

DS #: 5239

APN: 126-18-501-014

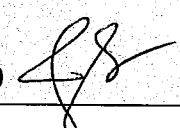
PROJECT: Bremerton

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: March 31, 2020 
TO: Land Development Services Department of Public Works		FROM: Jennifer Shinn, P.E. Flood Control, Engr. Associate Department of Public Works
SUBJECT:	Drainage Study for:	
	Bremerton	
Cross Streets:	Tee Pee Lane and Grand Teton Drive	
File Number:	F:\PW_Flood\DSMEMOS\DS5239B.docx	
Parcel Number:	126-18-501-014	
Zoning Action:	TMP-77764	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO
COPIES TO:		
		Westwood Professional Services
		USA/KB Home Nevada Acquisition, LLC
		Bart Anderson, P.E., DevCo

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1 st Submittal	2/26/2020	2/24/2020	See Comments Below	\$400.00	3722156: \$400
2 nd Submittal	3/9/2020	3/30/2020	Approved	\$4400.00	3772707: \$400
			TOTAL FEES (LDDRS):	\$800.00	=====

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 Nevada Department of Transportation concurrence.

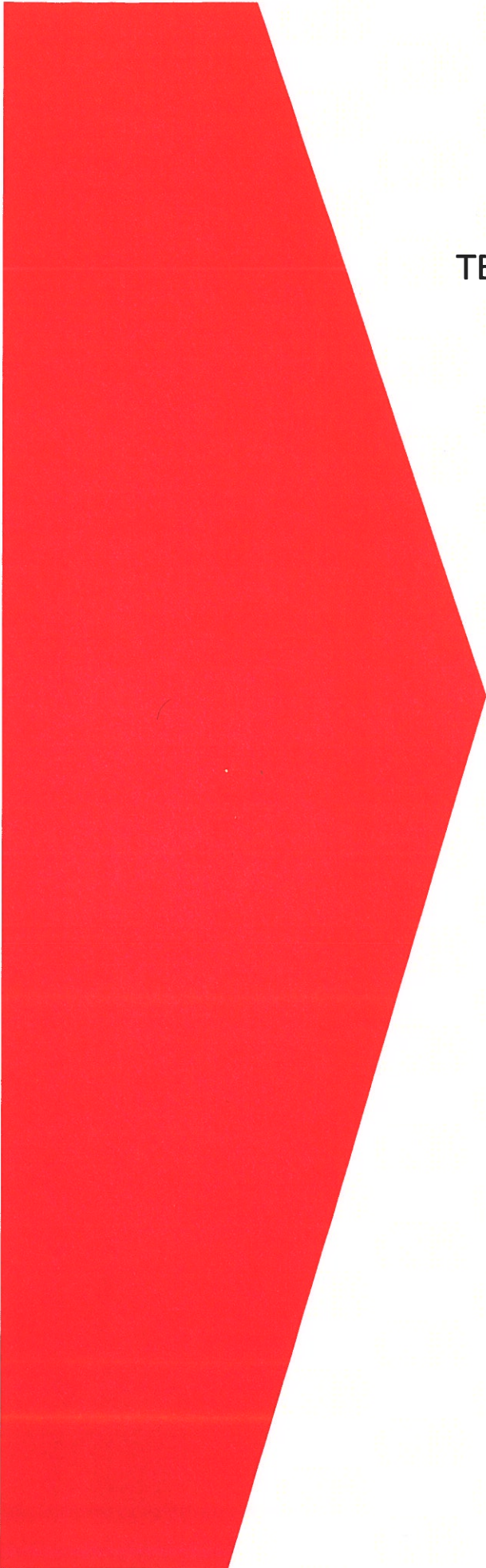
1. Add a note to the Grading Plans: " All private streets are public drainage easements and public sewer easements to be privately maintained by the HOA."
2. Label onsite storm drain as private on Plan and Profiles.
3. Label length and depth of SDDI #5 on Profile View on Sheet SD-3.

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
HDR/JKS

T/R/S: T19S/R60E/S18
AREA G-18



Westwood

TECHNICAL DRAINAGE STUDY ADDENDUM

Bremerton

City of Las Vegas, Nevada

Job No.: KBH1917.000

Date: March 2020

Prepared For:
KB Home

5795 Badura Avenue, Ste 180

Las Vegas, NV 89118

Phone: 702-266-8400 • Fax: 702-266-8623

TECHNICAL DRAINAGE STUDY

ADDENDUM

Bremerton

City of Las Vegas, Nevada

Job No.: KBH1917.000

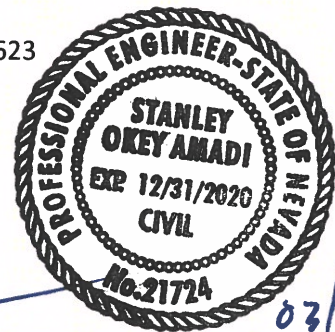
Date: March 2020

Prepared By:

Westwood Professional Services, Inc.
5740 S. Arville Street, Ste 216
Las Vegas, Nevada 89118
Phone: 702-281-5300 • Fax: 702-284-5399

Prepared For:

KB Home
5795 Badura Avenue, Ste 180
Las Vegas, NV 89118
Phone: (702) 266-8400 • Fax: (702) 266-8623



A handwritten signature in blue ink, appearing to read "S. Okey", written over a horizontal line.

03/05/20

Stanley Okey Amadi, P.E., C.F.M.
NV Professional Engineer No. 21724

Assisted by Gabby Squillante

KBH1917.000

March 05, 2020

Ms. 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 Addendum for Bremerton
DS 5239

Dear Ms. Shinn:

This letter certifies that all items provided on the *Technical Drainage Study Addendum for Bremerton* submittal CD match the paper version bound into the study.

Please contact me if you have any questions.

Sincerely,

WESTWOOD PROFESSIONAL SERVICES



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

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Bremerton - Addendum Date: March 2020
 Location of Development: a) Descriptive (Cross Streets): North/South: Tee Pee Lane
East/West: Grand Teton Drive
 b) Section: 18 Township: 19 South Range: 60 East
 c) APN: 125-18-501-014

Name of Owner: USA/KB Home Nevada Acquisition, LLC
 Telephone No.: (702) 266-8400 Fax No.: (702) 266-8623 E-mail Address: pchao@kbhome.com
 Address: 5795 Badura Ave Ste 180 Las Vegas NV 89118

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: Westwood PS
 Address: 5740 S. Arville #216 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: ± 10.0 acres Being Developed/Disturbed: ± 10.0 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.): Residential

5. Approximate upstream land area which drains to the subject site: 58 +/- acres

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

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: East to the adjacent Fort Apache Ranch storm....
....drain, North into Grand Teton Drive and South into Gilcrease Avenue.

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



Engineer's Seal

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

***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

KBH1917.000

March 4, 2020

Jennifer Shinn, P.E.
Flood Control, Engr. Associate
City of Las Vegas Department of Public Works
495 S. Main St
Las Vegas, NV 89101

**Subject: Addendum to the Technical Drainage Study for Bremerton
(DS05239A)**

Dear Ms. Shinn,

This letter is submitted in response to the comments contained in the February 20, 2020 review memorandum, regarding the above referenced project. A copy of the City of Las Vegas (CLV) comment letter has been provided in Appendix A.

The comments in the review memorandum have been individually addressed as follows:

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

Response: Acknowledged. Copies of the NOFA associated with the project have been provided in Appendix C for reference.

2. **Comment:** *The Study was seemingly prepared and submitted in a rush, the subject engineer shall conduct a better quality control of the works in the next submittal.*

Response: Acknowledged.

3. **Comment:** *Show all existing storm drain on Exhibit F Existing Condition Map.*

Response: Noted. Please refer to the revised Exhibit F provided in Appendix B.

4. **Comment:** *Provide basin flow arrows on Exhibit G Developed Condition Map.*

Response: Noted. Please refer to the revised Exhibit G provided in Appendix B.

5. **Comment:** *Show proposed contours on Exhibit G Developed Condition Map.*

Response: There are no proposed contours on the grading plans and the proposed design grades were frozen on the exhibit to avoid clutter. However, the street slopes and flow arrows have been provided on Exhibit G to depict the drainage patterns. Please refer to the revised exhibit in Appendix B.

6. **Comment:** *Show all easements on Exhibits F and G.*

Response: All the existing and proposed drainage easements have been shown on Exhibits F and G wherever applicable.

7. **Comment:** *Provide drop inlet capture summary and label drop inlets on Exhibit G. This is specifically important because you are using drop inlet capture values to calculate combination points.*

Response: Please refer to the Drop Inlet Capture Summary Table provided on Exhibit G.

8. **Comment:** *Unclear why there are several cross sections labeled "2" and "3" on Exhibit G when all locations are associated with a different flow/basin.*

Response: It appears that the report portion of the study was unclear or not thoroughly reviewed as it was stated in the first paragraph of Section 4.4 that the site layout design includes a one-way crowned street (Penderbook Street) and several stubbed streets; thus, street Sections 2 and 3 have been analyzed with the conservative flows from the largest pertinent onsite sub-basins. The use of multiple sections labeled 2 and 3 was also explained during the submittal meeting that it was deemed conservative to utilize the highest quantity of flow from one of the subbasins to analyze all the stubbed streets; hence, the same section identifier was provided at all the locations where used. Exhibit G has been revised to remove the multiple sections; but the calculations for the subbasins and stubbed streets with lower flows have not been revised since Sections 2 and 3 utilized higher flow rates.

9. **Comment:** *Prorated basins for OND2 do not add up. OND2 is 11 cfs total and $OND2(a) = 3\text{ cfs}$, $OND2(b) = 3\text{ cfs}$, $OND2(c) = 4\text{ cfs}$. $3+3+4=10\text{ cfs}$, not 11 cfs.*

Response: Both subbasins OND2(a) and OND2(b) generate 3.5 cfs each. The decimal place for the numbers has now been shown on the prorated summary table.

10. **Comment:** *The referenced HEC-1 model for the Brookhaven Study provides the flows for **C3 as 13 cfs and 30 cfs however, per Exhibit F and Exhibit G **C3 is 38 cfs and 82.*

Response: Please refer to Section 3.2 (bullet point 3) of the original report where **C3 was described, it was stated that:

*"**C3 – is referenced from the Brookhaven Study and comprises of the combined flows from both the Cascade III subdivision and the Brookhaven subdivision. The flows are combined at the intersection of Grand Teton Drive and Tee Pee Lane and conveyed east along the southern half of Grand Teton Drive."*

The referenced HEC-1 model from the from the Brookhaven Study did not include the surface flows of 25 cfs and 52 cfs from the Cascade III study but the flows were identified on their Exhibit F with a double asterisk (**) text indicating that the flow in Tee Pee Lane is referenced from combination point

C3 of the Cascade III Study by VTN Nevada. Thus, the flows were algebraically combined with the 13 cfs and 30 cfs from the Brookhaven Study. Please refer to Appendix F of the previous submittal for the highlighted supporting reference materials including the HEC-1 model from the Cascade III study.

11. **Comment:** *Unclear why the combination points on the developed condition drainage map are calculated when the HEC-1 accounts for the combination points. Are the HEC-1 combination points considered in this Study?*

Response: The HEC-1 combination points are considered; however, it should be noted that the referenced flows are not included in the HEC-1 model. Thus, the flows are algebraically added to the combination point flows from the HEC-1. For instance, CP1 from the HEC-1 is 2 cfs and 3 cfs while *C4 referenced from the Cascade Study is 6 cfs and 23 cfs, when algebraically combined, the flow at CP1 becomes 8 cfs and 23 cfs.

12. **Comment:** *Cross section E1 is analyzed as 2' wide and the summary table on Exhibit G lists it as 30' wide. Cross section E3 is analyzed as 5' wide and the summary table on Exhibit G lists it as 10' wide. Revise accordingly or provide clarification of the deviation.*

Response: The easement width for Cross section E1 is 30' wide; however, the analysis conservatively confined the flows with the 2-foot U-gutter. Similarly, for Section E3, the easement width is 10' wide but the analysis conservatively confined the flows within the existing L-curb and proposed concrete sidewalk. The calculations are correct and have not been revised.

13. **Comment:** *The emergency overflow section calculations (EO) appears to consider a sidewalk underdrain not shown on grading plans.*

Response: Acknowledged. The calculations for Section EO have been revised accordingly.

14. **Comment:** *Combination CP2 flow equation does not make sense. The equation listed on Exhibit G under the Developed Conditions Flow Rate Summary table considers OND2 as well as OND2(b) and the OND2(c) which are already considered in OND2. The equation does not add up when using the contributing basins listed or when using the routing described in the HEC-1.*

Response: Acknowledged. Basin OND2 was inadvertently left in the equation listed on the summary table of Exhibit G. The table has been corrected to remove OND2.

15. **Comment:** *Combination point CP3 is described on Exhibit G, as $Q = \text{OND3} + \text{OND4} + \text{OND2(a)} = 3 + 5 + 3 = 11 \text{ cfs}$ however the table states it is 8 cfs, not 11 cfs (100 year). OND2a for 10 year is not provided therefore the CP3 for 10 year cannot be verified. Clarify how the CP3 values of 8 and 3 were derived.*

Response: Acknowledged. The summary table has been corrected for combination point CP3 and the 10-year flows have been included in prorated summary for verification of the minor storm event flows at CP3. As noted in the response to Comment #9 above, subbasin OND2(a) generates a 100-year flow of 3.5 cfs; thus, the combined flow at CP3 is now 11.5 cfs. Note that the proposed 5-Type CM2 inlets at the end of the stubbed streets were shown to have the capacity to intercept more than 6 cfs at ponding depth of curb height. Thus, a revision to the inlet capacity calculation is not necessary. However, the

WSPGW models (SDE.wsw & SDEL.wsw) for the 18" storm drains and lateral loss calculations have been updated to include the additional 0.5 cfs from subbasin OND2(a).

- 16. Comment:** *Provide flow cross section at north end of Penderbrook Street and quantify the flow outletting to Grand Teton Drive through the sidewalk underdrain.*

Response: An additional prorate subbasin OND2(d) has been created to quantify the 100-year flow of 0.70 cfs outletting into Grand Teton Drive from the north end Penderbrook Street. The flow rate is considered insignificant as hydraulic Section E1 (at the south end of the street) has shown that 1 cfs will be conveyed thru a 2-ft U-gutter at a maximum normal and weir depths of 0.13' and 0.33' respectively contained within the U-gutter. Therefore, additional hydraulic calculations for the U-gutter at the north end of Penderbrook Street have not been provided. Note that adjacent finished floors were already analyzed based on the conservative flow depths at Sections 2 and 3.

- 17. Comment:** *SD-1 plan view shows construction notes 22, 26, 27 however, the construction note list only shows numbers 1-19.*

Response: Acknowledged. Sheet SD-1 has been revised to include all the construction notes.

- 18. Comment:** *Label inlets on the grading plans or provide a better way to identify the storm drain profiles. The inlets have a name on the profile but not in the plan therefore it is difficult to decipher which inlet is which on the profiles.*

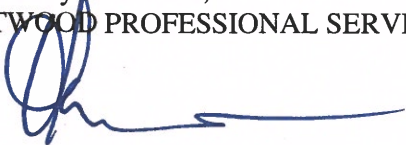
Response: Acknowledged. The proposed drop inlets have been labeled on the grading plans

- 19. Comment:** *Update the quantities listed on the SD sheets.*

Response: Noted. The quantities listed on the SD sheets have been updated.

We believe the above responses and revisions provided on the plans have adequately satisfied your concerns in the subject review memorandum. The revised plan, profile, and detail sheets adopting the revisions addressed in this letter have been included in Appendix E. If you have any questions or require additional information, please do not hesitate to contact our office at (702) 284-5300.

Respectfully Submitted,
WESTWOOD PROFESSIONAL SERVICES



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

cc: Mark Failla, P.E., CFM
Tim Mulrooney, P.E.
Matt Key, E.I.

APPENDIX

Appendix A – CLV Comment Letter

Appendix B – Revised Drainage Exhibits

Appendix C – NOFA

Appendix D – Revised Hydraulic Computations

Appendix E – CD of Electronic Files & Revised Improvement Plans

APPENDIX A

CLV Comment Letter

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 20, 2020
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:	
	Bremerton	
Cross Streets:	Tee Pee Lane and Grand Teton Drive	COPIES TO:
		Westwood Professional Services
File Number:	F:\Depot\DSMemos\DS05239A.doc	USA/KB Home Nevada Acquisition, LLC
Parcel Number:	125-18-501-014	Bart Anderson, P.E., DevCo
Zoning Action:		
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	1/29/2020	2/07/2020	See Comments Below	\$400.00	3722156: \$400
			TOTAL FEES (LDDRS):	\$400.00	----

REMARKS:

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

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

The following are comments pertaining to the subject site specific drainage study and grading plans:

1. Provide a copy of the zoning/planning conditions associated with this site with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. The *Study* was seemingly prepared and submitted in a rush, the subject engineer shall conduct a better quality control of the works in the next submittal.
3. Show all existing storm drain on Exhibit F Existing Condition Map.
4. Provide basin flow arrows on Exhibit G Developed Condition Map.
5. Show proposed contours on Exhibit G Developed Condition Map.
6. Show all easements on Exhibits F and G.
7. Provide drop inlet capture summary and label drop inlets on Exhibit G. This is specifically important because you are using drop inlet capture values to calculate combination points.
8. Unclear why there are several cross sections labeled "2" and "3" on Exhibit G when all locations are associated with a different flow/basin.

9. Prorated basins for OND2 do not add up. OND2 is 11 cfs total and OND2(a) = 3 cfs, OND2(b) = 3 cfs, OND2(c) = 4 cfs. $3+3+4=10$ cfs not 11 cfs.
10. The referenced HEC-1 model for the Brookhaven Study provides the flows for **C3 as 13 cfs and 30 cfs however, per Exhibit F and Exhibit G **C3 is 38 cfs and 82.
11. Unclear why the combination points on the developed condition drainage map are calculated when the HEC-1 accounts for the combination points. Are the HEC-1 combination points considered in this Study?
12. Cross section E1 is analyzed as 2' wide and the summary table on Exhibit G lists it as 30' wide. Cross section E3 is analyzed as 5' wide and the summary table on Exhibit G lists it as 10' wide. Revise accordingly or provide clarification of the deviation.
13. The emergency overflow section calculation (EO) appears to consider a sidewalk underdrain not shown on grading plans.
14. Combination CP2 flow equation does not make sense. The equation listed on Exhibit G under the Developed Conditions Flow Rate Summary table considers OND2 as well as OND2(b) and OND2(c) which are already considered in OND2. The equation does not add up when using the contributing basins listed or when using the routing described in the HEC-1.
15. Combination point CP3 is described on Exhibit G as $Q=OND3+OND4+OND2(a) = 3+5+3=11$ cfs however the table states it is 8 cfs, not 11cfs (100 year). OND2a for 10 year is not provided therefore the CP3 for 10 year cannot be verified. Clarify how the CP3 values of 8 and 3 were derived?
16. Provide flow cross section at north end of Benderbrook Street and quantify the flow outletting to Grand Teton Drive through the sidewalk underdrain.
17. SD-1 plan view shows construction notes 22, 26, 27 however, the construction note list only shows numbers 1-19.
18. Label inlets on the grading plans or provide a better way to identify the storm drain profiles. The inlets have a name on the profile but not in plan therefore it is difficult to decipher which inlet is which on the profiles.
19. Update the quantities listed on the SD Sheets.

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

T/R/S: T19S/R60E/S18
AREA G-18

APPENDIX B

Revised Drainage Exhibits

APPENDIX C

NOFA



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

MICHELE FIORE
Mayor Pro Tem

STAVROS S. ANTHONY

CEDRIC CREAR

BRIAN KNUDSEN

VICTORIA SEAMAN

OLIVIA DIAZ

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

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



cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: ZON-77758 [PRJ-77723] - REZONING RELATED TO MOD-77759, SUP-77761, VAC-77763, SDR-77762 AND TMP-77764
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Rezoning FROM: U (UNDEVELOPED) [TC (TOWN CENTER) GENERAL PLAN DESIGNATION] TO: T-C (TOWN CENTER) on 10.00 acres at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), Ward 6 (Fiore) [PRJ-77723].

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

Sincerely,

Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

MICHELE FIORE
Mayor Pro Tem

STAVROS S. ANTHONY
CEDRIC CREAR
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City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
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711 | TTY



cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: MOD-77759 [PRJ-77723] - MAJOR MODIFICATION RELATED TO ZON-
77758, SUP-77761, VAC-77763, SDR-77762 AND TMP-77764
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Major Modification of the Town Center Land Use Plan to amend the Special Land Use Designation FROM: PF-TC (PUBLIC FACILITIES - TOWN CENTER) TO: ML-TC (MEDIUM LOW DENSITY RESIDENTIAL - TOWN CENTER) on 10.00 acres at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), Ward 6 (Fiore) [PRJ-77723].

