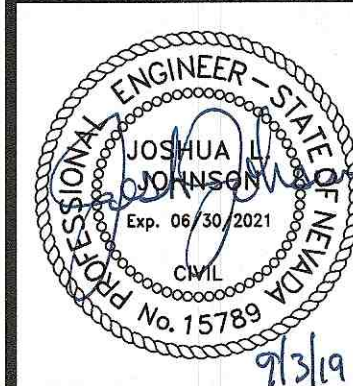
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5398

DATE	BY	APP.	DATE	DESCRIPTION	NO.

CITY OF LAS VEGAS, NEVADA
NINETY FIVE MANAGEMENT, LLC
SKYE CANYON II PARCEL 2.06 - PHASE 2
GRADING PLAN II

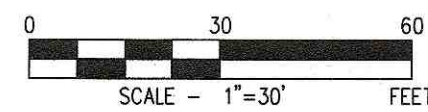
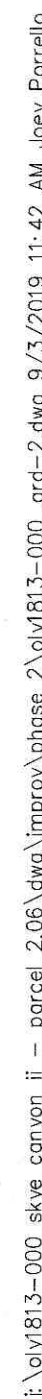
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DRAFTER: BKS
DESIGNER: BKS
CHECKED: JJ

PROJECT NO.
OLY1813-000



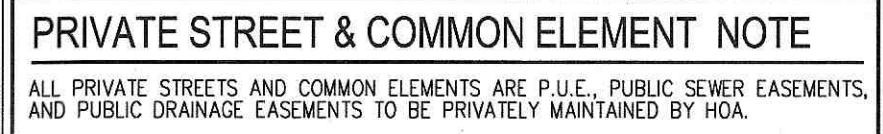
G-2
SHEET 5 OF 14





FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E DATED SEPTEMBER 27, 2002. A ZONE "X" (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

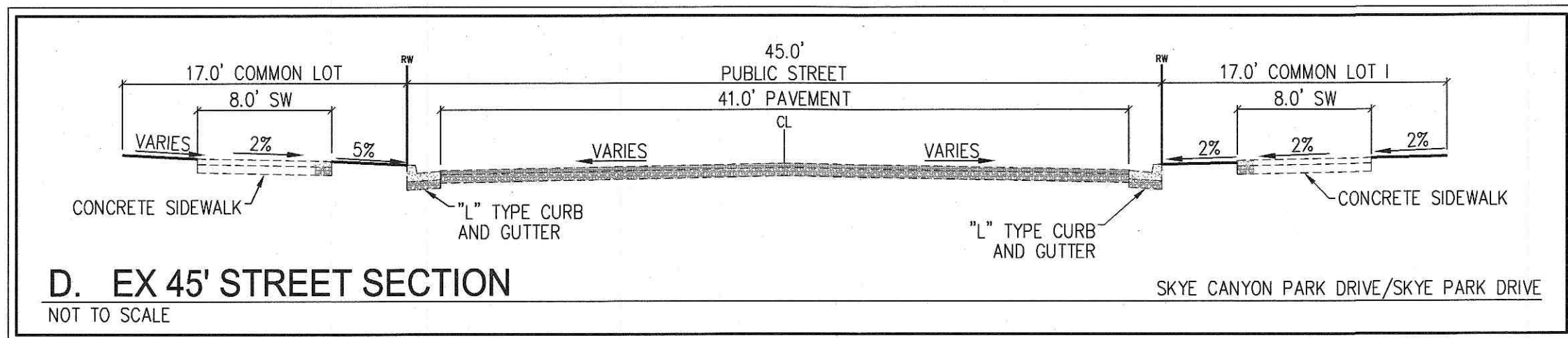
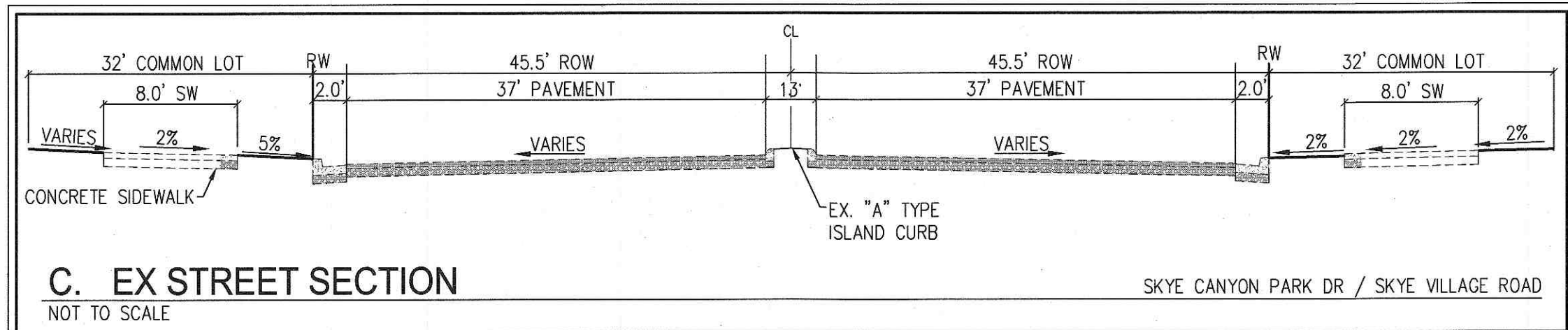
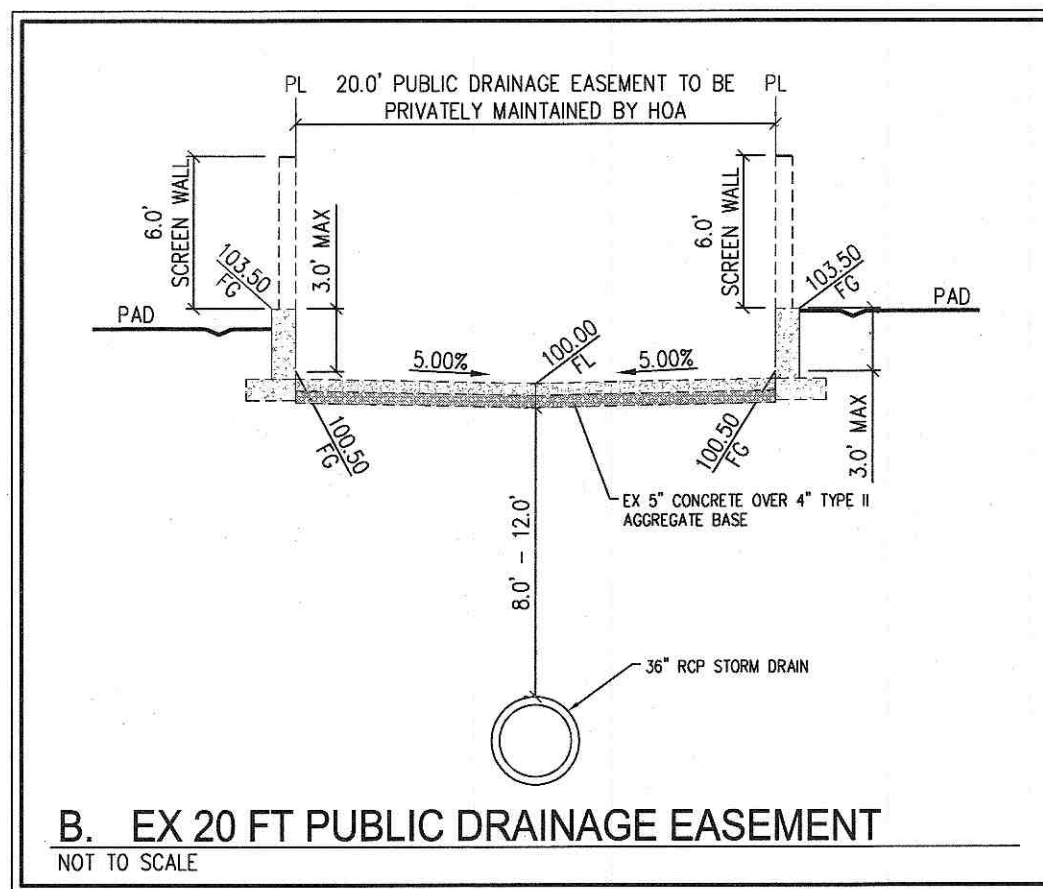