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

Sincerely,

Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118



**LAS VEGAS
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CAROLYN G. GOODMAN
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DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
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702.474.7463 | FAX
711 | TTY



cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: SUP-77761 [PRJ-77723] - SPECIAL USE PERMIT RELATED TO ZON-
77758, MOD-77759, VAC-77763, SDR-77762 AND TMP-77764
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Special Use Permit FOR A PROPOSED GATED COMMUNITY WITH PRIVATE STREETS WITH A WAIVER TO ALLOW ONE GATED ENTRANCE WHERE TWO ENTRANCES ARE REQUIRED at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), U (Undeveloped) Zone [TC (Town Center) General Plan Designation] [PROPOSED: T-C (Town Center)], Ward 6 (Fiore) [PRJ-77723].

This approval is subject to the following conditions:

Planning

1. Conformance to all Minimum Requirements under Town Center Development Standards for a Gated Community with Private Gated Streets use.
2. Approval of and conformance to the Conditions of Approval for Rezoning (ZON-77758), Major Modification (MOD-77759), Site Development Plan Review (SDR-77762), Petition for Vacation (VAC-77763) and Tentative Map (TMP-77764) shall be required.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. A Waiver from Town Center Development Standards is hereby approved, to allow one gated entrance where two entrances are required.

Ms. Christa Bilbrey
KB Home
SUP-77761 [PRJ-77723] – Page Two
February 20, 2020

5. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.
6. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit, as well as submitted as part of any business license application.
7. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

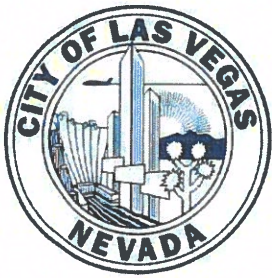
Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118



**LAS VEGAS
CITY COUNCIL**

CAROLYN G. GOODMAN
Mayor

MICHELE FIORE
Mayor Pro Tem

STAVROS S. ANTHONY

CEDRIC CREAR

BRIAN KNUDSEN

VICTORIA SEAMAN

OLIVIA DIAZ

SCOTT D. ADAMS
City Manager

DEPARTMENT OF PLANNING

ROBERT SUMMERFIELD
DIRECTOR

**DEVELOPMENT
SERVICES CENTER**

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



cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: VAC-77763 [PRJ-77723] - VACATION RELATED TO ZON-77758, MOD-77759, SUP-77761, SDR-77762 AND TMP-77764
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Petition to Vacate City of Las Vegas right-of-way, sewer, drainage, construction and trail easements at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), Ward 6 (Fiore) [PRJ-77723].

This approval is subject to the following conditions:

1. The limits of this Petition of Vacation shall be the unused portion of the Bureau of Land Management (BLM) Grant Easement for Roadway, Sewer, Drainage, and Trail purposes granted by N-75363/C and all of the Temporary Construction Easement granted by N-75636-01 located at the northwest corner of Grand Teton Drive and Tee Pee Lane on Assessor Parcel Number 125-18-501-014.
2. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the recordation of the Order of Vacation for this application. Appropriate drainage easements shall be reserved if recommended by the approved Drainage Plan/Study. The drainage study required by SDR-77762 and TMP-77764 may be used to satisfy this requirement provided that it addresses the area to be vacated.
3. Contact the City Engineer's Office at 702-229-6272 to coordinate the development of this project with the "Grand Teton Bridge" project and any other public improvement projects adjacent to this site. Appropriate right-of-way or easements shall be retained as recommended by the City Engineer.

4. This Order of Relinquishment shall record immediately prior to or concurrent with a mapping action that subdivides this site.
5. All public improvements, if any, adjacent to and in conflict with this vacation application are to be modified, as necessary, at the applicant's expense prior to the recordation of an Order of Vacation. Construction of the required trail improvements on Grand Teton Drive and Tee Pee Lane must be guaranteed by the applicant prior to the recordation of the Order of Relinquishment.
6. Reservation of easements for the facilities of the various utility companies together with reasonable ingress thereto and egress there from shall be provided if required.
7. All development shall be in conformance with code requirements and design standards of all City Departments.
8. The Order of Relinquishment of Interest shall not be recorded until all of the conditions of approval have been met provided, however, the conditions requiring modification of public improvements may be fulfilled for purposes of recordation by providing sufficient security for the performance thereof in accordance with the Subdivision Ordinance of the City of Las Vegas. City Staff is empowered to modify this application if necessary because of technical concerns or because of other related review actions as long as current City right-of-way requirements are still complied with and the intent of the vacation application is not changed. If applicable, a five foot wide easement for public streetlight and fire hydrant purposes shall be retained on all vacation actions abutting public street corridors that will remain dedicated and available for public use. Also, if applicable and where needed, public easement corridors and sight visibility or other easements that would/should cross any right-of-way being vacated must be retained.
9. If the Order of Relinquishment of Interest is not recorded within one (1) year after approval by the City of Las Vegas or an Extension of Time is not granted by the Planning Director, then approval will terminate and a new petition must be submitted.

Ms. Christa Bilbrey
KB Home
VAC-77763 [PRJ-77723] – Page Three
February 20, 2020

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Summerfield". The signature is fluid and cursive, with the first name "Robert" being more prominent than the last name "Summerfield".

Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118



**LAS VEGAS
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cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: SDR-77762 [PRJ-77723] - SITE DEVELOPMENT PLAN REVIEW
RELATED TO ZON-77758, MOD-77759, SUP-77761, VAC-77763 AND
TMP-77764
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Site Development Plan Review FOR A PROPOSED 73-LOT SINGLE FAMILY RESIDENTIAL DEVELOPMENT WITH A WAIVER OF TOWN CENTER STREETScape, WALL HEIGHT AND SINGLE FAMILY RESIDENTIAL DEVELOPMENT STANDARDS on 10.00 acres at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), U (Undeveloped) Zone [TC (Town Center) General Plan Designation] [PROPOSED: T-C (Town Center)], Ward 6 (Fiore) [PRJ-77723].

This approval is subject to the following conditions:

Planning

1. Approval of and conformance to the Conditions of Approval for Rezoning (ZON-77758), Major Modification (MOD-77759), Special Use Permit (SUP-77761), Petition for Vacation (VAC-77763) and Tentative Map (TMP-77764) shall be required, if approved.
2. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
3. All development shall be in conformance with the site plan and landscape plan date stamped 01/13/20, except as amended by conditions herein.
4. The standards for this development shall include a Minimum lot size of 3,500 square feet and Building height shall not exceed two stories or 35 feet, whichever is less.

5. The setbacks for this development shall be a minimum of 18 feet to the front of the garage as measured from back of sidewalk or from back of curb if no sidewalk is provided, 5 feet on the side, 10 feet on the corner side, 15 feet in the rear and 5 feet to the rear patio.
6. A Waiver is hereby approved, to allow deviations to Town Center streetscape development standards to allow the following deviations to the Grand Teton Drive, Tee Pee Lane and Gilcrease Avenue streetscape:

<i>Streetscape Standards</i>	<i>Required</i>	<i>Provided</i>
Town Center Primary Arterial Street – Grand Teton Drive	100-foot wide right-of-way, with a 2.5-foot amenity zone and five-foot sidewalk; with a Town Center Parkway Trail (14.5-foot); with a six-foot landscape buffer between the sidewalks and perimeter wall	100-foot right-of-way, with a three-foot amenity zone and zero-foot sidewalk; with a ten-foot Multi-Use Trail and 4.5-foot landscape buffer
Town Center Residential Collector Street – Tee Pee Lane	80-foot wide right-of-way, with a 7.5-foot amenity zone and seven-foot sidewalk; with a Town Center Collector Trail (12'); with a six-foot landscape buffer between the sidewalks and perimeter wall	80-foot right-of-way, with a five-foot amenity zone and zero-foot sidewalk; with a ten-foot Multi-Use Trail and five-foot landscape buffer
Town Center Residential Collector Street – Gilcrease Avenue	80-foot wide right-of-way, with a 7.5-foot amenity zone and seven-foot sidewalk; with a Town Center Collector Trail (12'); with a six-foot landscape buffer between the sidewalks and perimeter wall	80-foot right-of-way, with a five-foot amenity zone and zero-foot sidewalk; with a ten-foot Multi-Use Trail and five-foot landscape buffer

7. A Waiver is hereby approved, to allow deviations to Town Center streetscape development standards to allow 30-foot and 35-foot wide private streets where 37 feet is the minimum allowed.
8. A Waiver is hereby approved, to allow deviations to Town Center wall height development standards to allow an six-foot retaining wall where four feet is the maximum allowed on less than a two percent slope; and to allow a ten-foot retaining wall where six feet is the maximum allowed on more than a two percent slope.
9. A Waiver is hereby approved, to allow the following deviations to Town Center Single Family Residential development standards.
 - To allow a perimeter wall to separate private property from a street that is not classified as a Town Center Arterial or Primary Arterial Street.
 - To allow a solid CMU block perimeter screening wall where a combination of a 2'-10" low masonry wall with a 3'-2" wrought iron fence is the required design in residential districts.
 - To allow a zero-foot landscape buffer where a subdivision with perimeter walls with retaining walls with a height of greater than six feet shall be designed with a minimum five foot wide landscape planter as a buffer.
 - To allow zero 24-inch box trees where two 24-inch box or greater (1.5-inch caliper diameter at 4.5 feet from top of root ball) trees are encouraged within the front yard setback area.
 - To allow a four-foot wide landscape buffer where a six-foot wide landscape buffer is required between the sidewalks and the perimeter walls.
10. All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.
11. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
12. A technical landscape plan, signed and sealed by a Registered Architect, Landscape Architect, Residential Designer or Civil Engineer, must be submitted prior to or at the same time as Final Map submittal. A permanent underground sprinkler system is required, and shall be permanently maintained in a satisfactory manner; the landscape plan shall include irrigation specifications. Installed landscaping shall not impede visibility of any traffic control device.
13. No turf shall be permitted in the non-recreational common areas, such as medians and amenity zones in this development.

14. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
15. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

16. The applicant shall work with the Department of Public Works and the Department of Fire Services to ensure that the two stub streets adjacent to Grand Teton Drive and Gilcrease Avenue are designed and constructed to act as emergency access points with magnetic gates. Appropriate emergency access easements shall be granted on the Final Map for this site.
17. A Petition of Vacation, such as VAC-77763 to eliminate any conflicting easements shall record prior to or concurrent with the recordation of a Final Map for this site.
18. All dedications and easements required by TMP-77764 shall record on the Final Map for this site.
19. Concurrent with development, construct half-street improvements on Tee Pee Lane and Gilcrease Avenue per Town Center Development Standards including the required Multi-Use Non-Equestrian Trails on all adjacent public streets. Any improvements (trail improvements) not constructed with the City's "Grand Teton Bridge" project will be the responsibility of the applicant.
20. Contact the City Engineer's Office at 702-229-6272 to coordinate the development of this project with the "Grand Teton Bridge" project and any other public improvement projects adjacent to this site. Comply with the recommendations of the City Engineer.
21. Landscape and maintain all unimproved rights-of-way adjacent to this site. All landscaping and private improvements installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.

Ms. Christa Bilbrey
KB Home
SDR-77762 [PRJ-77723] – Page Five
February 20, 2020

22. Submit a License Agreement for landscaping and private improvements in public rights-of-way adjacent to this site prior to this issuance of permits for these improvements. The applicant must carry an insurance policy for the term of the License Agreement and add the City of Las Vegas as an additionally insured entity on this insurance policy. If requested by the City, the applicant shall remove property encroaching in the public right-of-way at the applicant's expense pursuant to the terms of the City's License Agreement. The installation and maintenance of all private improvements in the public right of way shall be the responsibility of the adjacent property owner(s) and shall be transferred with the sale of the property for the entire term of the License Agreement. Coordinate all requirements for the License Agreement with the Land Development Section of the Department of Building and Safety (702-229-4836).
23. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings, or the recordation of a map, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site. The Drainage Study required by TMP-77764 may be used to satisfy this condition.

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

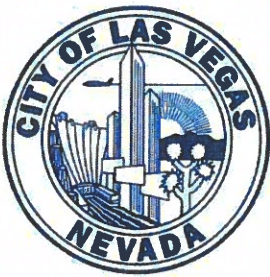
Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118



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DEPARTMENT OF PLANNING

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cityoflasvegas
lasvegasnevada.gov

February 20, 2020

Ms. Christa Bilbrey
KB Home
5795 West Badura Avenue, Suite #180
Las Vegas, Nevada 89118

**RE: TMP-77764 [PRJ-77723] - TENTATIVE MAP RELATED TO ZON-77758,
MOD-77759, SUP-77761, VAC-77763 AND SDR-77762
CITY COUNCIL MEETING OF FEBRUARY 19, 2020**

Dear Ms. Bilbrey:

The City Council at a regular meeting held on February 19, 2020 voted to **APPROVE** your request for a Tentative Map FOR A PROPOSED 73-LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION WITH A WAIVER TO ALLOW PRIVATE STUB STREETS THAT EXCEED ONE PER 660 FEET on 10.00 acres at the southeast corner of Grand Teton Drive and Tee Pee Lane (APN 125-18-501-014), U (Undeveloped) Zone [TC (Town Center) General Plan Designation] [PROPOSED: T-C (Town Center)], Ward 6 (Fiore) [PRJ-77723].

This approval is subject to the following conditions:

Planning

1. Approval of the Tentative Map shall be for no more than four (4) years. If a Final Map is not recorded on all or a portion of the area embraced by the Tentative Map within four (4) years of the approval of the Tentative Map, this action is void.
2. Approval of Rezoning (ZON-77758), Major Modification (MOD-77759), Special Use Permit (SUP-77761), Site Development Plan Review (SDR-77762) and Petition for Vacation (VAC-77763) shall be required, if approved.
3. Street names must be provided in accordance with the City's Street Naming Regulations.
4. A Waiver is hereby approved, to allow deviations to Town Center streetscape development standards to allow private stub streets that exceed one per 660 feet.

5. A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
6. In conjunction with creation, declaration and recordation of the subject common-interest community, and prior to recordation of the Covenants, Codes and Restrictions ("CC&R"), or conveyance of any unit within the community, the Developer is required to record a Declaration of Private Maintenance Requirements ("DPMR") as a covenant on all associated properties, and on behalf of all current and future property owners. The DPMR is to include a listing of all privately owned and/or maintained infrastructure improvements, along with assignment of maintenance responsibility for each to the common interest community or the respective individual property owners, and is to provide a brief description of the required level of maintenance for privately maintained components. The DPMR must be reviewed and approved by the City of Las Vegas Department of Field Operations prior to recordation, and must include a statement that all properties within the community are subject to assessment for all associated costs should private maintenance obligations not be met, and the City of Las Vegas be required to provide for said maintenance. Also, the CC&R are to include a statement of obligation of compliance with the DPMR. Following recordation, the Developer is to submit copies of the recorded DPMR and CC&R documents to the City of Las Vegas Department of Field Operations.
7. All development is subject to the conditions of City Departments and State Subdivision Statutes.

Public Works

8. The applicant shall work with the Department of Public Works and the Department of Fire Services to ensure that the two stub streets adjacent to Grand Teton Drive and Gilcrease Avenue are designed and constructed to act as emergency access points with magnetic gates. Appropriate emergency access easements shall be granted on the Final Map for this site.
9. A Petition of Vacation, such as VAC-77763 to eliminate any conflicting easements shall record prior to or concurrent with the recordation of a Final Map for this site.

Ms. Christa Bilbrey
KB Home
TMP-77764 [PRJ-77723] – Page Three
February 20, 2020

10. Dedicate 50 feet for Grand Teton Drive, 40 feet for Tee Pee Lane, and 40 feet for Gilcrease Avenue along with the standard radii at the southeast corner of Grand Teton Drive and Tee Pee Lane and at the northeast corner of Gilcrease Avenue and Tee Pee Lane on the Final Map for this site. Additionally, grant a 12.5-foot Multi-Use Non-Equestrian Trail Easement adjacent to Grand Teton Drive and a 10-foot Multi-Use Non-Equestrian Trail Easement adjacent to Gilcrease Avenue on the Final Map of this site
11. Grant a minimum 30-foot Public Sewer and Drainage Easement between lots 50 and 51.
12. Private streets must be granted and labeled on the Final Map for this site as Public Utility Easements (P.U.E.), Public Sewer Easements, and Public Drainage Easements to be privately maintained by the Homeowner's Association.
13. Construct Grand Teton Drive, Tee Pee Lane, and Gilcrease Avenue per Town Center Development Standards including the required Multi-Use Non-Equestrian Trails on all adjacent public streets. Any improvements (trail improvements) not constructed with the City's "Grand Teton Bridge" project will be the responsibility of the applicant.
14. Contact the City Engineer's Office at 702-229-6272 to coordinate the development of this project with the "Grand Teton Bridge" project and any other public improvement projects adjacent to this site. Comply with the recommendations of the City Engineer.
15. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings, or the recordation of a map, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site. The Drainage Study required by SDR-77762 may be used to satisfy this condition.

Ms. Christa Bilbrey
KB Home
TMP-77764 [PRJ-77723] – Page Four
February 20, 2020

16. As per Unified Development Code (UDC) 19.16.060.G, all requirements must be complied with or such future compliance must be guaranteed by an approved performance security method in accordance with UDC sections 19.02.130.
17. The approval of all Public Works related improvements shown on this Tentative Map is in concept only. Specific design and construction details relating to size, type and/or alignment of improvements, including but not limited to street, sewer and drainage improvements, shall be resolved prior to approval of the construction plans by the City. No deviations from adopted City Standards shall be allowed unless specific written approval for such is received from the City Engineer prior to the recordation of a Final Map or the approval of subdivision-related construction plans, whichever may occur first. Approval of this Tentative Map does not constitute approval of any deviations. If such approval cannot be obtained, a revised Tentative Map must be submitted showing elimination of such deviations.

The Notice of Final Action was filed with the Las Vegas City Clerk on February 20, 2020.

Sincerely,



Robert Summerfield, AICP
Director
Department of Planning

RTS:PL:clb

cc: Ms. Roxanne Leigh
Slater Hanifan Group
5740 South Arville Street, Suite #216
Las Vegas, Nevada 89118

APPENDIX D

Revised Hydraulic Computations

Project Description

Input Data

Station (ft)	Elevation (ft)
0+00.00	1.00
0+00.00	0.00
0+20.00	0.00
0+20.00	1.00

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.00)	(0+20.00, 1.00)	0.013

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

Normal Depth	0.07	ft
Elevation Range	0.00 to 1.00 ft	
Flow Area	1.44	ft²
Wetted Perimeter	20.14	ft
Hydraulic Radius	0.07	ft
Top Width	20.00	ft
Normal Depth	0.07	ft
Critical Depth	0.11	ft
Critical Slope	0.00525	ft/ft

Worksheet for Section EO Normal Depth (Emergency Overflow)

Results

Velocity	2.78	ft/s
Velocity Head	0.12	ft
Specific Energy	0.19	ft
Froude Number	1.82	
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	0.07	ft
Critical Depth	0.11	ft
Channel Slope	2.00	%
Critical Slope	0.00525	ft/ft

Cross Section for Section EO Normal Depth (Emergency Overflow)

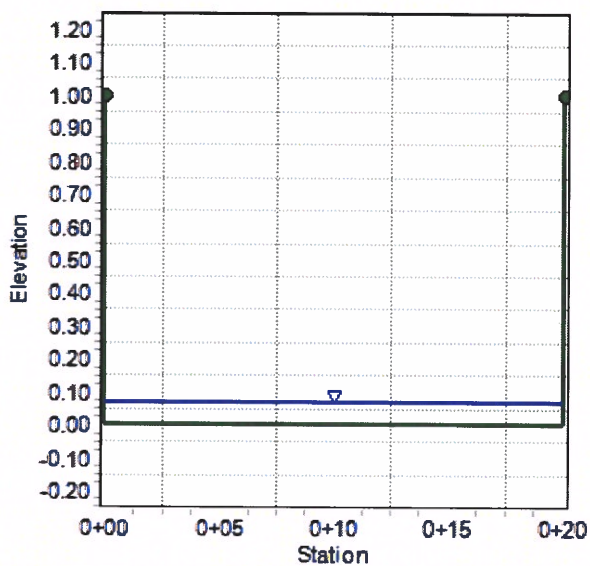
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	2.00 %
Normal Depth	0.07 ft
Discharge	4.00 ft ³ /s

Cross Section Image



Worksheet for Section EO Weir (Emergency Overflow)

Project Description

Solve For Headwater Elevation

Input Data

Discharge		4.00	ft ³ /s
Crest Elevation		0.00	ft
Tailwater Elevation		0.07	ft
Crest Surface Type	Paved		
Crest Breadth		5.00	ft
Crest Length		20.00	ft

Results

Headwater Elevation	0.17	ft
Headwater Height Above Crest	0.17	ft
Tailwater Height Above Crest	0.07	ft
Weir Coefficient	2.95	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.95	US
Flow Area	3.33	ft ²
Velocity	1.20	ft/s
Wetted Perimeter	20.33	ft
Top Width	20.00	ft

Cross Section for Section EO Weir (Emergency Overflow)