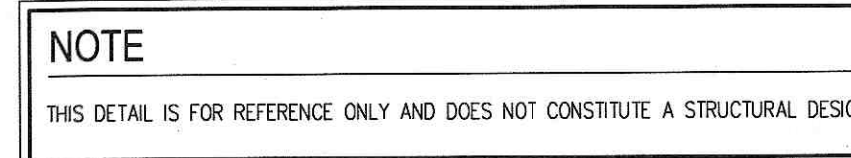
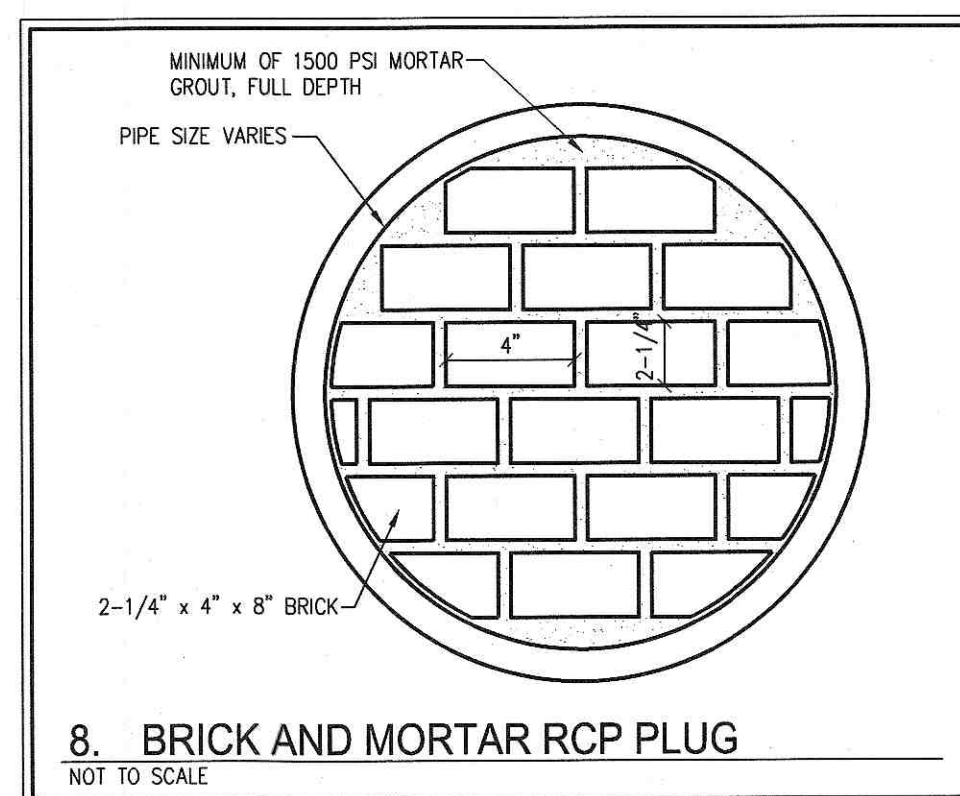
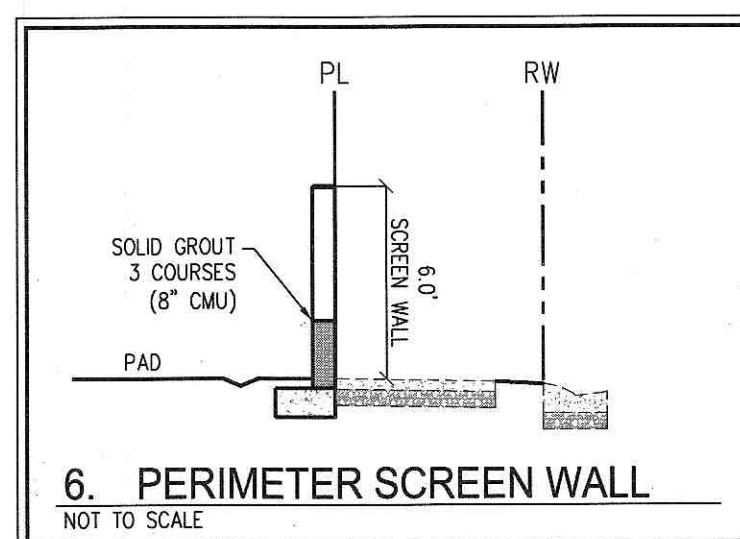
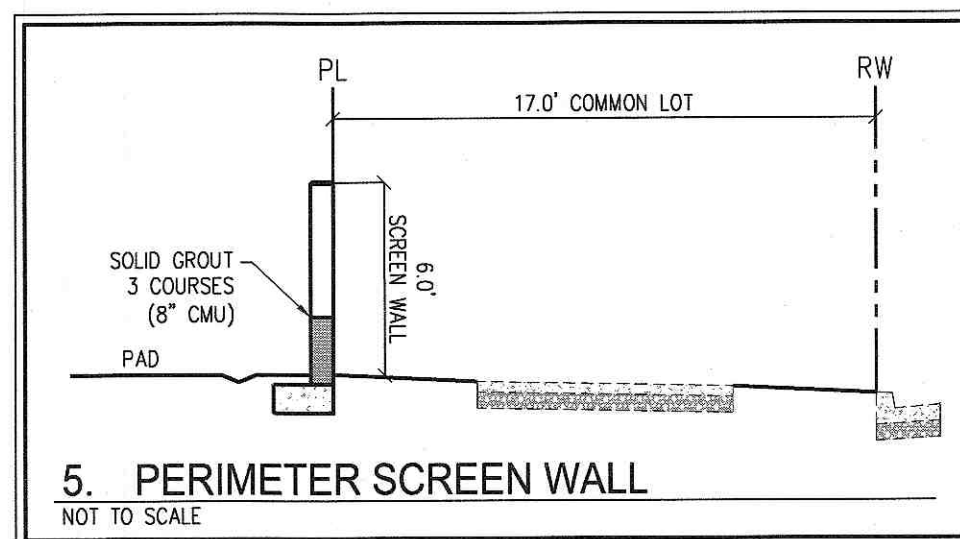
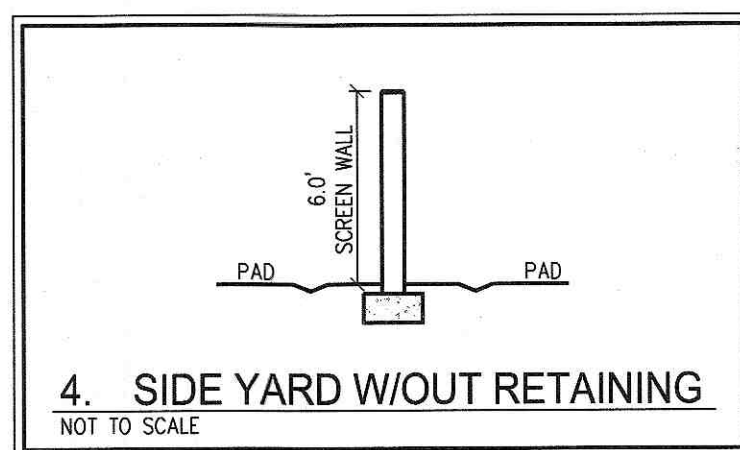
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DATE:	9/3/19
DRAFTER:	BKS
DESIGNER:	BKS
CHECKED:	JJ
PROJECT NO.	OLY1813-000
	



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SHEET 6 OF 14



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CITY OF LAS VEGAS, NEVADA

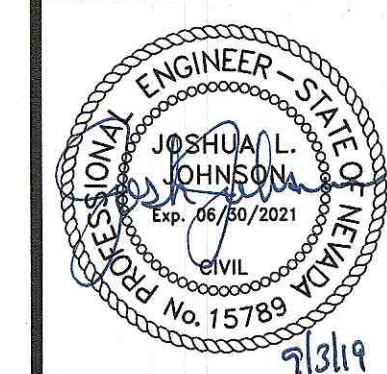
NINETY FIVE MANAGEMENT, LLC

SKYE CANYON II PARCEL 2.06 - PHASE 2

SITE DETAILS

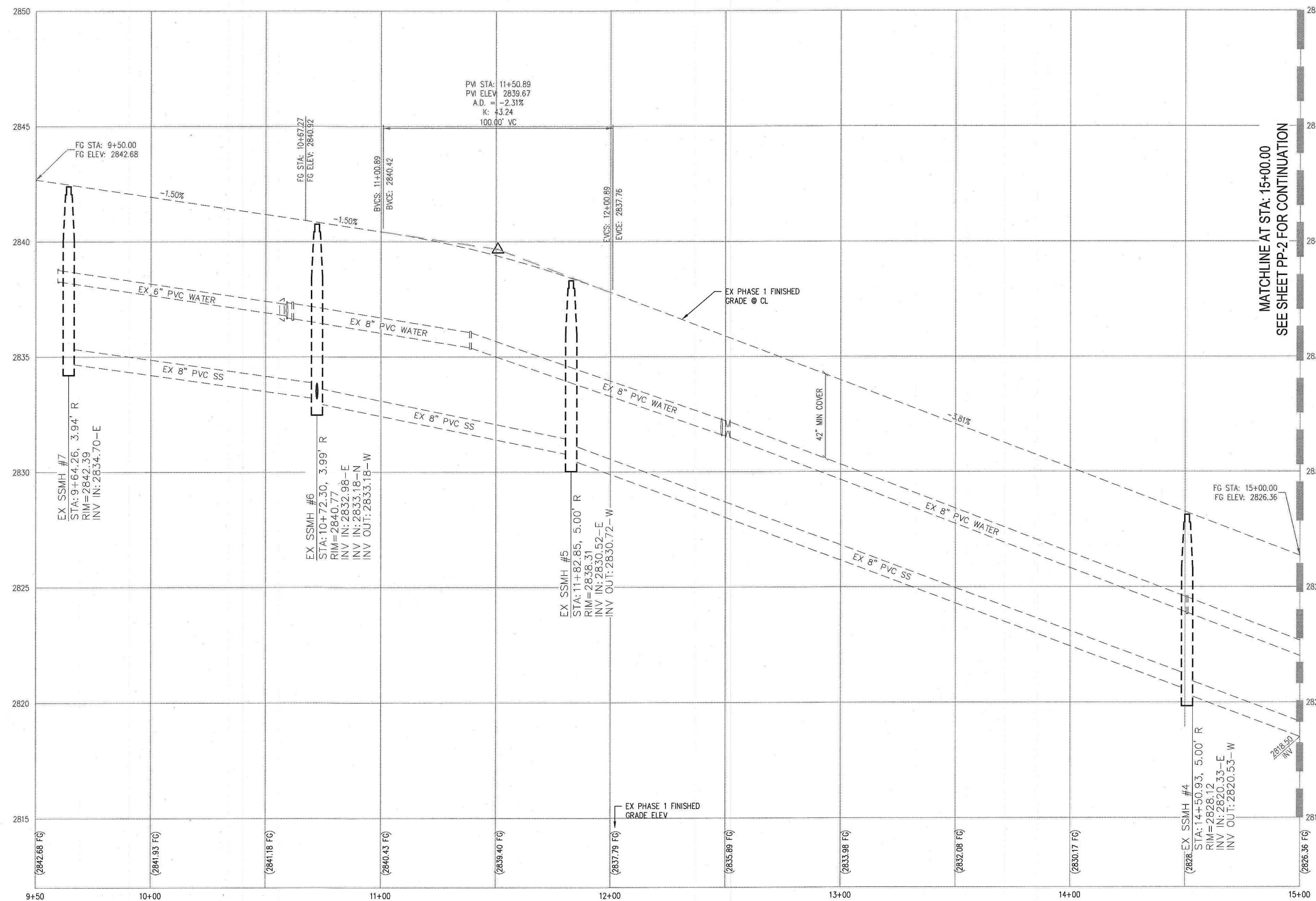
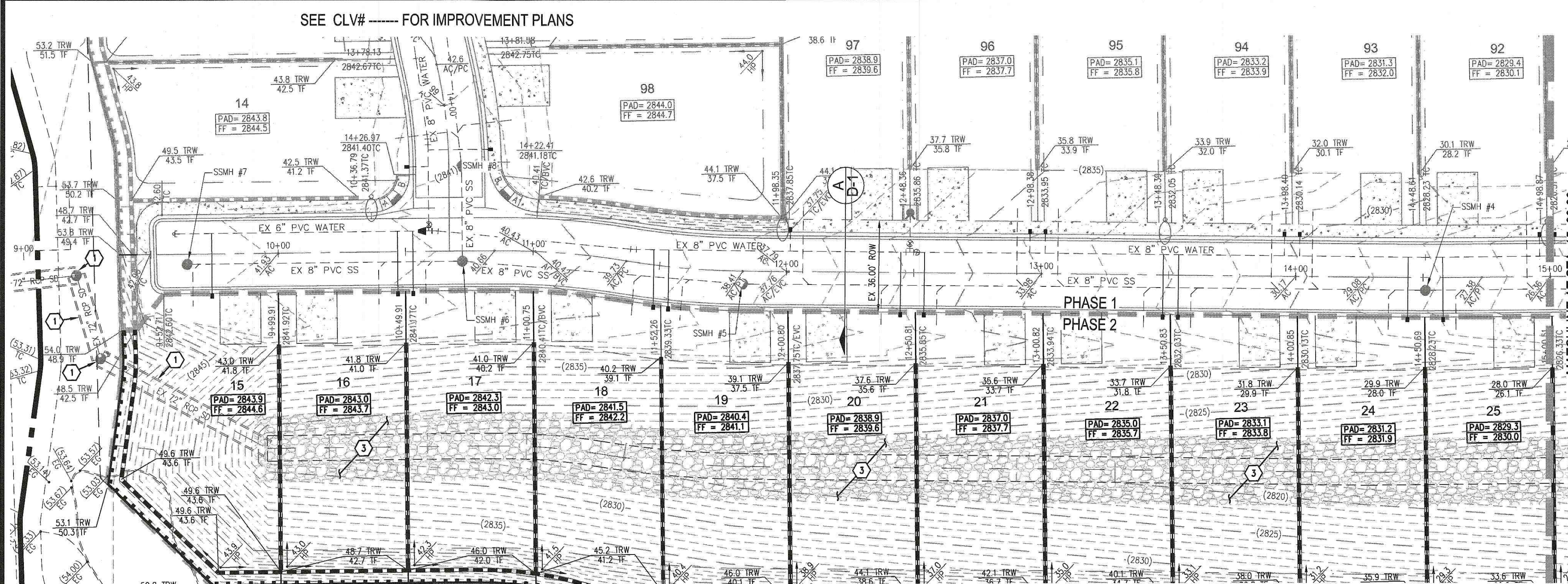
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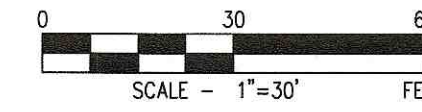


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SHEET 8 OF 14

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SEE SHEET PP-2 FOR CONTINUATION



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

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SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
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FILL= 58,338 CU YDS