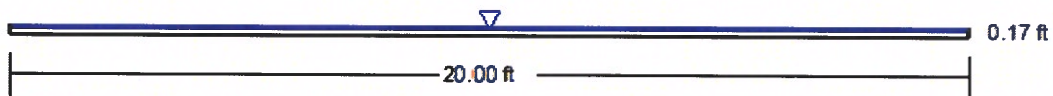
Project Description

Solve For Headwater Elevation

Input Data

Discharge		4.00	ft ³ /s
Headwater Elevation		0.17	ft
Crest Elevation		0.00	ft
Tailwater Elevation		0.07	ft
Crest Surface Type	Paved		
Crest Breadth		5.00	ft
Crest Length		20.00	ft

Cross Section Image



V: 1
H: 1

T1 BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM

T2 PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM

T3 STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING

SO	1000.0002707.903	18	.013		2709.403				
R	1012.3952708.075	18	.013					-15.000	
R	1012.3962708.076	18	.013					-15.000	
R	1012.3972708.077	18	.013					-15.000	
R	1012.3982708.078	18	.013					-15.000	
R	1012.3992708.079	18	.013					-15.000	
R	1012.4002708.080	18	.013					-15.000	1
JX	1012.4002708.080	18 18	.013	3.5	2708.080		90.0		
R	1134.1802709.300	18	.013				.000	0.000	1
JX	1134.1802709.300	18 18	.013	4.0	2709.300		90.0		
R	1254.1802710.500	18	.013				.000	0.000	1
JX	1254.1802710.500	18 18	.013	1.0	2710.500		90.0		
R	1440.2952712.355	18	.013					15.000	
R	1440.2962712.356	18	.013					15.000	
R	1440.2972712.357	18	.013					15.000	
R	1440.2982712.358	18	.013				.000	15.000	
R	1440.2992712.359	18	.013					15.000	
R	1440.3002712.360	18	.013					15.000	1
R	1449.8002712.450	18	.013				.000	.000	0
SH	1449.8002712.450	18				.000			
CD	18	4	1	0.000	1.500	0.000	0.000	0.000	0.00
CD	24	4	1	0.000	2.000	0.000	0.000	0.000	0.00
CD	30	4	1	0.000	2.500	0.000	0.000	0.000	0.00
CD	36	4	1	0.000	3.000	0.000	0.000	0.000	0.00
Q				3.000	.0				

FILE: SDE.WSW SDE.EDT
W S P G W - EDIT LISTING - Version 14.10 Date: 3- 4-2020 Time:11:51: 1
WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	18	4	1		1.500														
CD	24	4	1		2.000														
CD	30	4	1		2.500														
CD	36	4	1		3.000														

W S P G W PAGE NO 1
WATER SURFACE PROFILE - TITLE CARD LISTING
HEADING LINE NO 1 IS -
HEADING LINE NO 2 IS - BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM
HEADING LINE NO 3 IS - PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM
STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING

W S P G W PAGE NO 2
WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO	IS A	SYSTEM OUTLET	STATION	INVERT	SECT	W S ELEV	RADIUS	ANGLE	ANG PT	MAN H
1	IS A	SYSTEM OUTLET	1000.000	2707.903	18	2709.403				
2	IS A	REACH	1012.395	2708.075	18		.013	.000	-15.000	0
3	IS A	REACH	1012.396	2708.076	18		.013	.000	-15.000	0
4	IS A	REACH	1012.397	2708.077	18		.013	.000	-15.000	0
5	IS A	REACH	1012.398	2708.078	18		.013	.000	-15.000	0
6	IS A	REACH	1012.399	2708.079	18		.013	.000	-15.000	0
7	IS A	REACH	1012.400	2708.080	18		.013	.000	-15.000	1
8	IS A	JUNCTION	1012.400	2708.080	18		.013	.000	90.000	.000

THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
THE ABOVE ELEMENT CONTAINED AN INVERT ELEV WHICH WAS NOT GREATER THAN THE PREVIOUS INVERT ELEV -WARNING
ELEMENT NO 9 IS A REACH
U/S DATA STATION INVERT SECT N RADIUS ANGLE ANG PT MAN H
1134.180 2709.300 18 .013 .000 .000 .000 1
ELEMENT NO 10 IS A JUNCTION
U/S DATA STATION INVERT SECT LAT-1 LAT-2 N Q3 Q4 INVERT-3 INVERT-4 PHI 3 PHI 4
1134.180 2709.300 18 18 0 .013 4.000 .000 2709.300 .000 90.000 .000
RADIUS ANGLE .000 .000

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

W S P G W PAGE NO 3
WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO	IS A	REACH	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
11	IS A	REACH	1254.180	2710.500	18	.013	.000	.000	.000	1
12	IS A	JUNCTION	1254.180	2710.500	18	.013	1.000	.000	2710.500	.000

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

ELEMENT NO	IS A	REACH	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
13	IS A	REACH	1440.295	2712.355	18	.013	.000	.000	15.000	0
14	IS A	REACH	1440.296	2712.356	18	.013	.000	.000	15.000	0
15	IS A	REACH	1440.297	2712.357	18	.013	.000	.000	15.000	0
16	IS A	REACH	1440.298	2712.358	18	.013	.000	.000	15.000	0
17	IS A	REACH	1440.299	2712.359	18	.013	.000	.000	15.000	0
18	IS A	REACH	1440.300	2712.360	18	.013	.000	.000	15.000	1
19	IS A	REACH				N	RADIUS <td>ANGLE</td> <td>ANG PT</td> <td>MAN H</td>	ANGLE	ANG PT	MAN H

ELEMENT NO	20	IS	A	SYSTEM HEADWORKS	1449.800	2712.450	18	*	.013	SDE.EDT	.000	.000	.000	0
				U/S DATA	STATION	INVERT	SECT		*		W S ELEV			
					1449.800	2712.450	18				.000			

WATER SURFACE PROFILE LISTING
BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM
PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM
STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING

Date: 3- 4-2020 Time:11:51: 6

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	2707.903	1.500	2709.403	11.50	6.51	.66	2710.06	.00	1.29	.00	1.500	.000	.00	1 .0
12.395	.0139					.0120	.15	1.50	.00	1.14	.013	.00	.00	PIPE
1012.395	2708.075	1.509	2709.584	11.50	6.51	.66	2710.24	.00	1.29	.00	1.500	.000	.00	1 .0
1012.396	2708.076	1.541	2709.617	11.50	6.51	.66	2710.27	.00	1.29	.00	1.500	.000	.00	1 .0
1012.397	2708.077	1.572	2709.649	11.50	6.51	.66	2710.31	.00	1.29	.00	1.500	.000	.00	1 .0
1012.398	2708.078	1.604	2709.682	11.50	6.51	.66	2710.34	.00	1.29	.00	1.500	.000	.00	1 .0
1012.399	2708.079	1.635	2709.714	11.50	6.51	.66	2710.37	.00	1.29	.00	1.500	.000	.00	1 .0
1012.400	2708.080	1.699	2709.780	11.50	6.51	.66	2710.44	.00	1.29	.00	1.500	.000	.00	1 .0
JUNCT STR	.0000					.0089	.00	1.70	.00		.013	.00	.00	PIPE
1012.400	2708.080	2.378	2710.458	8.00	4.53	.32	2710.78	.00	1.10	.00	1.500	.000	.00	1 .0
121.780	.0100					.0058	.71	2.38	.00	.98	.013	.00	.00	PIPE
1134.180	2709.300	1.880	2711.180	8.00	4.53	.32	2711.50	.00	1.10	.00	1.500	.000	.00	1 .0
JUNCT STR	.0000					.0036	.00	1.88	.00		.013	.00	.00	PIPE
1134.180	2709.300	2.358	2711.658	4.00	2.26	.08	2711.74	.00	.77	.00	1.500	.000	.00	1 .0
100.725	.0100					.0014	.14	2.36	.00	.64	.013	.00	.00	PIPE
1234.905	2710.307	1.500	2711.807	4.00	2.26	.08	2711.89	.00	.77	.00	1.500	.000	.00	1 .0
15.034	.0100					.0013	.02	1.50	.00	.64	.013	.00	.00	PIPE
1249.939	2710.458	1.361	2711.819	4.00	2.37	.09	2711.91	.00	.77	.87	1.500	.000	.00	1 .0
4.241	.0100					.0013	.01	1.36	.30	.64	.013	.00	.00	PIPE
1254.180	2710.500	1.320	2711.820	4.00	2.43	.09	2711.91	.00	.77	.97	1.500	.000	.00	1 .0
JUNCT STR	.0000					.0010	.00	1.32	.33		.013	.00	.00	PIPE
1254.180	2710.500	1.402	2711.902	3.00	1.75	.05	2711.95	.00	.66	.74	1.500	.000	.00	1 .0
9.360	.0100					.0007	.01	1.40	.20	.55	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING
BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM
PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM
STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING

Date: 3- 4-2020 Time:11:51: 6

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1263.541	2710.593	1.311	2711.904	3.00	1.83	.05	2711.96	.00	.66	1.00	1.500	.000	.00	1 .0
7.188	.0100					.0008	.01	1.31	.25	.55	.013	.00	.00	PIPE
1270.728	2710.665	1.240	2711.905	3.00	1.92	.06	2711.96	.00	.66	1.14	1.500	.000	.00	1 .0
6.092	.0100					.0008	.01	1.24	.29	.55	.013	.00	.00	PIPE
1276.820	2710.726	1.179	2711.904	3.00	2.01	.06	2711.97	.00	.66	1.23	1.500	.000	.00	1 .0
5.370	.0100					.0009	.01	1.18	.32	.55	.013	.00	.00	PIPE
1282.190	2710.779	1.124	2711.903	3.00	2.11	.07	2711.97	.00	.66	1.30	1.500	.000	.00	1 .0

SDE.OUT														
4.792	.0100					.0010	.00	1.12	.36	.55	.013	.00	.00	PIPE
1286.981	2710.827	1.074	2711.901	3.00	2.22	.08	2711.98	.00	.66	1.35	1.500	.000	.00	1 .0
4.348	.0100					.0012	.01	1.07	.39	.55	.013	.00	.00	PIPE
1291.330	2710.870	1.028	2711.898	3.00	2.32	.08	2711.98	.00	.66	1.39	1.500	.000	.00	1 .0
3.962	.0100					.0013	.01	1.03	.43	.55	.013	.00	.00	PIPE
1295.292	2710.910	.985	2711.895	3.00	2.44	.09	2711.99	.00	.66	1.42	1.500	.000	.00	1 .0
3.599	.0100					.0015	.01	.99	.46	.55	.013	.00	.00	PIPE
1298.891	2710.946	.946	2711.891	3.00	2.56	.10	2711.99	.00	.66	1.45	1.500	.000	.00	1 .0
3.292	.0100					.0017	.01	.95	.50	.55	.013	.00	.00	PIPE
1302.183	2710.979	.908	2711.887	3.00	2.68	.11	2712.00	.00	.66	1.47	1.500	.000	.00	1 .0
2.995	.0100					.0019	.01	.91	.54	.55	.013	.00	.00	PIPE

FILE: SDE.WSW

W S P G W - CIVILDESIGN Version 14.08

Program Package Serial Number: 7189

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WATER SURFACE PROFILE LISTING														
BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM														
PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM														
STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING														
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1305.177	2711.008	.873	2711.881	3.00	2.81	.12	2712.00	.00	.66	1.48	1.500	.000	.00	1 .0
2.691	.0100					.0021	.01	.87	.58	.55	.013	.00	.00	PIPE
1307.869	2711.035	.839	2711.875	3.00	2.95	.14	2712.01	.00	.66	1.49	1.500	.000	.00	1 .0
2.404	.0100					.0024	.01	.84	.63	.55	.013	.00	.00	PIPE
1310.273	2711.059	.808	2711.867	3.00	3.09	.15	2712.02	.00	.66	1.50	1.500	.000	.00	1 .0
1.739	.0100					.0027	.00	.81	.68	.55	.013	.00	.00	PIPE
1312.012	2711.076	.777	2711.854	3.00	3.24	.16	2712.02	.00	.66	1.50	1.500	.000	.00	1 .0
HYDRAULIC JUMP														
1312.012	2711.076	.549	2711.625	3.00	5.12	.41	2712.03	.00	.66	1.45	1.500	.000	.00	1 .0
81.620	.0100					.0100	.81	.55	1.42	.55	.013	.00	.00	PIPE
1393.632	2711.890	.549	2712.439	3.00	5.12	.41	2712.85	.00	.66	1.45	1.500	.000	.00	1 .0
29.662	.0100					.0098	.29	.55	1.42	.55	.013	.00	.00	PIPE
1423.295	2712.186	.554	2712.740	3.00	5.05	.40	2713.14	.00	.66	1.45	1.500	.000	.00	1 .0
17.000	.0100					.0090	.15	.55	1.39	.55	.013	.00	.00	PIPE
1440.300	2712.360	.581	2712.941	3.00	4.75	.35	2713.29	.00	.66	1.46	1.500	.000	.00	1 .0
3.447	.0095					.0079	.03	.58	1.27	.56	.013	.00	.00	PIPE
1443.747	2712.393	.590	2712.983	3.00	4.65	.34	2713.32	.00	.66	1.47	1.500	.000	.00	1 .0
3.901	.0095					.0072	.03	.59	1.23	.56	.013	.00	.00	PIPE

FILE: SDE.WSW

W S P G W - CIVILDESIGN Version 14.08

Program Package Serial Number: 7189

PAGE 4

WATER SURFACE PROFILE LISTING														
BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM														
PROPOSED 18" SD CONNECTION TO EX. FORT APACHE RANCH SYSTEM														
STARTING HGL ASSUMED AT TOP OF PIPE AT CONNECTION TO EXISTING														
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1447.648	2712.430	.612	2713.042	3.00	4.43	.30	2713.35	.00	.66	1.47	1.500	.000	.00	1 .0
1.701	.0095					.0063	.01	.61	1.15	.56	.013	.00	.00	PIPE
1449.349	2712.446	.634	2713.080	3.00	4.22	.28	2713.36	.00	.66	1.48	1.500	.000	.00	1 .0

♠

T1 BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM

T2 PROPOSED 18" SD LATERAL CONNECTION TO MARLTON AVENUE DI

T3 STARTING HGL ADOPTED AT SDMH #5 CONNECTION TO MAINLINE SDE

SO	1000.000	2708.080	18	.013					2710.458	
R	1108.215	2709.075	18	.013						-15.000
R	1108.216	2709.076	18	.013						-15.000
R	1108.217	2709.077	18	.013						-15.000
R	1108.218	2709.078	18	.013						-15.000
R	1108.219	2709.079	18	.013						-15.000
R	1108.220	2709.080	18	.013						-15.000 1
R	1117.720	2709.170	18	.013					.000	.000 0
SH	1117.720	2709.170	18						.000	
CD	18	4	1	0.000	1.500	0.000	0.000	0.000	0.00	
CD	24	4	1	0.000	2.000	0.000	0.000	0.000	0.00	
CD	30	4	1	0.000	2.500	0.000	0.000	0.000	0.00	
CD	36	4	1	0.000	3.000	0.000	0.000	0.000	0.00	
Q				3.500	.0					

FILE: SDEL.WSW SDEL.EDT
W S P G W - EDIT LISTING - Version 14.10 Date: 3- 4-2020 Time: 4:46:44
WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1
CARD SECT CHN NO OF AVE PIER HEIGHT 1 BASE ZL ZR INV Y(1) Y(2) Y(3) Y(4) Y(5) Y(6) Y(7) Y(8) Y(9) Y(10)
CODE NO TYPE PIER/PIP WIDTH DIAMETER WIDTH DROP

CD 18 4 1 1.500
CD 24 4 1 2.000
CD 30 4 1 2.500
CD 36 4 1 3.000

PAGE NO 1

W S P G W
WATER SURFACE PROFILE - TITLE CARD LISTING
HEADING LINE NO 1 IS -
HEADING LINE NO 2 IS - BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM
HEADING LINE NO 3 IS - PROPOSED 18" SD LATERAL CONNECTION TO MARLTON AVENUE DI
STARTING HGL ADOPTED AT SDMH #5 CONNECTION TO MAINLINE SDE

PAGE NO 2

W S P G W
WATER SURFACE PROFILE - ELEMENT CARD LISTING
ELEMENT NO 1 IS A SYSTEM OUTLET * * *
U/S DATA STATION INVERT SECT
1000.000 2708.080 18
W S ELEV
2710.458
ELEMENT NO 2 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.215 2709.075 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 0
ELEMENT NO 3 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.216 2709.076 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 0
ELEMENT NO 4 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.217 2709.077 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 0
ELEMENT NO 5 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.218 2709.078 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 0
ELEMENT NO 6 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.219 2709.079 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 0
ELEMENT NO 7 IS A REACH * * *
U/S DATA STATION INVERT SECT
1108.220 2709.080 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 -15.000 1
ELEMENT NO 8 IS A REACH * * *
U/S DATA STATION INVERT SECT
1117.720 2709.170 18
N
.013
RADIUS ANGLE ANG PT MAN H
.000 .000 .000 0
ELEMENT NO 9 IS A SYSTEM HEADWORKS *
U/S DATA STATION INVERT SECT
1117.720 2709.170 18
W S ELEV
.000

WATER SURFACE PROFILE LISTING
BREMERTON - TECHNICAL DRAINAGE STUDY ADDENDUM
PROPOSED 18" SD LATERAL CONNECTION TO MARLTON AVENUE DI
STARTING HGL ADOPTED AT SDMH #5 CONNECTION TO MAINLINE SDE

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	2708.080	2.378	2710.458	3.50	1.98	.06	2710.52	.00	.71	.00	1.500	.000	.00	1 .0
108.215	.0092					.0011	.12	2.38	.00	.61	.013	.00	.00	PIPE
1108.220	2709.080	1.519	2710.599	3.50	1.98	.06	2710.66	.00	.71	.00	1.500	.000	.00	1 .0
2.247	.0095					.0011	.00	1.52	.00	.61	.013	.00	.00	PIPE
1110.467	2709.101	1.500	2710.601	3.50	1.98	.06	2710.66	.00	.71	.00	1.500	.000	.00	1 .0
7.253	.0095					.0010	.01	1.50	.00	.61	.013	.00	.00	PIPE
1117.720	2709.170	1.436	2710.606	3.50	2.01	.06	2710.67	.00	.71	.61	1.500	.000	.00	1 .0

APPENDIX E

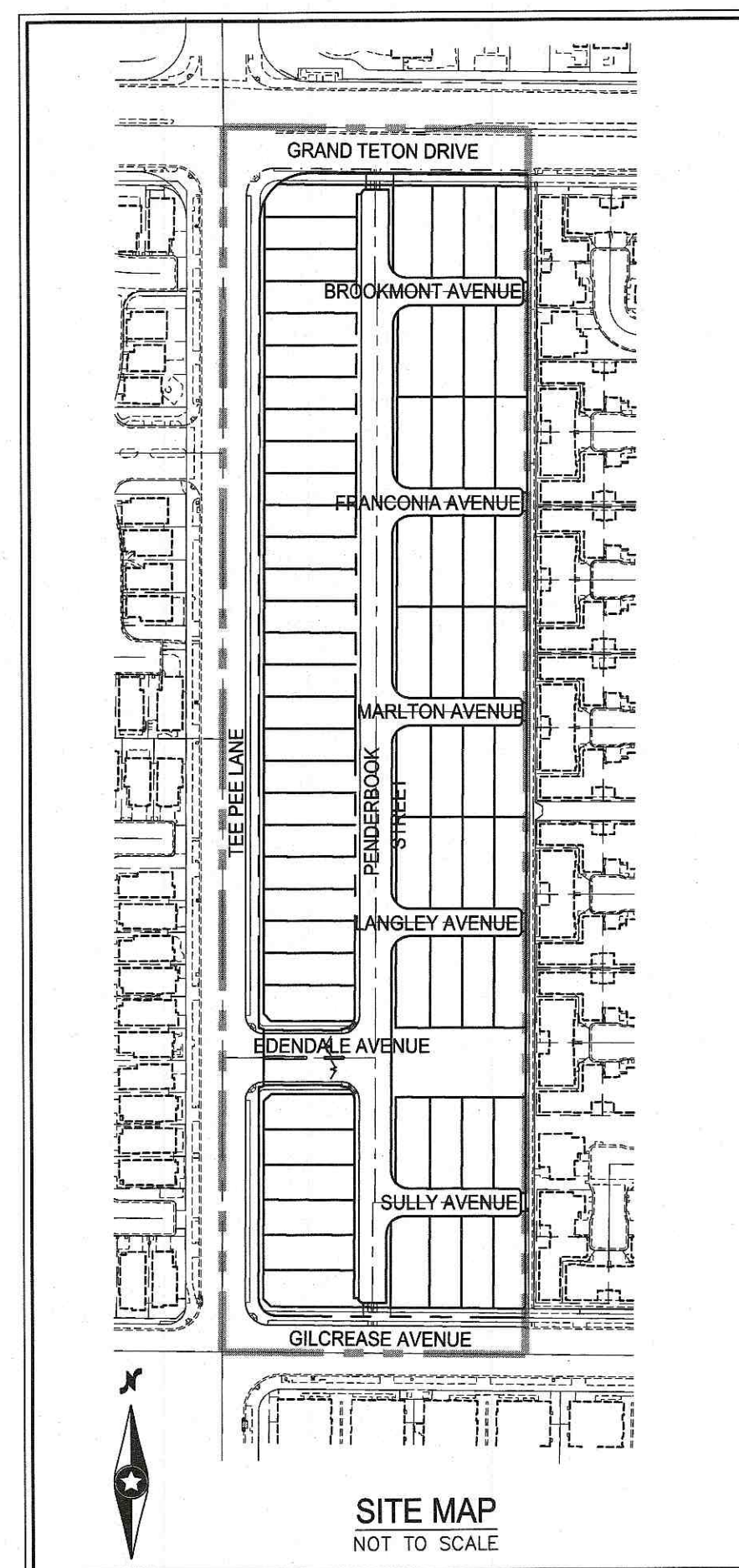
CD of Electronic Files & Revised Improvement Plans

APPROVED ENTITLEMENTS:

TMP-74639, SDR-74638, SUP-74637, GPA-74633, VAR-75154

SWPPP NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: <http://WWW.STATE.NV.US/SWPP/STORMWATER/INTL PROJETS>. THAT DISTURB MORE THAN ONE ACRE OF LAND MUST SUBMIT TO KEEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NV1000000 ALONG WITH THE APPROPRIATE FILING FEE.



DEVIATIONS FROM STANDARDS

PER M.O.U. DATED 2/12/2018

4. MINIMUM STREETS WIDTHS AS DESCRIBED WITHIN GATED PRIVATE COMMUNITY INTERIOR STREETS AS FOLLOWS:

- b. 28' WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB.
- c. 33' WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB.

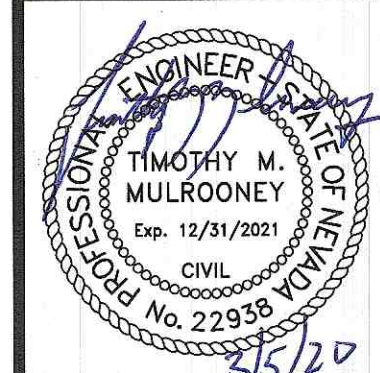
AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929



OWNER/DEVELOPER	ENGINEER
KB HOME NW ACQUISITION LLC 5795 BADURA AVE. SUITE 180 LAS VEGAS, NV 89118 PH: 702-266-8400 FX: 702-266-8623 CONTACT: PAUL GHAO	WESTWOOD 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 FX: (702) 284-5399 CONTACT: TIMOTHY MULROONEY
BENCHMARK	
CITY OF LAS VEGAS BENCHMARK 10LV90-18N66	
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND THE FEE ELEVATION=829.564 METERS (NAVD'83) ELEVATION=2721.66 US SURVEY FEET (NAVD'88)	
BASIS OF BEARING	
NORTH 090°41'00" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREON ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.	
LEGAL DESCRIPTION	
THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.	
FEMA FLOOD ZONE INFORMATION	
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1745E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.	



C-1
SHEET 1 OF 13

kb HOME	CITY OF LAS VEGAS, NV	NO.	DESCRIPTION	DATE	BY	APP. DATE
BREMERTON						
COVER SHEET						

Westwood

(702) 284-5300
 Suite 216
 Las Vegas, NV 89118
 Phone
 Fax
 westwoodps.com

Westwood Professional Services, Inc.

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 PRIOR TO THE NEXT ANNOTATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

LEGAL DESCRIPTION

THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 10LY90-18N66

RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND TEE PEE ELEVATION=829.564 METERS (NAV80)
ELEVATION=721.66 US SURVEY FEET (NAV80)

BASIS OF BEARINGS

NORTH 00°04'10" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

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
5. SOUTHWEST GAS STANDBY CONTACT NUMBER (702)-400-1789

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 AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS, ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "C" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYETHYLENE (PE) 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 (12") DIAMETER, CONNECTIONS TO FIFTEEN (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES, IN LINE "Y" "S" SHALL BE USED ON LINES TWELVE (12") AND 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 (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 # ----- (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 (258-7177) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN SEVEN (7) DAYS PRIOR TO THE REQUIRED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
 2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
 3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
 4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
 5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
 6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
 7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB CUTTERS.
 8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSEINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
 9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
 10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
 11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO 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 REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

15. NO LEAD CONNECTION 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 TECHNICAL, PROJECT NO. 196822, DATED 10/15/2019.
6. EARTHWORK QUANTITIES (RAW):
- CUT = 15,764 CUBIC YARDS
- FILL = 15,951 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 # 8631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICTS - 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. FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. IFC § 3310.1 & 3312
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.F.A. 24
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. IFC § 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 TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. IFC § 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 § 503.2.1 & 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, CIVIL REGULATION AND MOUNTAIN ROAD(S).
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 91 FT. CIVIL 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. CIVIL 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 GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION, ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

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

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 ISSUE, THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA", LATEST REVISED EDITION, THE "SUMMERLIN IMPROVEMENT STANDARDS FOR WORK IN THE SUMMERLIN AREA", AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY, THE UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
 2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS WHICH MAY NOT BE SHOWN ON THE PLANS, 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 8" OR 12" MIN. DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
 6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
 7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300 FT IN EXTRUDED-TYPE CURB.
 8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER THE EXCEPT AT THE RADIUS OF THE CUL-DE-SAC.
 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 TECHNICAL, REPORT #196822, 10/15/2019 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
 13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
 14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS, ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
 15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APPROXS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:**
1. 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.
 2. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
 3. CONTRACTOR SHALL ADJUST ALL NEW 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.
 4. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF MDOOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
 5. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING REGION, 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.
 6. 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 CERTAINITIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
 7. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
 8. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADEING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM 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 AND AT ALL FIRST GRADING WORK AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAID 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 MARKING, 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 V.P. 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 SPECIFIED 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 INTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER. REPAIRS OF THE ROAD(S) BEING IMPROVED OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOPS 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 INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR INSA 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 # 828-3442) 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 INITIATING PAVING TO RECEIVE DIRECTION REGARDING ANY PERMANENT PAVEMENT MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DETECTING 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.02.01 OF THE USS.
5. ALL EMPTIED CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 18 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. 302A, 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 DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
8. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHENEVER 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 COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

APPROVED FOR CONSTRUCTION

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



Westwood

5740 S. Arville Street
Suite 216
Las Vegas, NV 89118
Phone (702) 284-5300
Fax (702) 284-5399
westwoodps.com
Westwood Professional Services, Inc.

APP. DATE

DATE BY

DESCRIPTION

NO.

CITY OF LAS VEGAS, NV

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ABBREVIATIONS

AC	ASPHALTIC CONCRETE OR ACRE	FL	FLOWLINE	PM	POINT OF VERTICAL INTERSECTION
AGG	AGGREGATE BASE	FT	FEET OR FOOT	QTY	QUANTITY
APN	ASSESSORS PARCEL NUMBER	FUT	FUTURE	R	RADIUS
APPROX OR ~	APPROXIMATE	GRD	GRADE OR GROUND	RCA	REINFORCED CONCRETE ARCH
AVE	AVENUE	GB	GRADE BREAK OR GRADE CHANGE	RCB	REINFORCED CONCRETE BOX
AT	AT	GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE
BC	BEGIN CURVE OR BACK OF CURB	HDPE	HIGH DENSITY POLYETHYLENE	RD	ROAD
BCR	BEGINNING OF CURB RETURN	HOA	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	RG	ROUGH GRADE
BM	BENCHMARK	HDWL OR HW	HEADWALL	RT OR R	RIGHT
BVC	BEGIN VERTICAL CURVE	HYD	HYDRAULIC OR HYDRANT	RW, ROW	RIGHT OF WAY
BWV	BACK WATER VALVE	ID	INSIDE DIAMETER	S	SLOPE
CC	CLARK COUNTY	IN	INCH	SCH	SCHEDULE
CCAUISO	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS	INT	INTERSECTION	SD	STORM DRAIN
CCPW	CLARK COUNTY PUBLIC WORKS	INV	INVERT ELEVATION	SDDI	STORM DRAIN DROP INLET
CORFOD	CLARK COUNTY REGIONAL FLOOD DISTRICT	IP	IRON PIPE	SDMH	STORM DRAIN MANHOLE
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT	IRRG	IRRIGATION	SEC	SECTION
CE	COMMON ELEMENT	LF	LINEAR FEET	SF	SQUARE FEET
CLC/LC	CENTERLINE	LMC	LANDSCAPE MAINTENANCE CORPORATION	SHT	SHEET
CLR	CLEAR OR CLEARANCE	LP	LOW POINT	SLTC	STREET LIGHT & TRAFFIC CONTROL ESMT
CLSM	CONTROLLED LOW STRENGTH MATERIAL	LT OR L	LEFT	SNWA	SOUTHERN NEVADA WATER AUTHORITY
CLV	CITY OF LAS VEGAS	LVWD	LAS VEGAS VALLEY WATER DISTRICT	SPECS	SPECIFICATIONS
CMU&C	CEMENT MORTAR LINED AND COATED	LWL	LOW WATER LEVEL	ST	STREET
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM	SSMH	SANITARY SEWER MANHOLE
CON	CITY OF NORTH LAS VEGAS	MECH	MECHANICAL	STA	STATION
COH	CITY OF HENDERSON	MH	MANHOLE	STD	STANDARD
CONC	CONCRETE	MIN	MINIMUM	STL	STEEL
CT	COURT	MISC	MISCELLANEOUS	STLT	STREET LIGHT
CY OR CU YD	CUBIC YARD	MUE	MUNICIPAL UTILITY EASEMENT	SW	SIDEWALK
DOWCS	DESIGN AND CONSTRUCTION FOR WASTEWATER COLLECTION SYSTEMS	NDOT	NEVADA DEPARTMENT OF TRANSPORTATION	SWG	SOUTHWEST GAS
DE	DETAIL	NTS	NOT TO SCALE	SWR OR SS	SANITARY SEWER
DET	DUCTILE IRON OR DRAIN INLET	NUE	NONEXCLUSIVE UTILITY EASEMENT	SY	SQUARE YARD
DI	DIAMETER	NVE	NV ENERGY	TAN	TANGENT
DIP	DUCTILE IRON PIPE	OC	ON CENTER	TF	TOP OF CURB
DI	DIAMETER	OD	OUTSIDE DIAMETER OR OVERALL DIMENSION	TO	TOP OF FLOOR OR TOP OF FOOTING
DIP	DUCTILE IRON PIPE	OFF	OFFSET	TG	TOP OF GRATE
DR	DRIVE	ORIG	ORIGINAL	THRU	THROUGH
DWG(S)	DRAWING	P&E	PUBLIC OR PEDESTRIAN ACCESS EASEMENT	THW	TOP OF HEADWALL
DWY	DRIVEWAY	PB	PULL BOX	TP	TOP OF PIPE
EA	EACH	PC	POINT OF CURVE	TW	TOP OF WALL
EOR	END CURB RETURN	PCC	POINT OF COMPOUND CURVE	TRW	TOP OF RETAINING WALL
EG	EXISTING GROUND	PDE	PUBLIC DRAINAGE EASEMENT	TSW	TOP OF SCREEN WALL
ELEV	ELEVATION	PL	PROPERTY LINE	TYP	TYPICAL
ESMT	EASEMENT	POB	POINT OF BEGINNING	UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
EP	EDGE OF PAVEMENT	POC	POINT OF CURVATURE	UE	UTILITY EASEMENT
ERU	EQUIVALENT RESIDENTIAL UNIT	POE	POINT OF ENDING	VC	VERTICAL CURVE
EVC	END VERTICAL CURVE	PRC	POINT OF REVERSE CURVATURE	VERT	VERTICAL
EX OR EXIST	EXISTING	PRELIM	PRELIMINARY	VG	VALLEY GUTTER
FC	FACE OF CURB	PROP	PROPOSED	WI	WROUGHT IRON
FF	FINISHED FLOOR	PRV	PRESSURE REDUCING VALVE	WL	WATER LINE
PUE	PUBLIC UTILITY EASEMENT	PZ	POINT OF TANGENT OR POINT	WPZ	WATER PRESSURE ZONE
FGH	FINISHED GRADE, HIGH SIDE	PVC	POLYVINYL CHLORIDE	WT	WEIGHT
FGL	FINISHED GRADE, LOW SIDE			WTR	WATER LINE
FH	FIRE HYDRANT				

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: PAYMENT 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 PROPOSED SCARP AREA
		EXISTING UNKNOWN MANHOLE DRIVEWAY
		EXISTING GAS, SIZE PER PLAN PROPOSED RIP RAP
		EXISTING POWER POLE SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
		EXISTING TRAFFIC SIGNAL HANDICAP RAMP
		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

QUANTITIES

		PRIVATE	PUBLIC
DRAINAGE			
1. 48" TYPE III STORM DRAIN MANHOLE	EA	6	1
2. 5.0' TYPE "CM2" DROP INLET	EA	3	0
3. 17.5' TYPE "CM2" DROP INLET	EA	0	1
4. 2.5' W X 3' L NDOT TYPE II DROP INLET	EA	1	0
5. 18" RCP CLASS III STORM DRAIN	LF	587	0
6. 24" RCP CLASS III STORM DRAIN	LF	0	31
7.			
SEWER SYSTEM			
1. 4" PVC SEWER LATERAL (PRIVATE)	LF	1,595	0
2. 8" PVC SEWER PIPE (PUBLIC)	LF	0	2,011
3. STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	0	12
4. BACK WATER VALVE	EA	3	0
5.			
WATER SYSTEM			
1. FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	0	6
2. 6" PVC WATER PIPE	LF	0	840
3. 8" PVC WATER PIPE	LF	0	1,326
4. 6" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	0	5
5. 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	0	8
6. 8" X 8" TEE PER UDACS PLATE NO. 31	EA	0	5
7. 8" X 8" TEE PER UDACS PLATE NO. 31	EA	0	1
8. 10" X 8" TAPPING TEE WITH 10" TAPPING VALVE PER UDACS PLATE NO. 34	EA	0	1
9. 12" X 8" TAPPING TEE WITH 12" TAPPING VALVE PER UDACS PLATE NO. 34	EA	0	1
10. 8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	0	2
11. CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	0	6
12. 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 2	EA	0	72
13. 1" COPPER SERVICE W/ 1" IRR. METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	0	1
14. 8" X 6" REDUCER PER UDACS PLATE NO. 30	EA	0	1
15. 6" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	0	2
16. IRRIGATION SLEEVES	LF	727	0
17.			
STREET IMPROVEMENTS			
1. 2" A.C. PAVEMENT	SY	6,928	0
2. 4.5" A.C. PAVEMENT	SY	0	3,053
3. TYPE II AGGREGATE BASE	CY	770	509
4. STANDARD 24" TYPE "L" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	715	1,412
5. STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	146	0
6. STANDARD 24" TYPE "R" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	3,625	0
7. 5' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	11,739	0
8. 10' WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	4,148	14,116
9.			
TRAFFIC SIGNALS			
1. 30" STOP SIGN WITH POST (R1-1)	EA	7	0
2. 9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	14	0
3. BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	6	0
4. CROSSWALK MARKINGS	LF	-	-
5. TRAFFIC SIGNS	EA	21	0
6.			
DRY UTILITIES			
1. 100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	6	0
2. 150W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	0	12
3. 250W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	0	1
4. 400W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	0	1
5. 1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #6 CONDUCTORS	LF	1,140	1,745
6. 4" INTERCONNECT W/ #8 TRACER WIRE	LF	0	279
7. NO. 3-1/2 PULL BOX W/METAL COVER	EA	-	-
8. 200 AMP SERVICE PEDESTAL (STLT)	EA	0	1

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. _____ FIRST APPROVED DATE: _____



Westwood

5740 S. Anville Street
Suite 216
Las Vegas, NV 89118
Phone (702) 284-5300
Fax (702) 284-5399
westwoodps.com
Westwood Professional Services, Inc.

CITY OF LAS VEGAS, NV

kb HOME

BREMERTON

LEGEND, ABBREVIATIONS, & QUANTITIES

3/5/20

DATE: 3/5/20

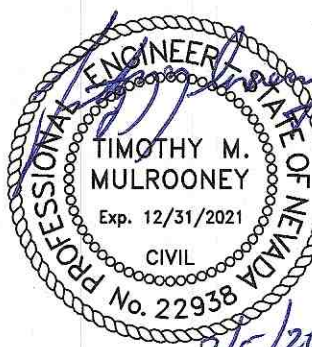
DRAFTER: KDH

DESIGNER: KDH

CHECKED: MAK

PROJECT NO.

KBH1917-000



C-3

SHEET 3 OF 32

CENTENNIAL POINT - UNIT 1
CLV #107Y-4727-1

GRAND TETON AND TEE PEE
CLV #107Y4986

0 30 60
SCALE - 1"=30'
FEET



LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(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 REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY 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 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 IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, 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 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 AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

DRAINAGE QUANTITIES	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA 6	1
2. 5.0' TYPE "CM2" DROP INLET	EA 3	-
3. 17.5' TYPE "CM2" DROP INLET	EA -	1
4. 2.5'W X 3'L NODT TYPE II DROP INLET	EA 1	-
5. 18" RCP CLASS III STORM DRAIN	LF 587	-
6. 24" RCP CLASS III STORM DRAIN	LF -	31

SURVEY NOTE

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

ELEVATION NOTE

ADD 2700 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2701.00).

LEGAL DESCRIPTION

THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.

GENERAL GRADING NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION AND DIMENSIONS AND SHALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, SECTION 2304.11.2.2.
3. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
4. SEE HORIZONTAL CONTROL PLANS AND FINAL MAP FOR EXACT BOUNDARY BEARINGS AND DISTANCE.
5. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
6. MAXIMUM/ANNUAL SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
7. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
8. WESTWOOD PROFESSIONAL SERVICES ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS DRAWING ARE FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES, INCLUDING BUT NOT LIMITED TO, THE WATER, FIRE, SANITARY SEWER, STORM SEWER, TELEPHONE, POWER, GAS, AND IRRIGATION LINES AND ALL EXISTING UTILITIES SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. IF CONFLICTS EXIST IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE PROJECT ARCHITECT, OWNER'S REPRESENTATIVE, AND THE PROJECT ENGINEER IMMEDIATELY.
9. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
10. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1745E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

SOILS REPORT

SOILS REPORT BY SOUTHWEST TECHNICAL
PROJECT NO. 196822 DATED 10/15/2019

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT= 15,764 CU YDS
FILL= 15,951 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.

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5232 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

Timothy M. Mulrooney 3/5/20
DATE

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEMS. IT'S COSTLY.
Call before you dig
do Underground
1-702-267-2783
CITY OF HENDERSON UTILITY SERVICES LINE LOCATION AND
1-702-432-5300
FREEDWAY AND MATERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
Call before you dig
overhead
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600
AND
CITY OF HENDERSON TRAFFIC MAINTENANCE
1-702-267-3200

GRADING NOTES

1. CONSTRUCT 4.5" ASPHALT PAVEMENT OVER 6" TYPE II AGGREGATE BASE
2. INSTALL 3" CURB TRANSITION PER CCAUSD NO. 223
3. CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
4. CONSTRUCT L-TYPE CURB PER CCAUSD NO. 216
5. CONSTRUCT R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
6. CONSTRUCT A-TYPE CURB PER CCAUSD NO. 219
7. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234
8. CONSTRUCT 10' WIDE MULTI-USE TRAIL PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14.
9. CONSTRUCT 8' VALLEY GUTTER PER CCAUSD NO. 228
10. CONSTRUCT SIDEWALK RAMP PER CCAUSD NO. 235, CASE 1 AND CCAUSD NO. 235.1
11. CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14.
12. INSTALL 17.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
14. INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
15. SAWCUT, REMOVE & REPLACE AC PAVEMENT
16. INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236
17. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 16 ON SHEET D-2
18. INSTALL U-CHANNEL PER DETAIL 17 ON SHEET D-2
19. INSTALL STEEL TUBING FENCE & MAINTENANCE ACCESS GATES PER CCAUSD NO. 425.51
20. CONSTRUCT 5" THICK 5' WIDE SIDEWALK PER CCAUSD NO. 234
21. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
22. CONSTRUCT 4' WIDE SIDEWALK PER CCAUSD NO. 234
23. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
24. INSTALL 5.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
25. INSTALL 2.5'W X 3'L NODT TYPE II DROP INLET AND NODT CONCRETE APRON PER NODT STD DWG RF-4.2.1 & R-4.2.2 PER DETAIL ON SHEET D-3 AND CCAUSD #421
26. INSTALL STEEL TUBING FENCE PER CCAUSD NO. 425.51
27. INSTALL STEEL TUBING FENCE & PEDESTRIAN ACCESS GATE PER CCAUSD NO. 425.51

BASIS OF BEARING

NORTH 00°04'10" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 10LV90-18NN6
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND TEE PEE
ELEVATION=829.564 METERS (NAV83)
ELEVATION=2721.66 US SURVEY FEET (NAV83)

DISCLAIMER NOTE

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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 UP 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 NOTIFY THE ENGINEER.

Westwood

5740 S. Aville Street
Suite 216
Las Vegas, NV 89118
Phone (702) 284-5300
Fax (702) 284-5399
westwoodps.com
Westwood Professional Services, Inc.