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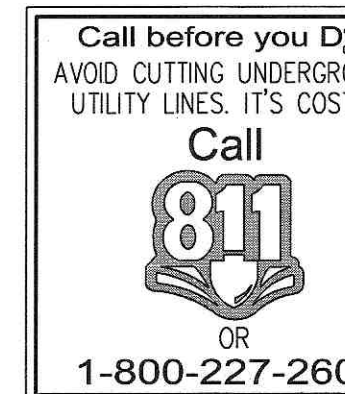
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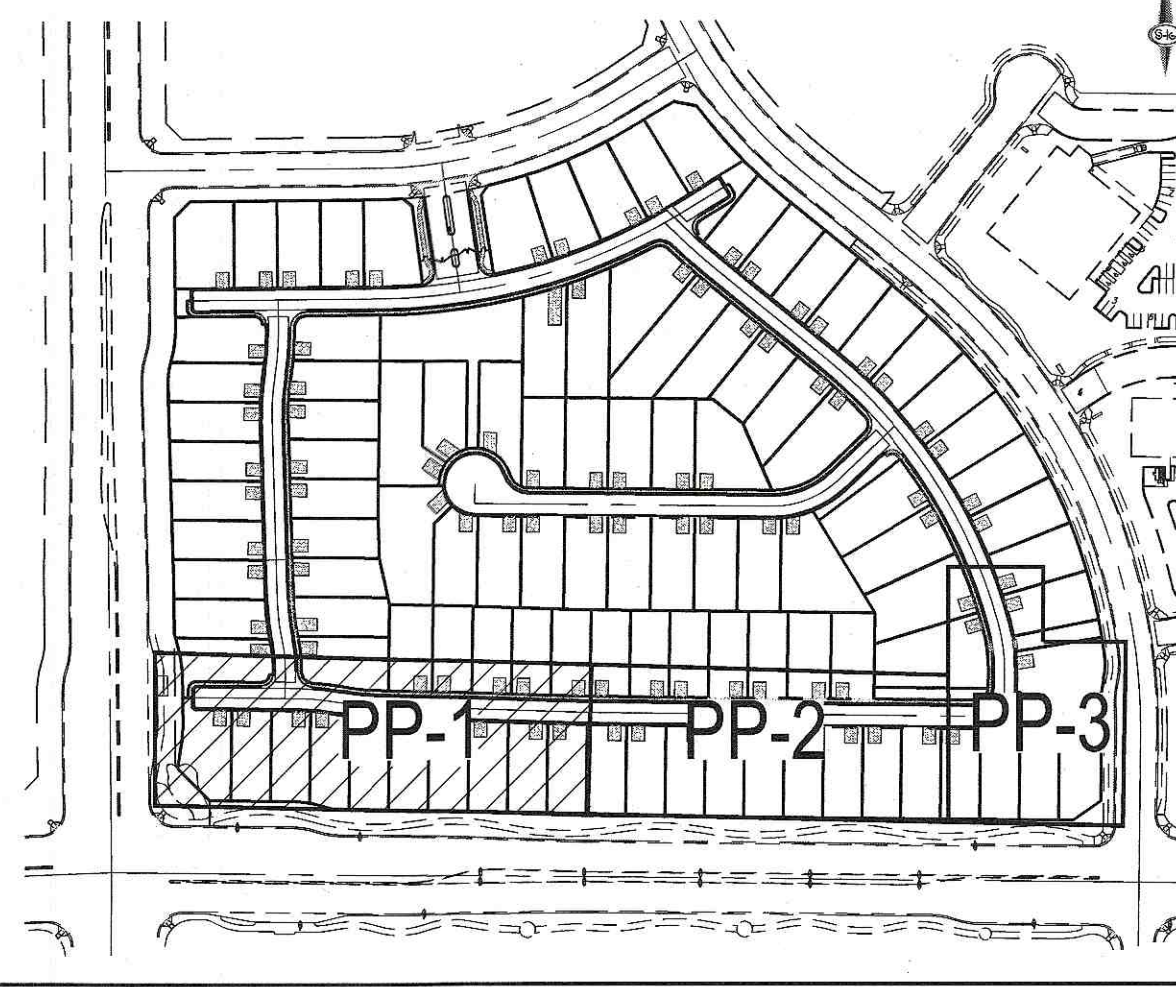
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KEY MAP



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SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

PP-1
SHEET 9 OF 14

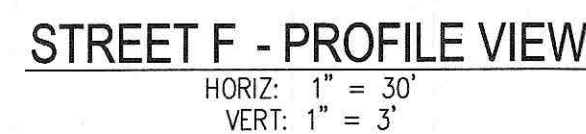
NINETY FIVE MANAGEMENT, LLC
SKYE CANYON II PARCEL 2.06 - PHASE 2
PLAN & PROFILE STREET F STA 9+50 - STA 15+00

CITY OF LAS VEGAS, NEVADA

DATE: 9/3/19
DRAFTER: BKS
DESIGNER: BKS
CHECKED: JJ
PROJECT NO. OLY1813-000

JOSHUA L. JOHNSON
ENGINEER
9/3/19

MATCHLINE AT STA: 19+50.00
SHEET BB-2 FOR CONTINUATION



CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN
EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES

OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBSCURED DURING CONSTRUCTION.

ADD 2800 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 1801.00)

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 175337 DATED 10/17/2018

EARTHWORK QUANTITIES (RAW):
CUT= 128,656 CU YDS
FILL= 58,338 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED
LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED
AND ACTIVE GRADING PERMIT.

- 1) EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- 2) FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED CURB OR CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH H&C 2012, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES. IF ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION, CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLEFING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURBS EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, WAD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY. THE REMOVAL OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS AGENT TO PREVENT EXCESSIVE EROSION AND SEDIMENTATION. ANY SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24-40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY THAT DISTURBED THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SUCH EXCEPTIONS MAY APPLY TO REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION II.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE TRAFFIC, OR EXISTING OR POTENTIAL POLLUTION. INSPECTIONS SHALL BE CONDUCTED AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY. SUCH EXCEPTIONS MAY APPLY TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION II.A.2.
5. ACCUMULATED SEDIMENT IN BMP'S SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X' (UNSHADED), AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANELS 32003C1735E DATED SEPTEMBER 27, 2002. A ZONE 'X' (UNSHADED) IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% (500 YEAR) ANNUAL CHANCE FLOOD PLAIN.

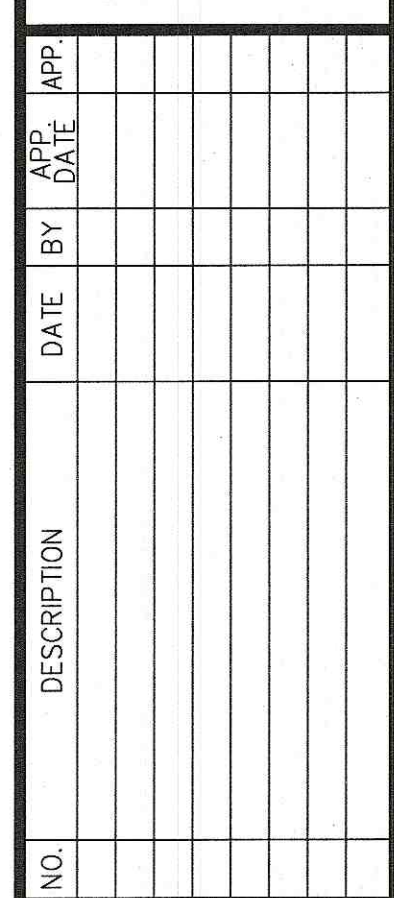


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OR
1-800-227-2600

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED
TECHNICAL DRAINAGE STUDY DS5107 ON FILE AT CITY OF LAS VEGAS FOR THE
SUBJECT PROJECT.