CITY OF LAS VEGAS, NV

kb HOME

BREMERTON

GRADING PLAN I

DATE: 3/5/2020

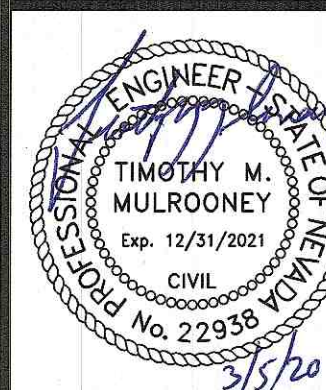
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DESIGNER: KDH

CHECKED: MAK

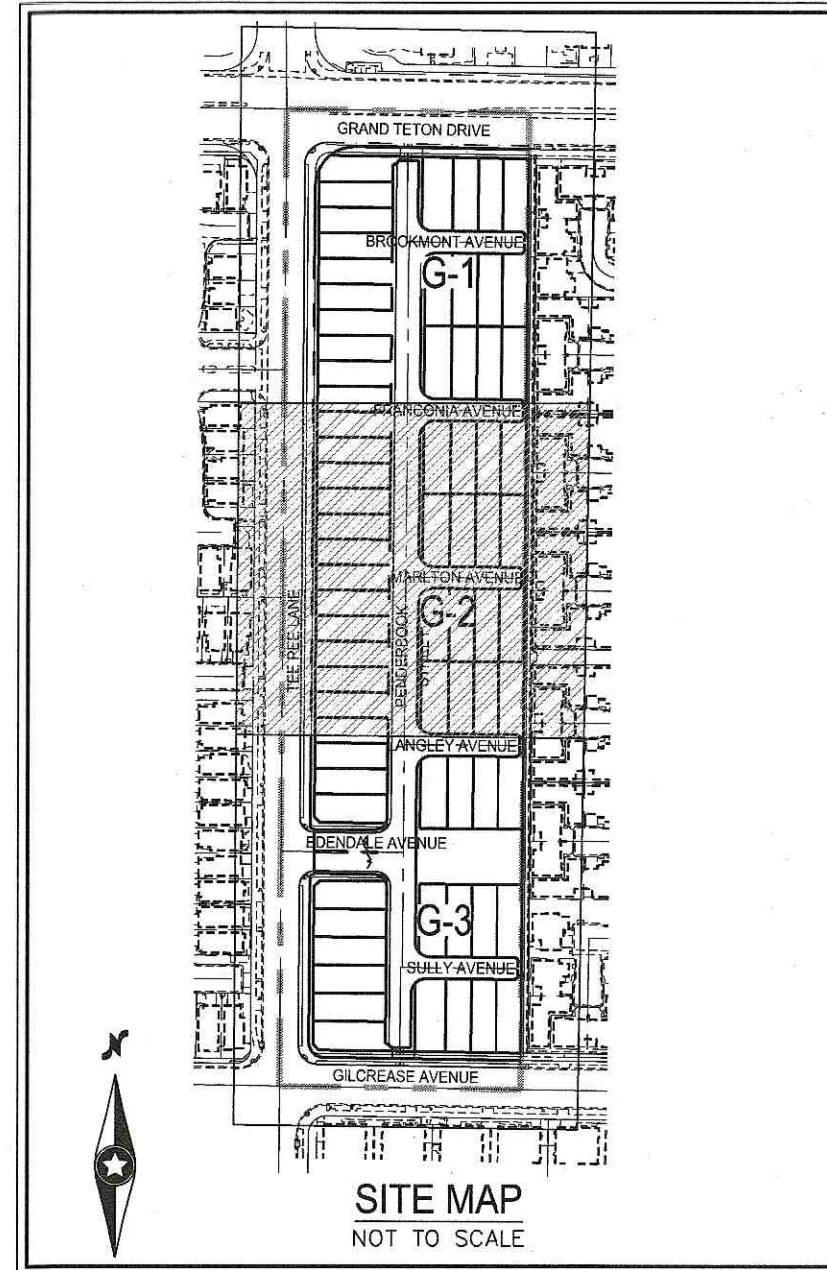
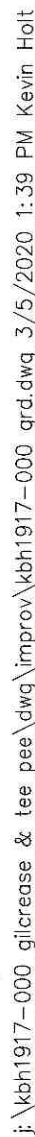
PROJECT NO.

KBH1917-000



G-1

SHEET 4 OF 32



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

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

- | DRAINAGE QUANTITIES | | PRIV. | PUBLIC | |
|---------------------|--------------------------------------|-------|--------|----|
| 1. | 48" TYPE "B" STORM DRAIN MANHOLE | EA | 6 | 1 |
| 2. | 5.0' TYPE "CM2" DROP INLET | EA | 3 | — |
| 3. | 17.5' TYPE "CM2" DROP INLET | EA | — | 1 |
| 4. | 2.5'W X 3'L NDOT TYPE "B" DROP INLET | EA | 1 | — |
| 5. | 18" RCP CLASS III STORM DRAIN | LF | 587 | — |
| 6. | 24" RCP CLASS III STORM DRAIN | LF | — | 31 |

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

ADD 2700 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2701.00)

THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
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- 1) CONSTRUCT 4.5" ASPHALT PAVEMENT OVER 6" TYPE II AGGREGATE BASE
- 2) INSTALL 3" CURB TRANSITION PER CCAUSD NO. 223
- 3) CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 4) CONSTRUCT 1" TYPE CURB PER CCAUSD NO. 216
- 5) CONSTRUCT R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
- 6) CONSTRUCT A TYPE CURB PER CCAUSD NO. 219
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- 15) INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236
- 16) INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 16 ON SHEET D-2
- 17) INSTALL U-CHANNEL PER DETAIL 17 ON SHEET D-2
- 18) INSTALL STEEL TURNING FENCE & MAINTENANCE ACCESS GATES PER CCAUSD NO. 425.51
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- 21) CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
- 22) INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
- 23) INSTALL 5" WIDE SIDEWALK TYPE "OM2" PER CCAUSD NO. 412.I AND 421
- 24) INSTALL 2.5" X .51" NOOT TYPE I DROP INLET AND NOOT CONCRETE AND NOOT TYPE II DROP INLET PER R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
- 25) INSTALL STEEL TURNING FENCE PER CCAUSD NO. 425.51
- 26) INSTALL STEEL TURNING FENCE & PEDESTRIAN ACCESS GATE PER CCAUSD NO. 425.51

NORTH 00°04'10" WEST BEING THE BEARING OF THE EAST LINE OF THE
NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF
SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS
VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE
CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

CITY OF LAS VEGAS BENCHMARK 10LV90-18NNE6
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND
TETON AND TEE PEE
ELEVATION=829.564 METERS (NAVD'88)
ELEVATION=2721.66 US SURVEY FEET (NAVD'88)

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THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1745E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

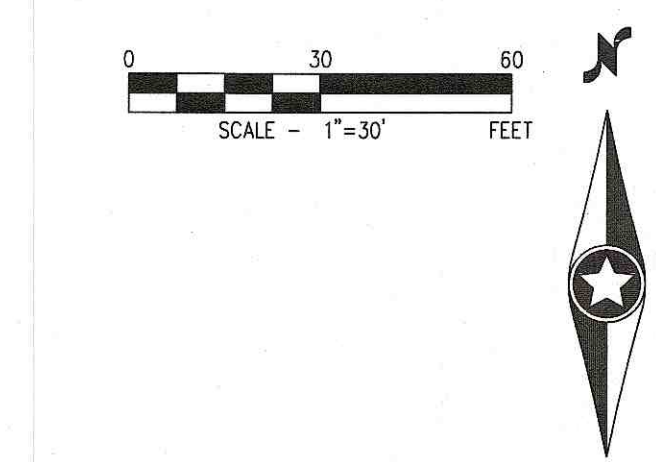
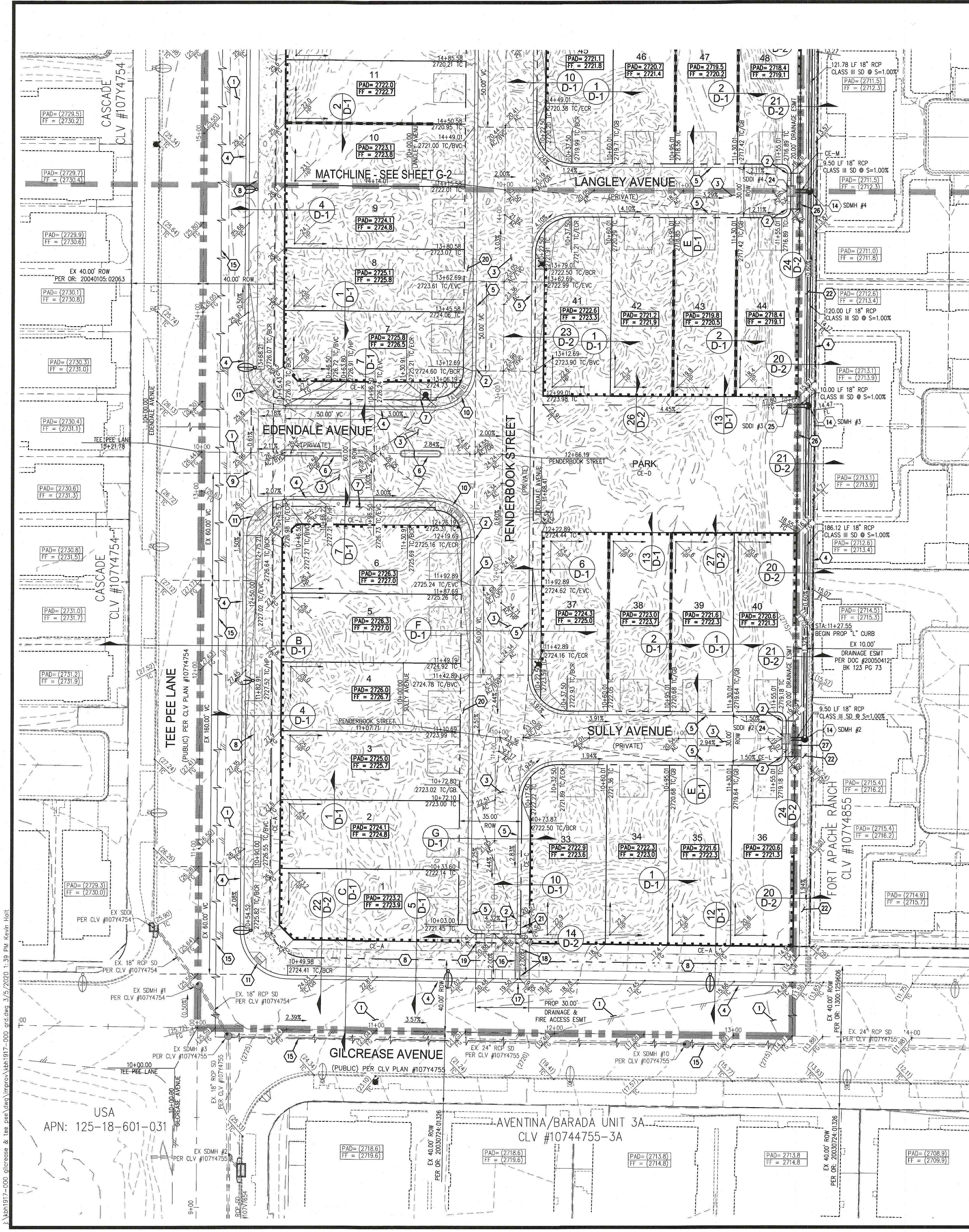
SOILS REPORT BY SOUTHWEST TECHNICAL
PROJECT NO. 196822 DATED 10/15/2019
EARTHWORKS

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

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5239 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.



Call before you Dig
 AVOID CUTTING UNDERGROUND
 UTILITY LINES. IT'S COSTLY.
Call 811
 OR
1-800-227-2600
 AND
 CITY OF HENDERSON TRAFFIC MAINTENANCE
1-702-267-3200



LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

- (REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))
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 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 THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NV100000, SECTION III.A.5.
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LEGAL DESCRIPTION
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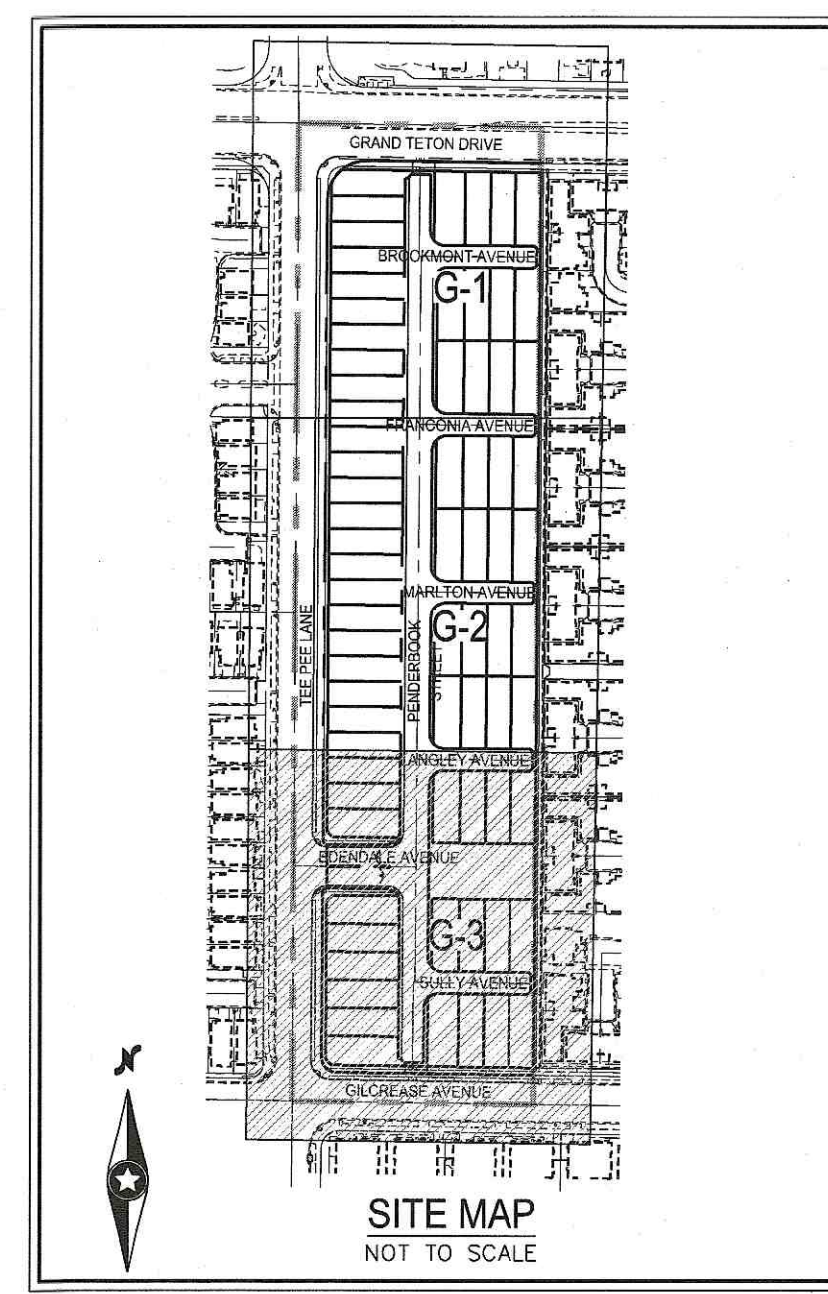
GENERAL GRADING NOTES
1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES INCLUDING LOCATION, ELEVATION AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2018, SECTION 2304.11.2.2.
3. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
4. SEE HORIZONTAL CONTROL PLANS AND FINAL MAP FOR EXACT BOUNDARY BEARINGS AND DISTANCE.
5. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
6. MAXIMUM MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
7. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
8. WESTWOOD PROFESSIONAL SERVICES ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS DRAWING ARE FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES, INCLUDING BUT NOT LIMITED TO, THE WATER, FIRE, SANITARY SEWER, STORM SEWER, TELEPHONE, POWER, GAS, AND IRRIGATION LINES AND ALL EXISTING UTILITIES SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. IF CONFLICTS EXIST IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE PROJECT ARCHITECT, OWNER'S REPRESENTATIVE, AND THE PROJECT ENGINEER IMMEDIATELY.
9. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
10. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.

FEMA FLOOD ZONE INFORMATION
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 32003C1745E, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

SOILS REPORT
SOILS REPORT BY SOUTHWEST TECHNICAL
PROJECT NO. 196822 DATED 10/15/2019
EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT= 15,764 CU YDS
FILL= 15,991 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.

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-5239 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.
TIMOTHY M. MULROONEY, P.E. 2/29/38
DATE 3/5/20

Call before you Dig
Call 811
1-800-227-2600
CITY OF HENDERSON UTILITY SERVICES LINE LOCATION AND 1-702-432-5300
FREEMAN AND ARTERIAL SYSTEM OF TRANSPORTATION
1-702-227-2929



- GRADING NOTES**
1. CONSTRUCT 4.5" ASPHALT PAVEMENT OVER 6" TYPE II AGGREGATE BASE
 2. INSTALL 3" CURB TRANSITION PER CCAUSD NO. 223
 3. CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 4. CONSTRUCT L TYPE CURB PER CCAUSD NO. 216
 5. CONSTRUCT R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
 6. CONSTRUCT A-TYPE CURB PER CCAUSD NO. 219
 7. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234
 8. CONSTRUCT 10' WIDE MULTI-USE TRAIL PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
 9. CONSTRUCT 8" VALLEY GUTTER PER CCAUSD NO. 228
 10. CONSTRUCT SIDEWALK RAMP PER CCAUSD NO. 235, CASE I AND CCAUSD NO. 235.1
 11. CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
 12. INSTALL 17.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
 13. INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
 14. SAWCUT, REMOVE & REPLACE AC PAVEMENT
 15. INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236
 16. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 16 ON SHEET D-2
 17. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 17 ON SHEET D-2
 18. INSTALL STEEL TUBING FENCE & MAINTENANCE ACCESS GATES PER CCAUSD NO. 425.51
 19. CONSTRUCT 5" THICK 5' WIDE SIDEWALK PER CCAUSD NO. 234
 20. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 19 ON SHEET D-2
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 22. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
 23. INSTALL 5.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
 24. INSTALL 2.5'W X 3'L NODOT TYPE I DROP INLET AND NODOT CONCRETE APRON PER NODOT STD DWG #R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
 25. INSTALL STEEL TUBING FENCE PER CCAUSD NO. 425.51
 26. INSTALL STEEL TUBING FENCE & PEDESTRIAN ACCESS GATE PER CCAUSD NO. 425.51

BASIS OF BEARING
NORTH 00°04'10" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREON ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 10LV90-18N86
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND TEE PEE

DISCLAIMER NOTE
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 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 NOTIFY THE ENGINEER.

Westwood
5740 S. Aville Street
Suite 216
Las Vegas, NV 89118
Phone (702) 284-5300
Fax (702) 284-5399
westwoodps.com
Westwood Professional Services, Inc.

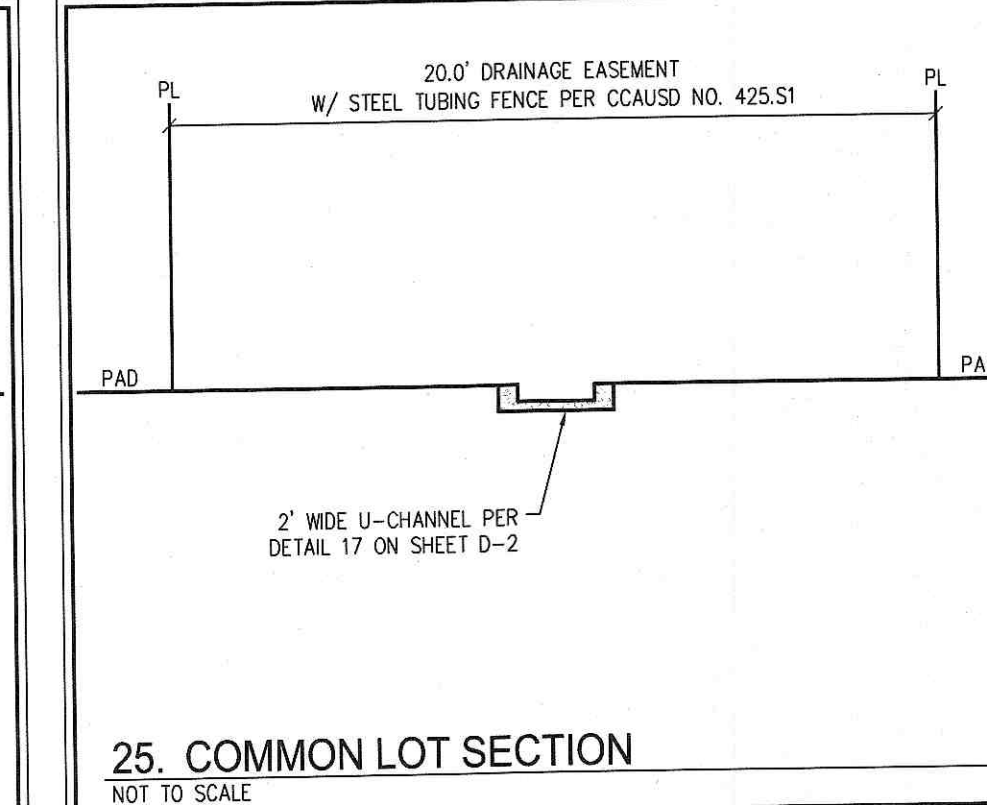
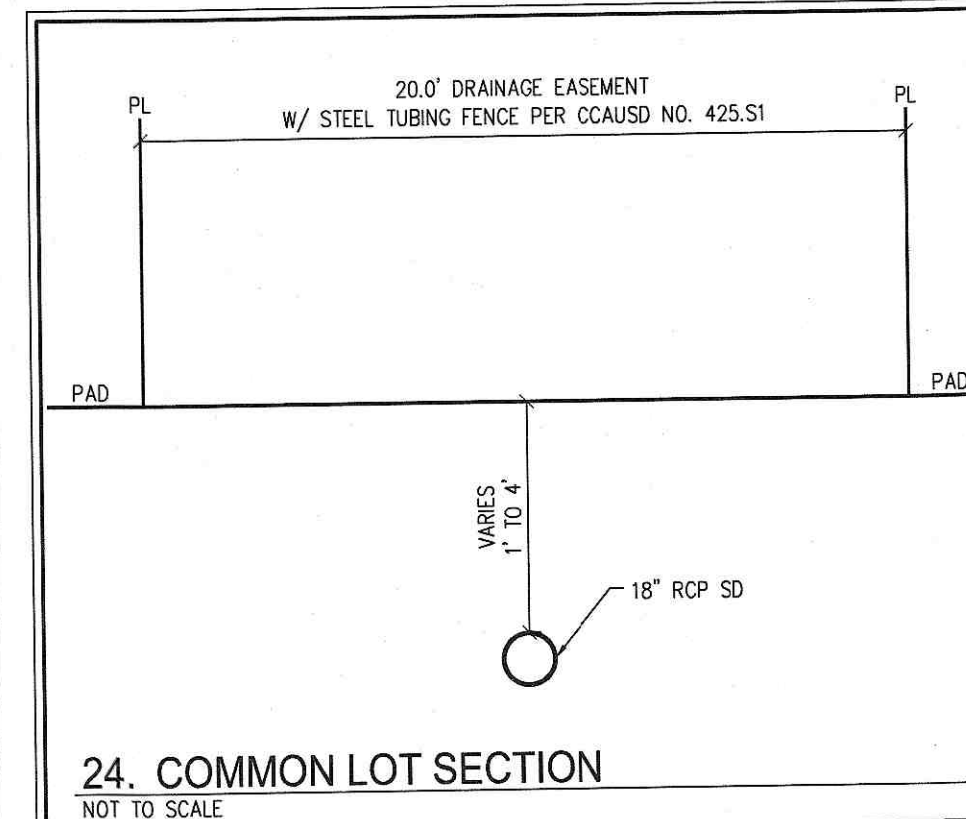
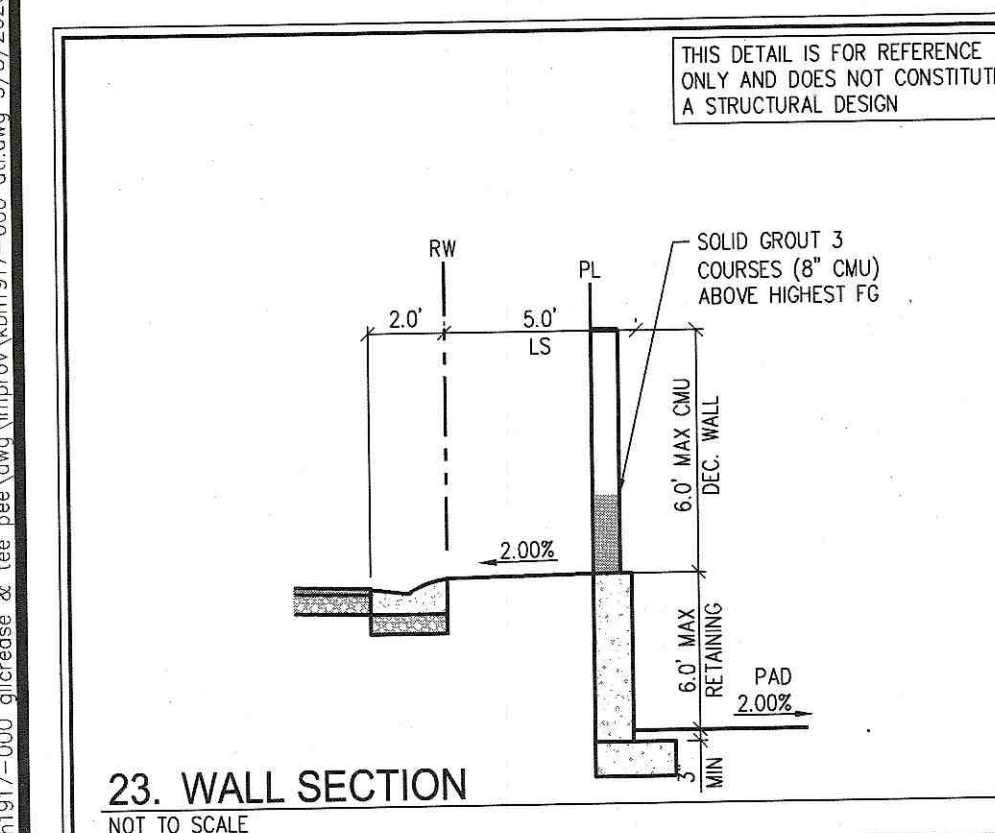
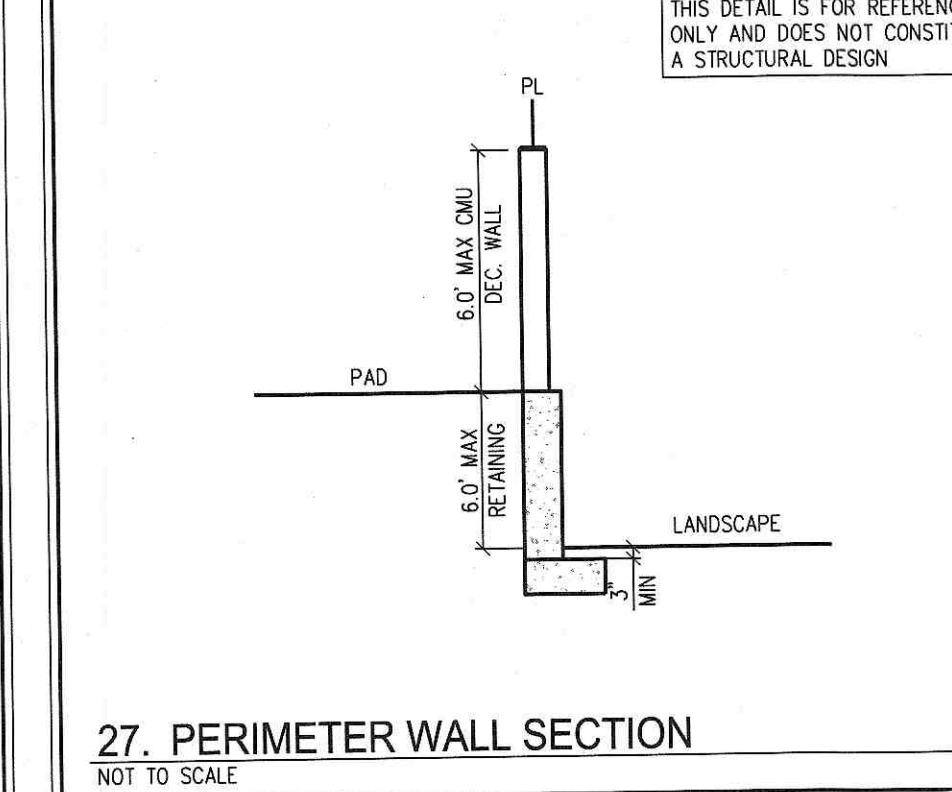
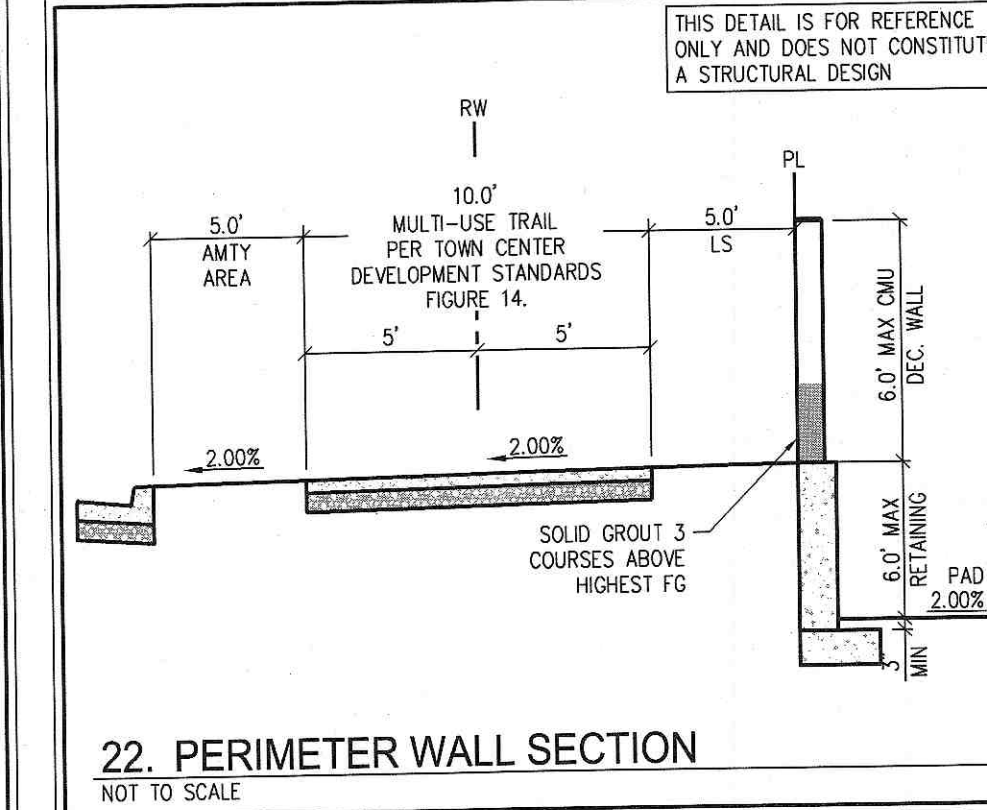
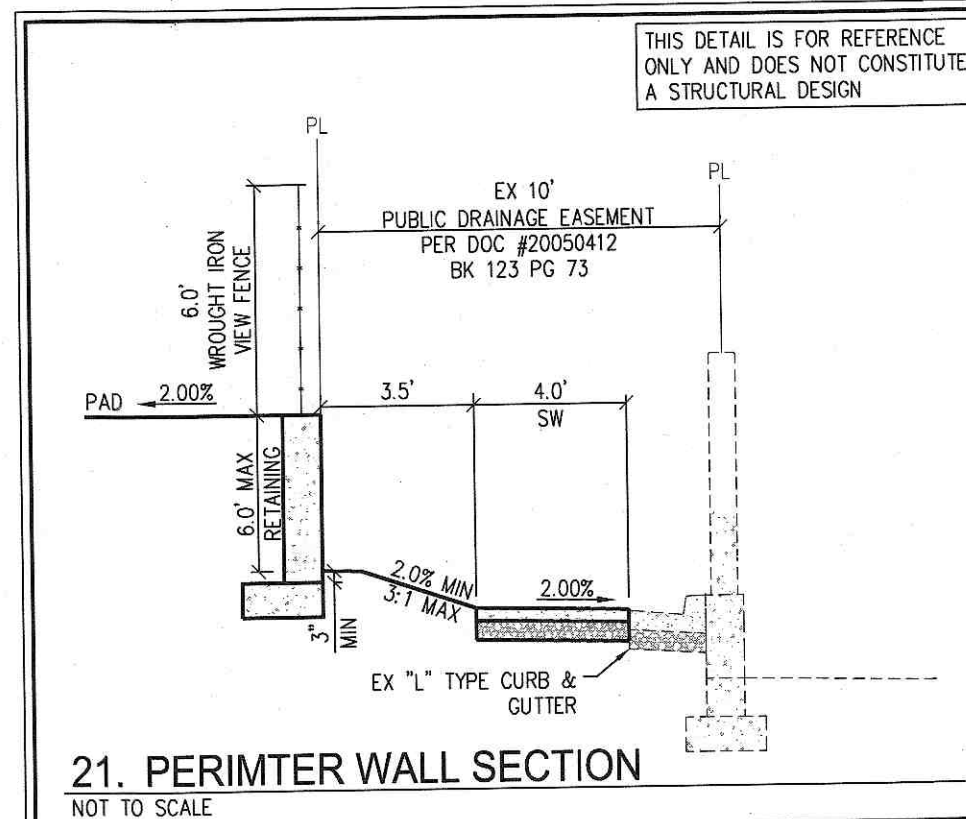
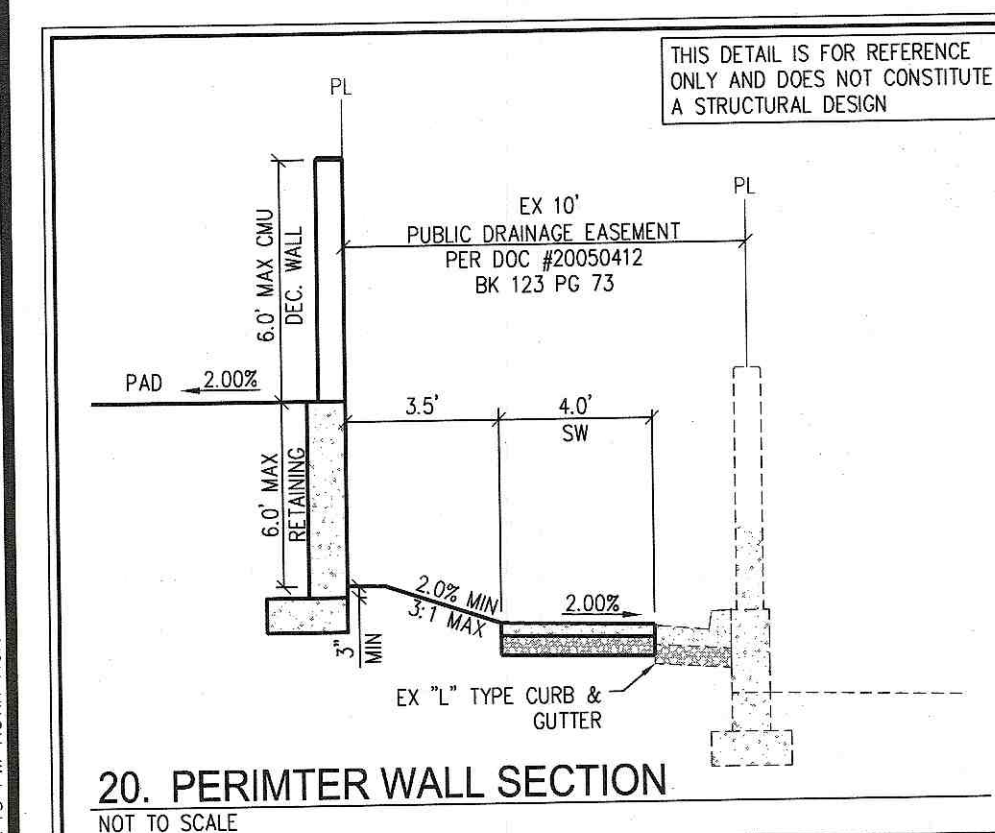
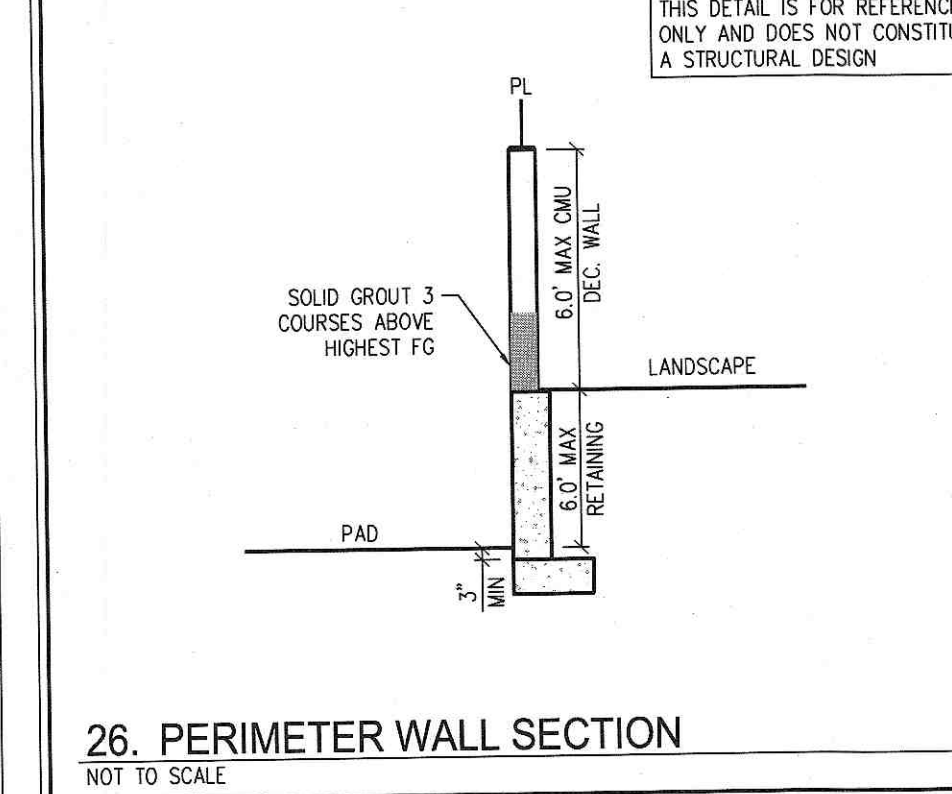