Josh Johnson 9/3/19
JOSH JOHNSON, P.E. 15789 DATE



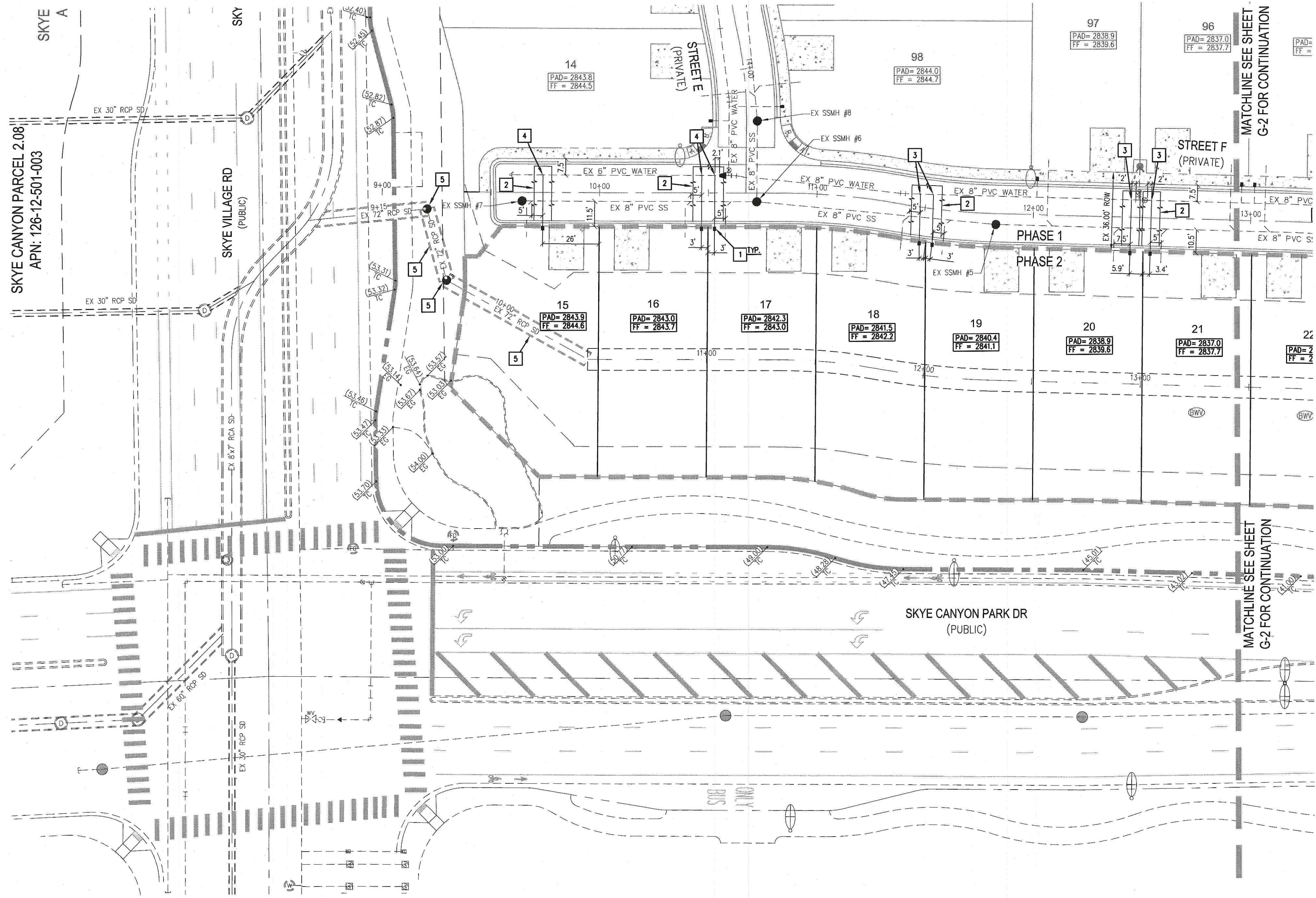
SKYE CANYON II PARCEL 2.06 - PHASE 2
PLAN & PROFILE STREET F STA 19+50 - STA 20+83
PLAN & PROFILE STREET E STA 16+50 - STA 18

DATE:	9/3/19
DRAFTER:	BKS
DESIGNER:	BKS
CHECKED:	JJ
PROJECT NO.	
OLY1813-000	



PP-3
SHEET 11 OF 14

\\w1813-000 SKYE canyon II - parcel 2.06.dwg (w1813-000) 9/2/2019 11:44 AM Joey Barrella

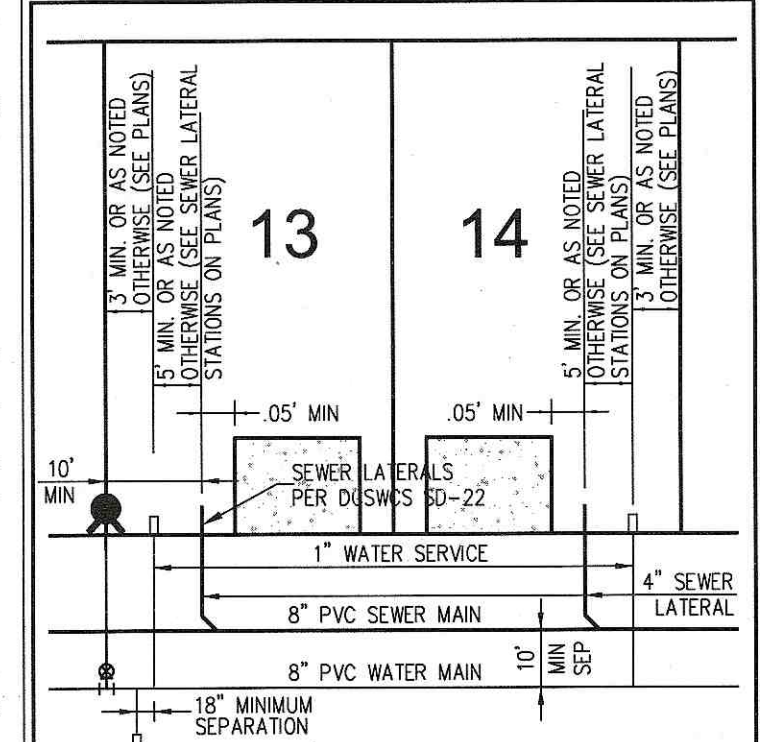


BACK WATER VALVE (BWW)
APPROVED BACK WATER VALVE(S) SHALL BE INSTALLED PER DCSWCS-STD DRWG #28. LOTS HAVING FINISHED FLOOR ELEVATIONS BELOW THE R/W ELEVATION OF THE NEAREST UPSTREAM MANHOLE SHALL BE PROTECTED FROM BACKFLOW OF SEWAGE BY INSTALLING AN APPROVED BACKWATER VALVE.

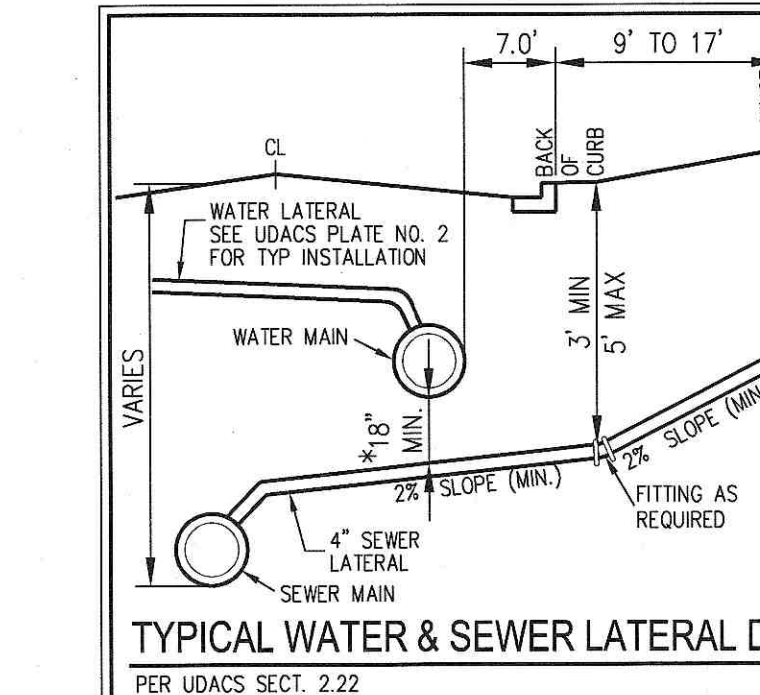
DROP INLET NOTE
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE, CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS, BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULL OR FLAT STRIP, (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL).

WATER NOTES

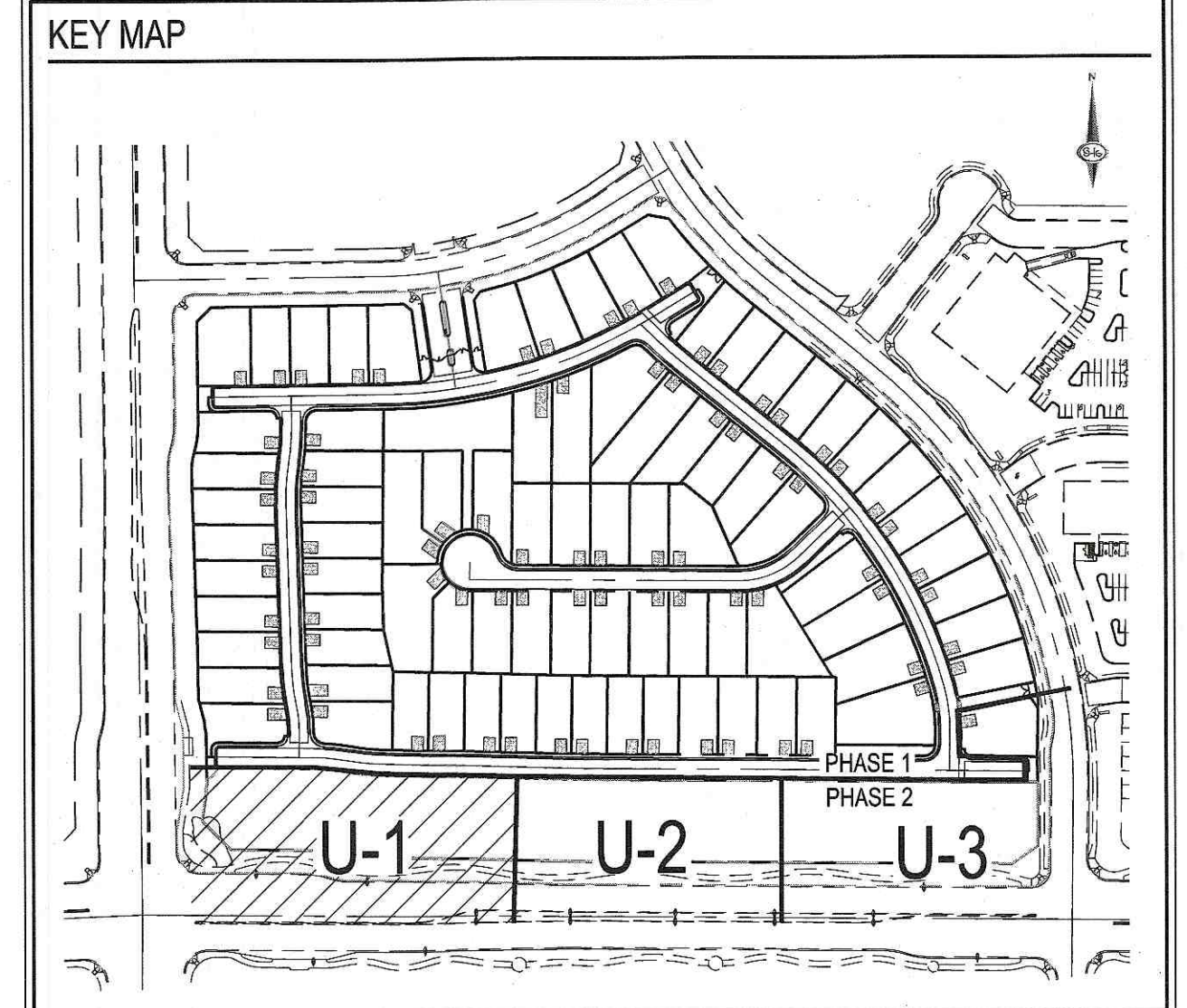
1. WATER MAIN JOINT DEFLECTION (PVC 4" - 24")
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.
2. REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
3. 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. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALKS.
5. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
6. THE LVWD CANNOT QUARANTEE A WATER-TIGHT 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 IMPERE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TYPICAL SHUTDOWN.
7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
8. MINIMUM 24" COVER PER UDACS SEC. 2.08.04 GRADING BE COMPLETE PRIOR TO WATERLINE INSTALLATION.
9. ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.06 & 19.08.
10. DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
11. DISCLAIMER: FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS, THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAYMENT SAND/ LANE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOT NOTIFY THE ENGINEER.



TYPICAL UTILITY LOCATION
UNLESS OTHERWISE NOTED (SIZES AS NOTED ON PLANS)



TYPICAL WATER & SEWER LATERAL DETAIL
PER UDACS SECT. 2.22



FIRE FLOW CALCULATIONS
FIRE FLOW IS 1,500 GPM AT 20 P.S.I. RESIDUAL.

USE/OCCUPANCY	SINGLE FAMILY
TOTAL SQUARE FOOTAGE (UNDER ROOF)	<3600 SF
NO. OF STORIES INCLUDING BASEMENT	YES
AUTOMATIC FIRE SPRINKLER SYSTEM	30 GPM
ANTICIPATED FIRE SPRINKLER DEMAND	TYPE V-B
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	2S
NO. OF HYDRANTS INSTALLED	4

HOMES ABOVE 3,600 SQ. FT. REQUIRES NFPA 13D SYSTEM IF FIRE FLOW AVAILABILITY IS INSUFFICIENT.
HOMES ABOVE 3,600 SQ. FT. AND/OR REQUIRING NFPA 13D SYSTEMS ARE REQUIRED TO BE APPROVED BY LVWD AND CLY FD BEFORE BUILDING PERMIT ISSUANCE.

SEWER CONNECTION NOTE
ONE OR MORE SEGMENTS OF THE DOWNSIDE 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 DOWNSIDE 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 DOWNSIDE 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

1. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING
2. MAINTAIN MINIMUM 3' PARALLEL SEPARATION
3. 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.

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS
108 UNITS X 250 GPD/UNIT = 26,500 GPD = 0.0265 MGD
TOTAL PEAK FLOW=0.0265 X 3.65 (PEAK FACTOR)=0.096725 MGD

APPROVAL
LAS VEGAS FIRE AND RESCUE _____ DATE _____

SOUTHWEST GAS APPROVAL
SOUTHWEST GAS CORPORATION _____ DATE _____

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 1813-000 FIRST APPROVED DATE: 06/20/2019
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

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AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
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SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5398

916

DATE: _____ BY: _____ APP. DATE: _____

DESCRIPTION NO.