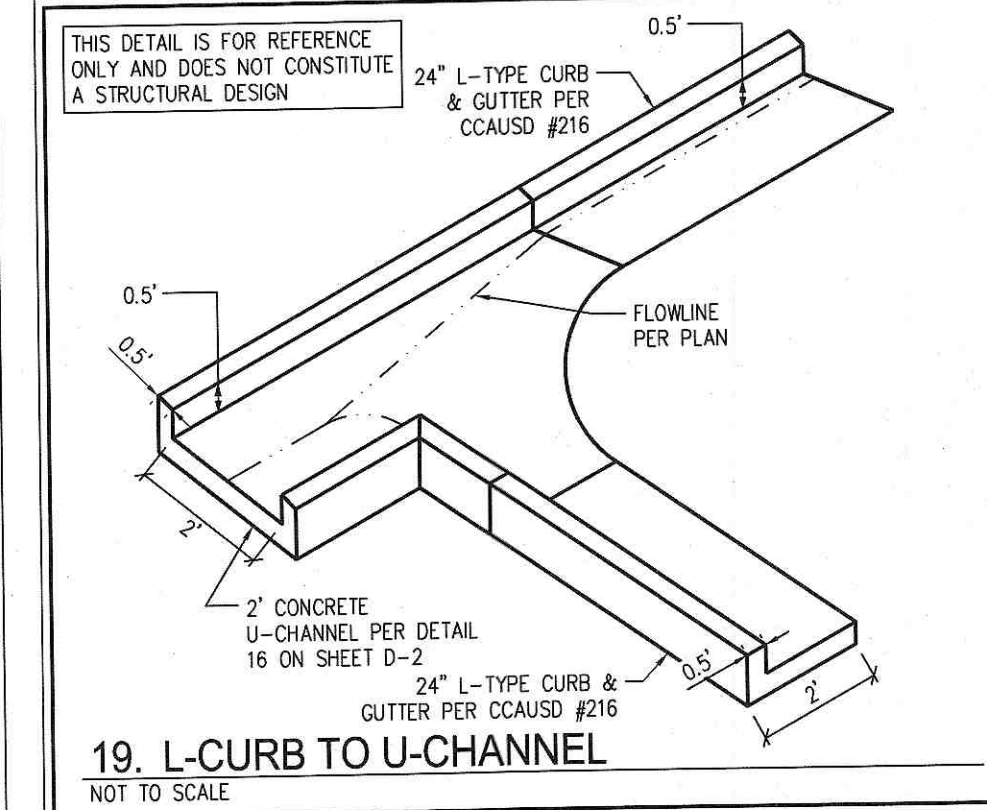
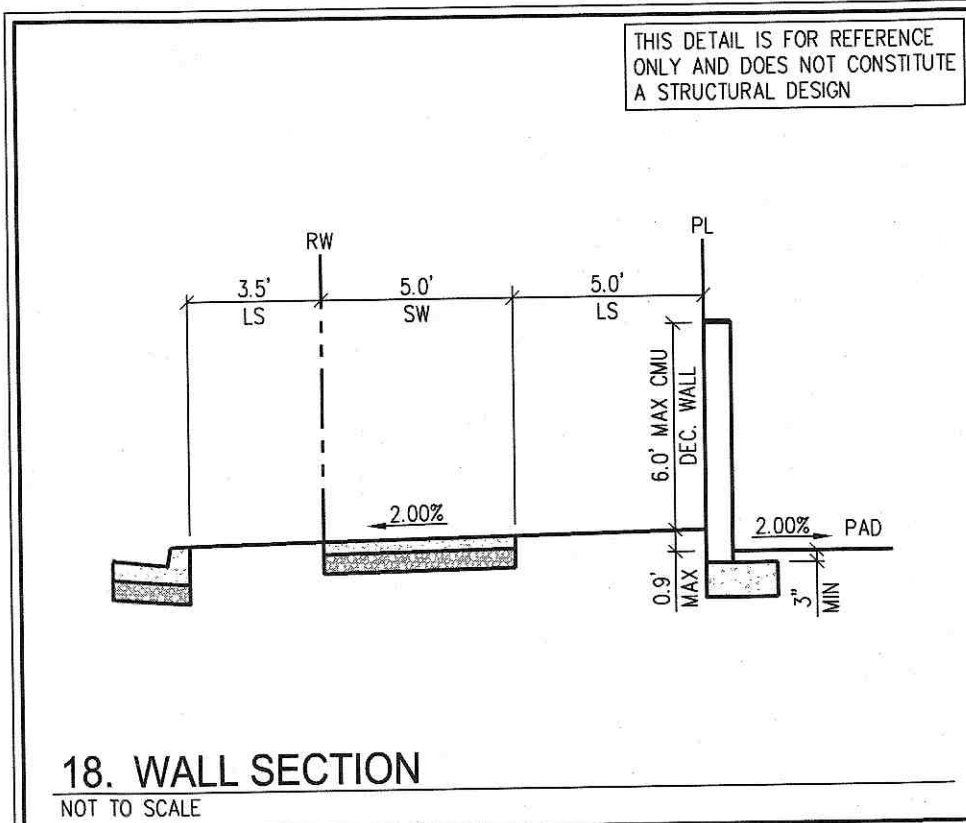
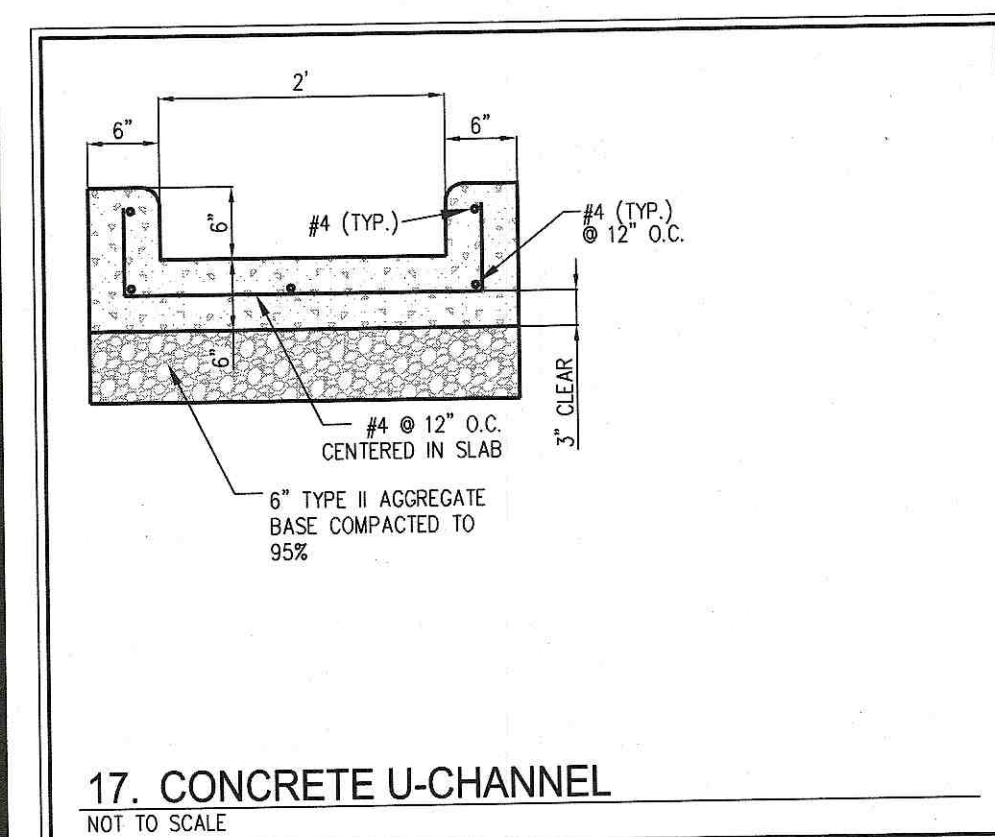
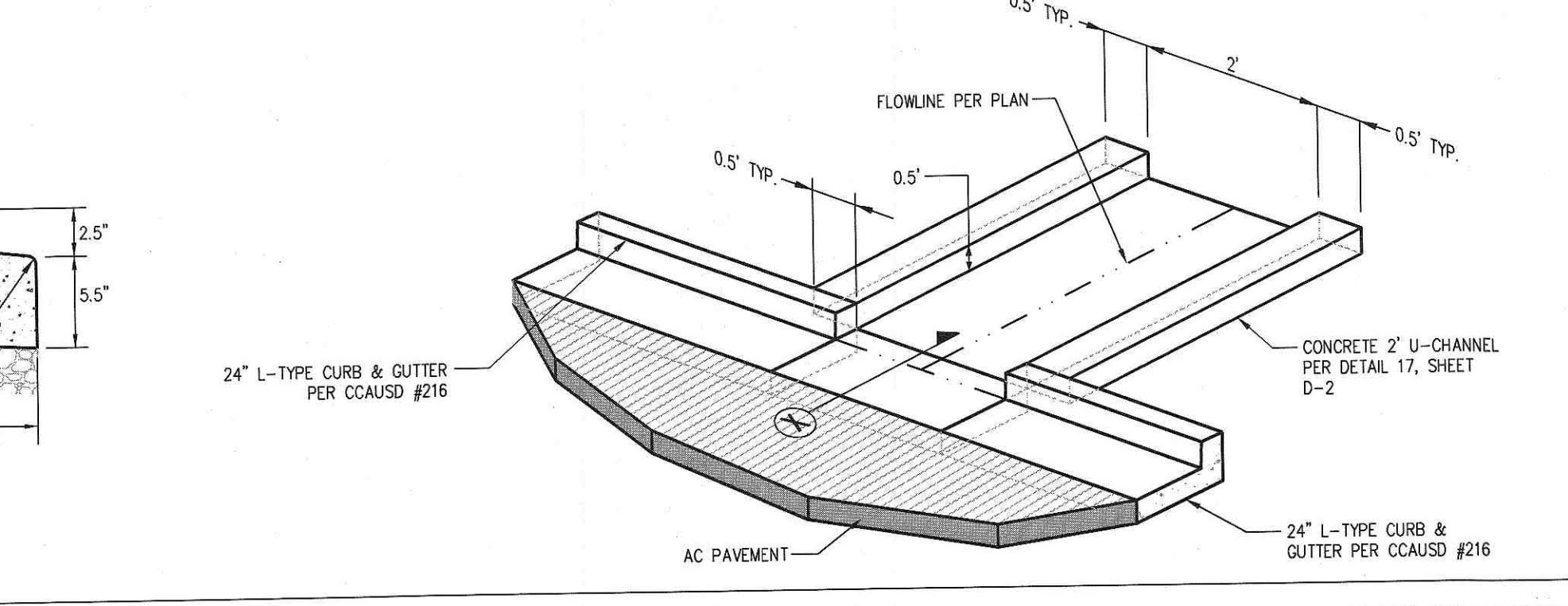
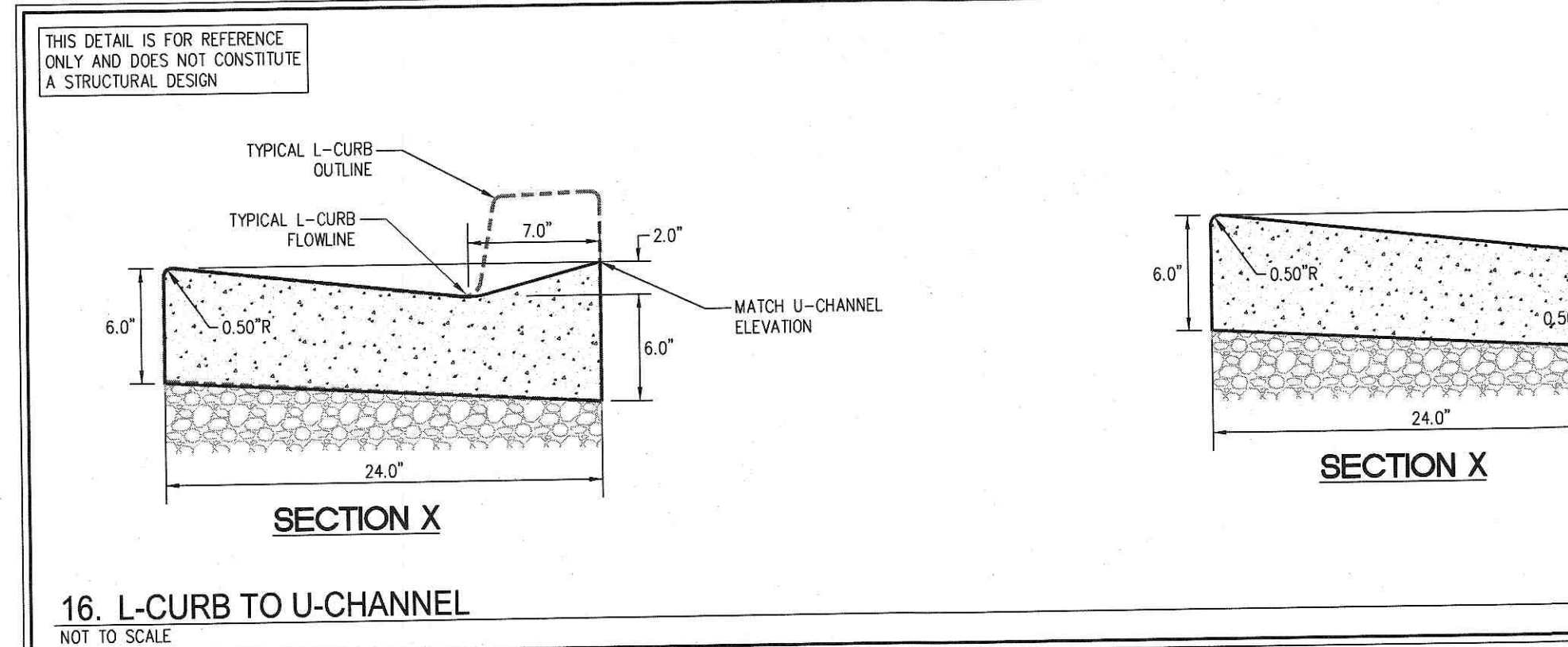
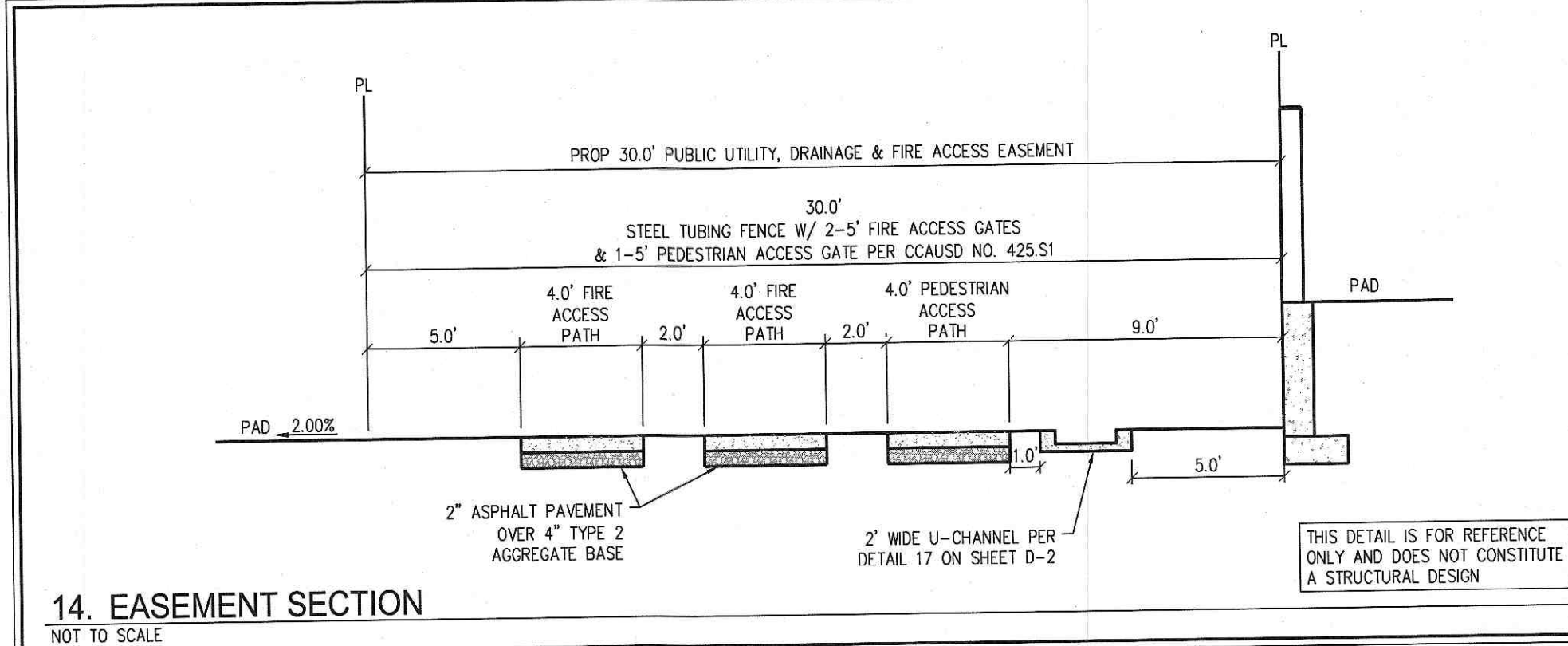
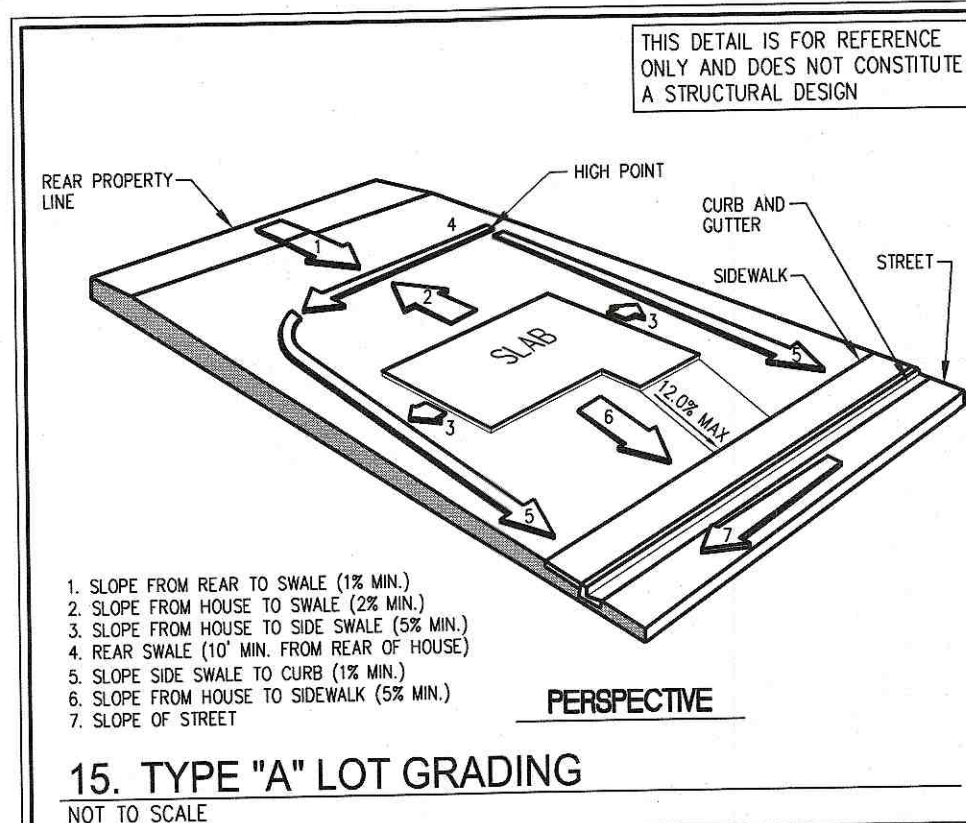
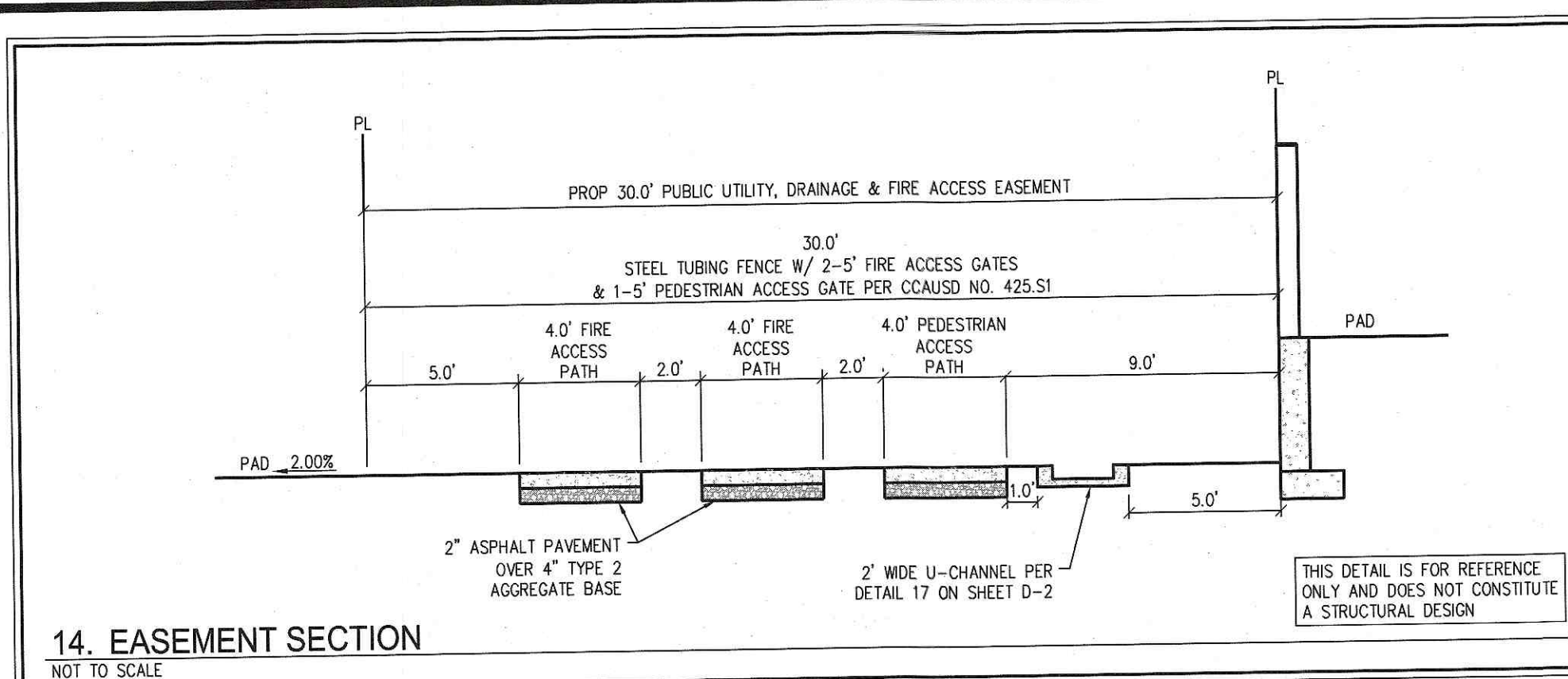
DATE	BY	APP	DATE	DESCRIPTION