CITY OF LAS VEGAS, NEVADA

NINETY FIVE MANAGEMENT, LLC

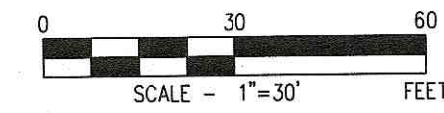
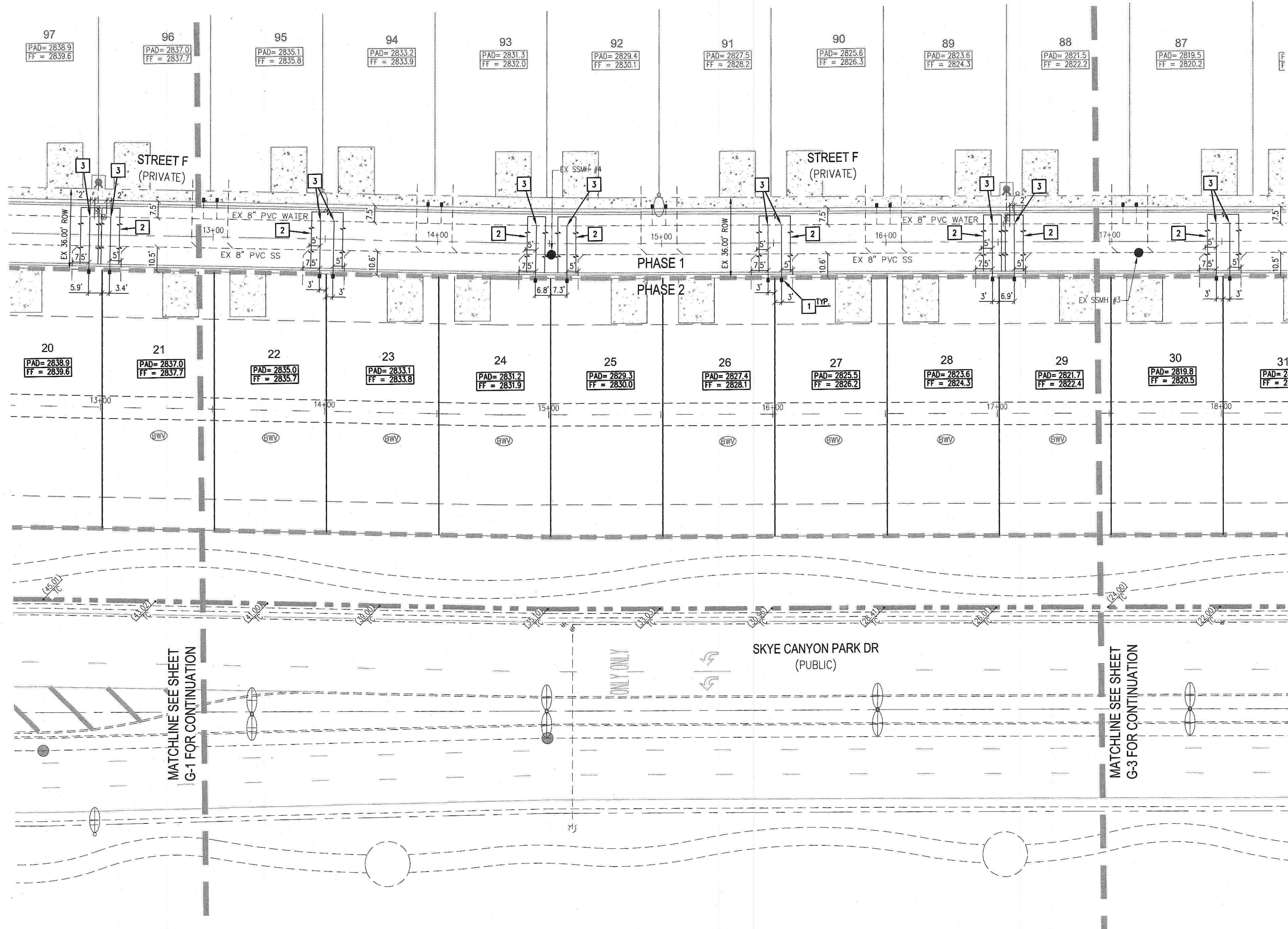
SKYE CANYON II PARCEL 2.06 - PHASE 2

UTILITY PLAN I

DATE: _____
DRAWN: CLAYER
DESIGNED: JJ
CHECKED: JJ
PROJECT NO. 1813-000

U-1
SHEET 12 OF 14

\\s01813-000\skycanyon\phase 2\01813-000-utl-2.dwg 9/2/2019 11:45 AM jay.porello

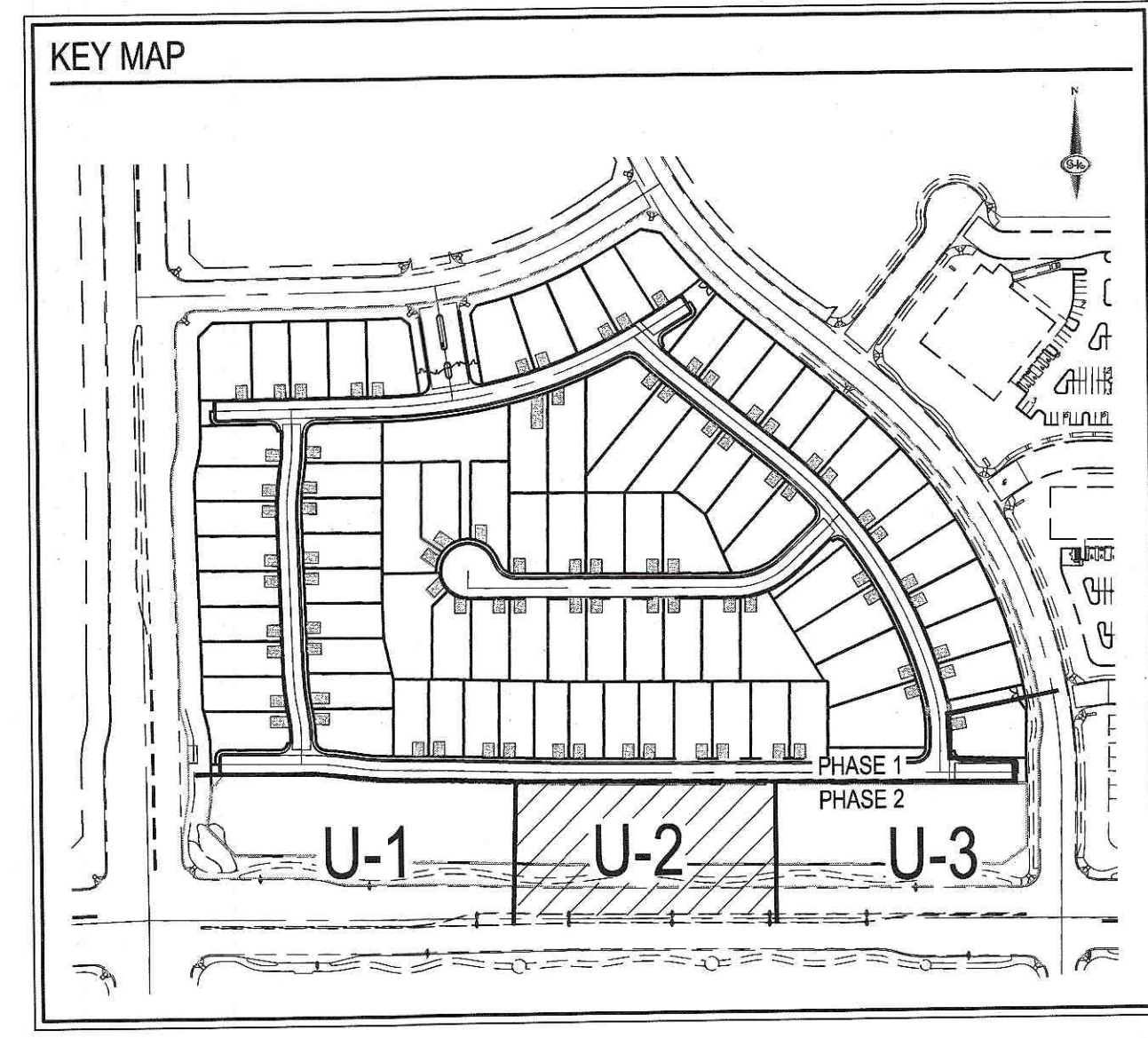
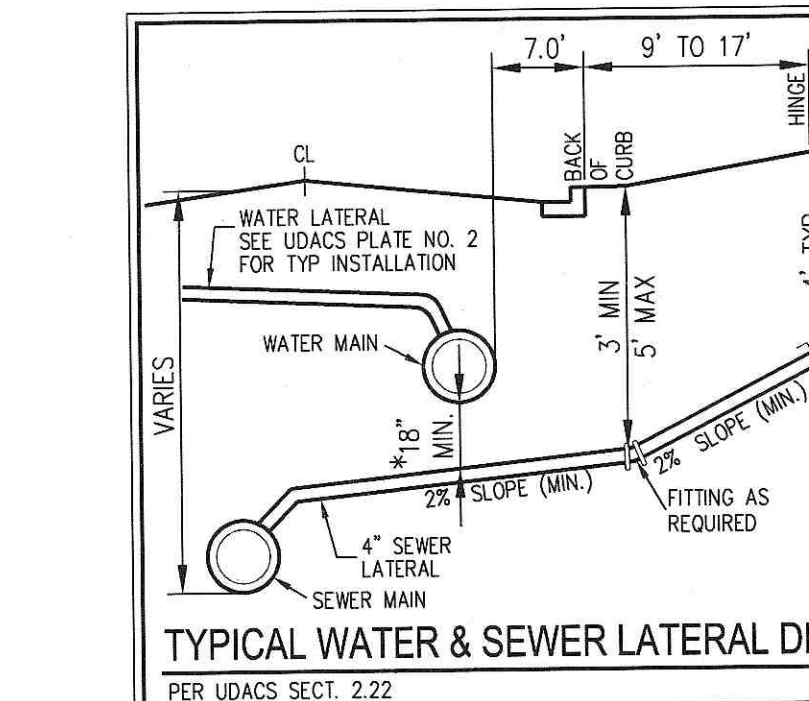
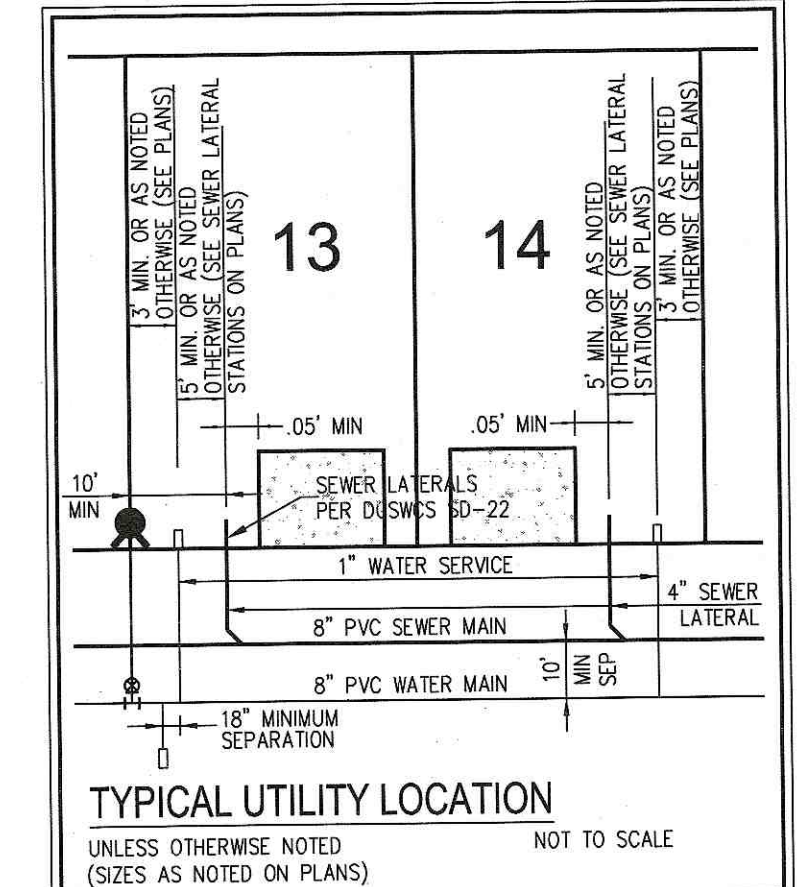