kb HOME
BREMERTON
GRADING PLAN III

811
RÉP
RÉP
RÉP

DATE: 3/5/2020
DRAFTER: KDH
DESIGNER: KDH
CHECKED: MAK
PROJECT NO. KBH1917-000

G-3
SHEET 6 OF 32



*The Concrete And Reinforcing Quantities Are Based On The H Min. Shown. Increase The Concrete And Reinforcing Base Quantity By The Corresponding Add Rate (Per Foot Of Increased H) If The H Specified Is Larger Than H Min.



GENERAL NOTES:

1. CONCRETE SHALL BE CLASS A OR AA.

[illegible]

CITY OF LAS VEGAS, NV

kb HOME
BREMERTON
GRADING DETAILS III

S18
T19S
R60E

DATE: 3/5/20

DRAFTER: KDH

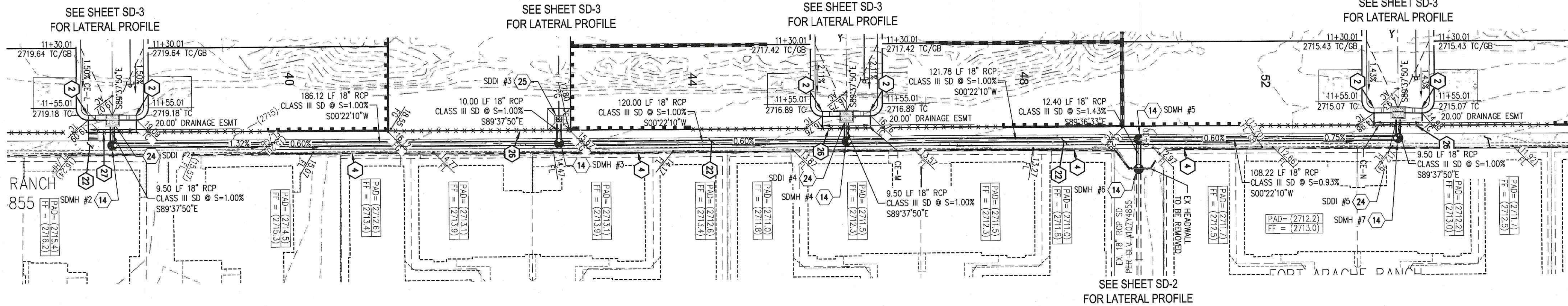
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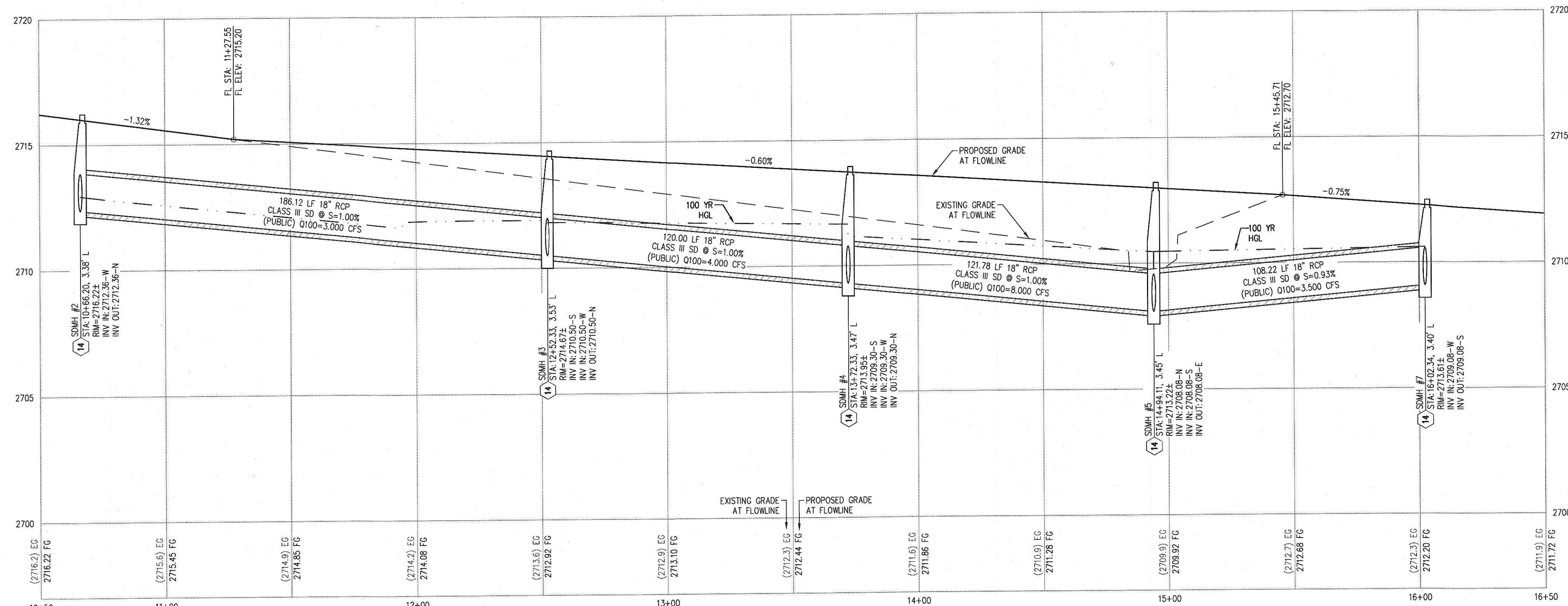
PROJECT NO.

KBH1917-000

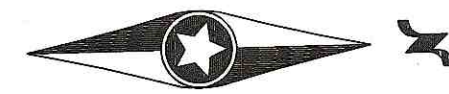
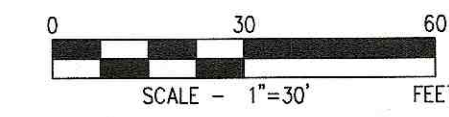




STORM DRAIN - PLAN VIEW
(PRIVATE)



STORM DRAIN - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'



DRAINAGE QUANTITIES	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA 6	1
2. 5.0' TYPE "CM2" DROP INLET	EA 3	-
3. 17.5' TYPE "CM2" DROP INLET	EA -	1
4. 2.5'W X 3'L NDOT TYPE II DROP INLET	EA 1	-
5. 18" RCP CLASS III STORM DRAIN	LF 587	-
6. 24" RCP CLASS III STORM DRAIN	LF -	31

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

ELEVATION NOTE
ADD 2700 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2701.00).

LEGAL DESCRIPTION
THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.

GENERAL GRADING NOTES

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- SEE HORIZONTAL CONTROL PLANS AND FINAL MAP FOR EXACT BOUNDARY BEARINGS AND DISTANCE.
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- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you dig
do UnderGround
1-702-267-2783
CITY OF HENDERSON UTILITY SERVICES LINE LOCATION AND
1-702-432-5300
FREEMAN AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
Call before you dig
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600
AND
CITY OF HENDERSON TRAFFIC MAINTENANCE
1-702-267-3200

- GRADING NOTES**
- CONSTRUCT 4.5" ASPHALT PAVEMENT OVER 6" TYPE II AGGREGATE BASE
 - INSTALL 3" CURB TRANSITION PER CCAUSD NO. 223
 - CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 - CONSTRUCT L TYPE CURB PER CCAUSD NO. 216
 - CONSTRUCT R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
 - CONSTRUCT A TYPE CURB PER CCAUSD NO. 219
 - CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234
 - CONSTRUCT 10' WIDE MULTI-USE TRAIL PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
 - CONSTRUCT 8" VALLEY GUTTER PER CCAUSD NO. 228
 - CONSTRUCT SIDEWALK RAMP PER CCAUSD NO. 235, CASE 1 AND CCAUSD NO. 235.1
 - CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
 - INSTALL 17.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
 - INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
 - SAWCUT, REMOVE & REPLACE AC PAVEMENT
 - INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236
 - INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 16 ON SHEET D-2
 - INSTALL U-CHANNEL PER DETAIL 17 ON SHEET D-2
 - INSTALL STEEL TUBING FENCE & MAINTENANCE ACCESS GATES PER CCAUSD NO. 425.51
 - CONSTRUCT 5" THICK 5' WIDE SIDEWALK PER CCAUSD NO. 234
 - INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 19 ON SHEET D-2
 - CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
 - INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
 - INSTALL 5.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
 - INSTALL 2.5'W X 3'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG #R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
 - INSTALL STEEL TUBING FENCE PER CCAUSD NO. 425.51
 - INSTALL STEEL TUBING FENCE & PEDESTRIAN ACCESS GATE PER CCAUSD NO. 425.51

BASIS OF BEARING
NORTH 00°41'00" WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 10LV90-18N06
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND TEE PEE
ELEVATION=825.564 METERS (NAVD'83)
ELEVATION=2721.66 US SURVEY FEET (NAVD'83)

DISCLAIMER NOTE

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westwoodps.com
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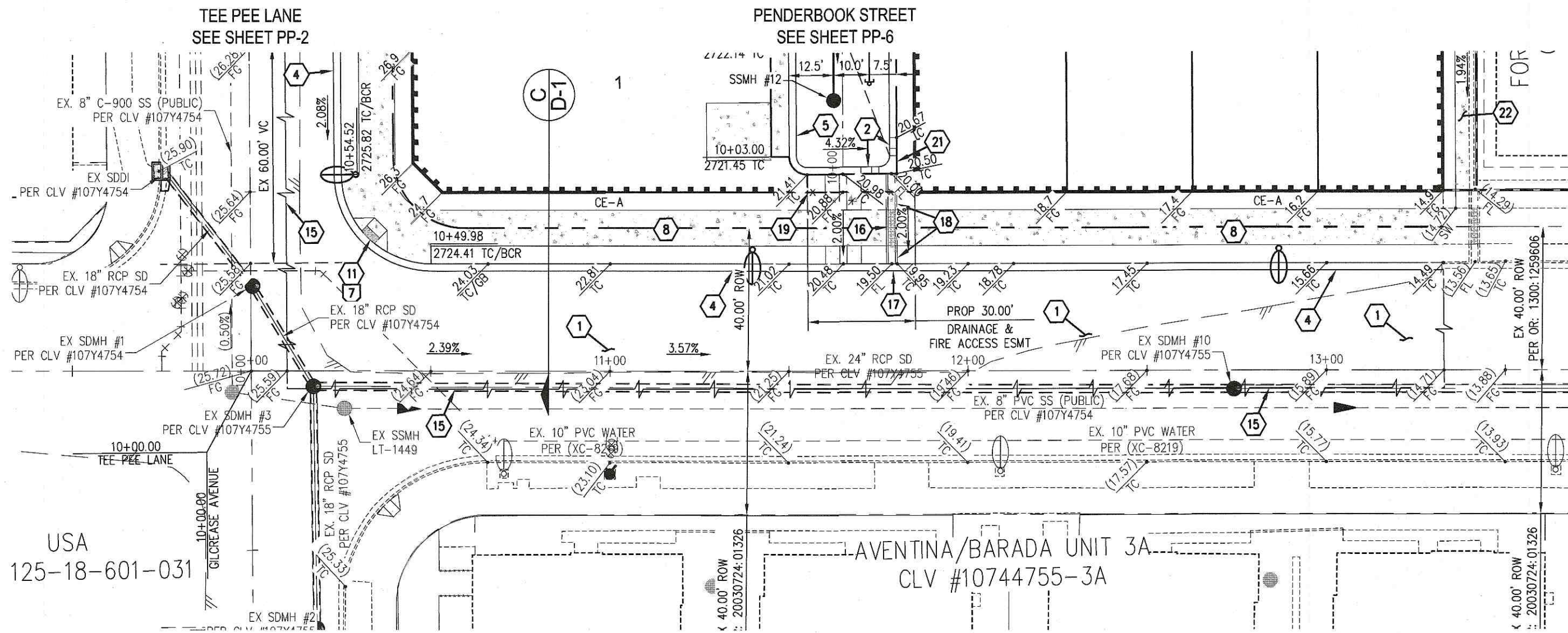
DATE	BY	APP.	DESCRIPTION

CITY OF LAS VEGAS, NV	NO.	DESCRIPTION

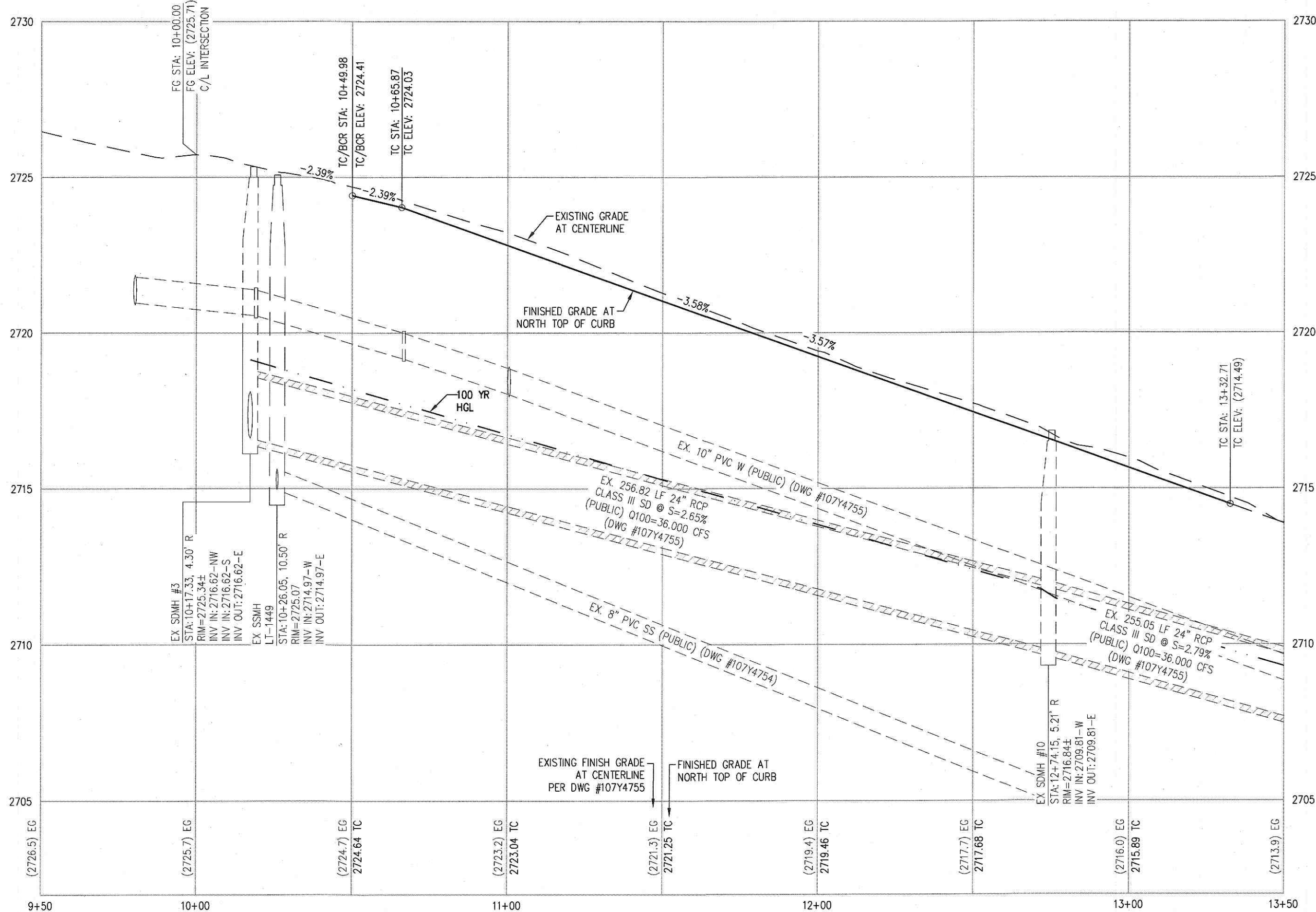
kb HOME
BREMERTON
PLAN AND PROFILE - STORM DRAIN

DATE: 3/5/20
DRAFTER: KDH
DESIGNER: KDH
CHECKED: MAK
PROJECT NO.
KBH1917-000

SD-1
SHEET 10 OF 32



GILCREASE AVENUE - PLAN VIEW
(PUBLIC)



GILCREASE AVENUE - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'

0 30 60
SCALE - 1"=30'
FEET



RAMP TRANSITION LENGTHS FOR 1:12 SIDE SLOPES				
CASE NO.	GRADE %	"A" MIN.	"B" MIN.	
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

SIDEWALK RAMP USING ANIOR TILE
TRUNCATED DOWNS OR EQUIVALENT PER
CCASD NO. 235, CASE 1

SEWER NOTES

1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE PER DCSWS SD-1, SD-3, AND SD-4, WITH SINGLE 24" LID
2. INSTALL 8" PVC PUBLIC SANITARY SEWER PIPE
3. INSTALL 4" PVC SEWER LATERAL (PRIVATE) PER DCSWS SD-20, SD-21, & SD-23 W/8" X 4" WYE (TYPICAL)

DRAINAGE QUANTITIES

	PRIV.	PUBLIC
1. 48" TYPE III STORM DRAIN MANHOLE	EA 6	1
2. 5.0' TYPE "CM2" DROP INLET	EA 3	-
3. 17.5' TYPE "CM2" DROP INLET	EA -	1
4. 2.5'W X 3'L NDOT TYPE II DROP INLET	EA 1	-
5. 18" RCP CLASS III STORM DRAIN	LF 587	-
6. 24" RCP CLASS III STORM DRAIN	LF -	31

SURVEY NOTE

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

ELEVATION NOTE

ADD 2700 TO ALL SPOT GRADES WHERE THE HUNDREDS AND THOUSANDS PLACES ARE OMITTED FOR ACTUAL ELEVATION (I.E. 01.00 REPRESENTS 2701.00)

LEGAL DESCRIPTION

THE WEST HALF (W 1/2) OF THE WEST HALF (W 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CLARK COUNTY, NEVADA.

GENERAL GRADING NOTES

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6. MAXIMUM MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
7. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
8. WESTWOOD PROFESSIONAL SERVICES ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS DRAWING ARE FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES INCLUDING BUT NOT LIMITED TO, THE WATER, FIRE, SANITARY SEWER, STORM SEWER, TELEPHONE, POWER, GAS, AND IRRIGATION LINES AND ALL EXISTING UTILITIES SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. IF CONFLICTS EXIST IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE PROJECT ARCHITECT, OWNER'S REPRESENTATIVE, AND THE PROJECT ENGINEER IMMEDIATELY.
9. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
10. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.



Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
1-800-227-2600
AND
CITY OF HENDERSON TRAFFIC MAINTENANCE
1-702-267-3200

GRADING NOTES

1. CONSTRUCT 4.5" ASPHALT PAVEMENT OVER 6" TYPE II AGGREGATE BASE
2. INSTALL 3" CURB TRANSITION PER CCAUSD NO. 223
3. CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
4. CONSTRUCT L TYPE CURB PER CCAUSD NO. 216
5. CONSTRUCT R-TYPE CURB & GUTTER PER CCAUSD NO. 217.3.51
6. CONSTRUCT A TYPE CURB PER CCAUSD NO. 219
7. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234
8. CONSTRUCT 10' WIDE MULTI-USE TRAIL PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
9. CONSTRUCT 8" VALLEY GUTTER PER CCAUSD NO. 228
10. CONSTRUCT SIDEWALK RAMP PER CCAUSD NO. 235, CASE 1 AND CCAUSD NO. 235.1
11. CONSTRUCT SIDEWALK RAMP PER TOWN CENTER DEVELOPMENT STANDARDS FIGURE 14
12. INSTALL 17.5' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
13. INSTALL 48" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 406
14. SAWCUT, REMOVE & REPLACE AC PAVEMENT
15. INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236
16. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 16 ON SHEET D-2
17. INSTALL U-CHANNEL PER DETAIL 17 ON SHEET D-2
18. INSTALL STEEL TUBING FENCE & MAINTENANCE ACCESS GATES PER CCAUSD NO. 425.51
19. CONSTRUCT 5" THICK 5' WIDE SIDEWALK PER CCAUSD NO. 234
20. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 19 ON SHEET D-2
21. CONSTRUCT 4' WIDE SIDEWALK PER CCAUSD NO. 234
22. INSTALL U-CHANNEL TO "L" CURB OPENING PER DETAIL 23 ON SHEET D-2
23. INSTALL 5.0' DROP INLET TYPE "CM2" PER CCAUSD NO. 412.1 AND 421
24. INSTALL 2.5'W X 3'L NDOT TYPE II DROP INLET AND NDOT CONCRETE APRON PER NDOT STD DWG #R-4.2.1 & R-4.2.7 PER DETAIL ON SHEET D-3 AND CCAUSD #421
25. INSTALL STEEL TUBING FENCE PER CCAUSD NO. 425.51
26. INSTALL STEEL TUBING FENCE & PEDESTRIAN ACCESS GATE PER CCAUSD NO. 425.51

BASIS OF BEARING

NORTH 000°10' WEST BEING THE BEARING OF THE EAST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.B. & M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE IN FILE 114, PAGE 57 OF SURVEYS.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 10LV90-18N66
RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND TEE PEE
ELEVATION=829.564 METERS (NAV88)
ELEVATION=2721.86 US SURVEY FEET (NAV88)

DISCLAIMER NOTE

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 LIP OF CURB PRIOR TO SUPERGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

Westwood

5740 S. Avile Street
Suite 216
Las Vegas, NV 89118
Phone (702) 284-5300
Fax (702) 284-5399
westwoodps.com
Westwood Professional Services, Inc.

CITY OF LAS VEGAS, NV

kb HOME

BREMERTON

PLAN AND PROFILE - GILCREASE AVENUE

818
7188
R00E

DATE: 2/27/20

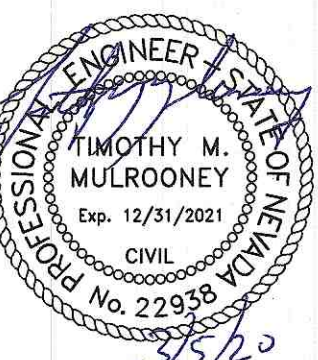
DRAFTER: KDH

DESIGNER: KDH

CHECKED: MAK

PROJECT NO.

KBH1917-000



PP-1

SHEET 13 OF 32