BACK WATER VALVE (SW)
APPROVED BACK WATER VALVE(S) SHALL BE INSTALLED PER DCSWCS-STD DRWG #29. LOTS HAVING FINISHED FLOOR ELEVATIONS BELOW THE ROW ELEVATION OF THE NEAREST UPSTREAM MANHOLE SHALL BE PROTECTED FROM BACKFLOW OF SEWAGE BY INSTALLING AN APPROVED BACKWATER VALVE.

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).

WATER NOTES

1. WATER MAIN JOINT DEFLECTION (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.
2. REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1" APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.
3. ALL SEWERY STORM DRAIN 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. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALKS.
5. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
6. THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE, TIGHTEN, WATER, THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPEARANCES ARE AVAILABLE.
8. MINIMUM 24" COVER PER UDACS SEC. 2.08.04. GRADING BE COMPLETE PRIOR TO WATERLINE INSTALLATION.
9. ALL ABOVE GROUND UTILITY APPEARANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 18.08 & 19.08.
10. DISCLAIMER: EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
11. DISCLAIMER: FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SLOTT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOT NOTIFY THE ENGINEER.



WATER CONSTRUCTION NOTES

1. INSTALL 1" COPPER SERVICE W/ 3/4" METER PLATE NO. 1 PER UDACS PLATE NO. 2.
2. SAWCUT AND MATCH EXISTING IMPROVEMENTS PER CCAUSD NO. 300.1, 300.2, 300.3, 300.4, 300.5, & 303.
3. INSTALL 8" X 1" TAPPING SLEEVE W/ 1" TAPPING VALVE PER UDACS PLATE NO. 34, 39, AND UDACS SECT. 2.24.01(A).
4. INSTALL 6" X 1" TAPPING SLEEVE W/ 1" TAPPING VALVE PER UDACS PLATE NO. 34, 39, AND UDACS SECT. 2.24.01(A).
5. REMOVE EXISTING STORM DRAIN PIPES AND MANHOLES.

FIRE FLOW CALCULATIONS
FIRE FLOW IS 1,500 GPM AT 20 P.S.I. RESIDUAL.

USE/OCCUPANCY	SINGLE FAMILY
TOTAL SQUARE FOOTAGE (UNDER ROOF)	<3600 SF
NO. OF STORIES INCLUDING BASEMENT	1
AUTOMATIC FIRE SPRINKLER SYSTEM	YES
ANTICIPATED FIRE SPRINKLER DEMAND	30 GPM
TYPE OF CONSTRUCTION (BC)	TYPE V-B
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	2
NO. OF HYDRANTS INSTALLED	4

HOMES ABOVE 3,600 SQ. FT. REQUIRES NFPA 13D SYSTEM IF FIRE FLOW AVAILABILITY IS INSUFFICIENT.
HOMES ABOVE 3,600 SQ. FT. AND/OR REQUIRING NFPA 13D SYSTEMS ARE REQUIRED TO BE APPROVED BY LVWD AND CLV FD BEFORE BUILDING PERMIT ISSUANCE.

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

1. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.
2. MAINTAIN MINIMUM 3' PARALLEL SEPARATION.
3. 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.

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS
106 UNITS X 250 GPD/UNIT = 26,500 GPD = 0.0265 MGD
TOTAL PEAK FLOW=0.0265 X 3.65 (PEAK FACTOR)=0.096725 MGD

APPROVAL
LAS VEGAS FIRE AND RESCUE _____ DATE _____

SOUTHWEST GAS APPROVAL
SOUTHWEST GAS CORPORATION _____ DATE _____

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 222222 FIRST APPROVED DATE:
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM



SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

916

CITY OF LAS VEGAS, NEVADA
NINETY FIVE MANAGEMENT, LLC
SKYE CANYON II PARCEL 2.06 - PHASE 2
UTILITY PLAN II

DATE: _____
DRAWN: CLAYER
CHECKED: JJ
PROJECT NO. **OLY1813-000**

U-2
SHEET 13 OF 14

