

DS #: 4691

APN: 125-19-301-007 & -008

PROJECT: CONNOR HILLS

SUBMITTAL: SUPPLEMENT + CCPW

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: January 7, 2015
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: Connor Hills	
Cross Streets:	SWC Deer Springs Way & Grand Canyon Dr.	COPIES TO: Slater Hanifan Group
File Number:	F:\Depot\DSMemos\DS4691E.doc	Richmond American Homes
Parcel Number:	125-19-301-007 & 125-19-301-008	Bart Anderson, P.E., DevCo
Zoning Action:	TMP-52119; GPA-52116; ZON-52117; VAR-52118 & WVR-52169	CCPW
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	7/24/2014	8/6/2014	Not Approved	\$400.00	364839: \$400
2 nd Submittal	8/21/2014	8/27/2014	Conditional Approval	\$400.00	367787: \$400
3 rd Submittal	9/25/2014	10/9/2014	Not Approved	\$100.00	371564: \$100
Supplement	10/15/2014	10/20/2014	Conditional Approval	N/C	N/C
CCPW	1/7/2015	1/7/2015	Concurrence Recv'd	N/C	N/C
TOTAL FEES (LDDRS):				\$900.00	----

REMARKS:

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

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

Note to Land Development:

Section Detail 5/D-1 shows a wrought iron fence on top of a wall of a concrete U-channel. Structural design and calculations for the integral structure must be approved by *Building Department* prior to the final acceptance of the improvement plans.

- Sheet G-1:** Clearly label the proposed 10'-public drainage easement (privately maintained by the HOA) and Common Lot along the west boundary on the grading plan. The public drainage easement shall extend into the bulb of cul-de-sac of each of the two interior streets (*Ashlynn Peak St.* and *Bruschi Ridge St.*)
- All drainage easements must be **PUBLIC** drainage easements to be privately maintained and **COMMON LOTS** to be labeled on the grading plans and to be dedicated as such in the final map.

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

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

END OF REMARKS

ays

T/R/S: T19S/R60E/19

AREA G-19

H56862



Department of Public Works

500 S Grand Central Pky • Box 554000 • Las Vegas NV 89155-4000
(702) 455-6000 • Fax (702) 455-6040

Denis Cederburg, P.E., Director • E-Mail: dlc@ClarkCountyNV.gov

Drainage Study Approval Letter

Date: October 30, 2014
Firm: Slater Hanifan Group
Engineer: Stanley Okey Amadi, P.E.
Address: 5740 South Arville Street, Suite 216
Phone: (702) 284-5300
Fax: (702) 284-5399
E-mail: SAmadi@SHG-INC.com

Subject: Technical Drainage Study and Update for Connor Hills
Location: SWC of Deer Springs Way / Grand Canyon Drive
APN: 125-19-301-007 and 125-19-301-008
Sec, Township, Range: S19, T19S, R60E
Flood Zone & Panel: Zone X, 1745, September 27, 2002
Application Tracking #: 14-43035



Submittals	Date Received	Date Returned	Reviewer	Miscellaneous
Technical	10/16/2014	10/30/2014	JRH	
Addendum #1	10/16/2014	10/30/2014	JRH	CLV Approved 08/27/2014
Update	10/16/2014	10/30/2014	JRH	
UPD Supplement #1	10/16/2014	10/30/2014	JRH	CLV Approved 10/20/2014

Concurrence Required: (Must be obtained prior to permit issuance)		Reason Concurrence is required
	City of Henderson	Adjacent to or Impacts Henderson
X	City of Las Vegas	Adjacent to or Impacts Las Vegas
	City of North Las Vegas	Adjacent to or Impacts North Las Vegas
	Nevada Department of Transportation	Adjacent to or Impacts NDOT Facility
	Union Pacific Rail Road	Adjacent to or Impacts a UPRR Facility
	US Army Corp of Engineers	Impacts a USACE Facility
	Clark County Regional Flood Control District	Regional Significance, Adjacent to or Impacts CCRFCD MPU Facility or in a SFHA

The referenced **Technical Drainage Study** has been reviewed and is accepted as complying with minimum improvement standards. As set forth in the subject drainage study, the following measures will be taken to mitigate flood hazards.

The site shall be graded with respect to drainage as shown on "Connor Hills", grading plan sheets C-1, C-2, G-1, D-1, and PP-1 through PP-6; signed and sealed by Angela R. Pinley, P.E. on October 15, 2014.

Check appropriate conditions

	Retaining/screen wall combination may be in excess of current Clark County Unified Development Code, Chapter 30.64.050.
	A FEMA Elevation Certificate, completed by a licensed surveyor, must be submitted to and approved by CCPW Development Review Plan Check prior to the issuance of Certificates of Occupancy for those structures.
X	Mylars of the grading plan must be submitted to the CCPW Development Review Plan Check for approval signatures prior to map recordation (residential) or permit issuance (commercial).
	An administrative variance to allow the finished floor elevation(s) to be set below the current Clark County criteria must be approved. The finished floor variance must be submitted to CCPW Development Review front counter after drainage study approval and prior to offsite final review.
X	The grading plan will be reviewed by the Building Office Operations Division to ensure compliance with the ADA access requirements. Revisions to the grading plan may be required if the site accessibility design does not comply with the requirements set forth in the Accessibility Chapter of the Clark County Building Code.
	The plans show work is proposed on another property. Notarized written permission must be obtained prior to plan approval. A grading permit must be obtained from Building Dept prior to grading.
X	Right-of-way dedication must be verified.
	Any previously approved drainage easements that are not being used must be vacated.
	Per <i>Regional Flood Control District policies and Procedures manual, Section VIII. D. 13. Uniform Regulations for the Control of Drainage</i> , the Engineer of Record shall provide As-Built plans or record drawings to the District after completion and final inspection of such privately installed flood control facilities that have regional flood control significance.
	Structural calculations are required. The structural calculations, plans, and details must be approved prior to "Offsite" submittal and prior to CCRFCD submittal, if applicable.
X	Plan revisions can be found on the red-lined plans and must be addressed.
	Prepare drainage easement documents as shown on the grading plans.

Connor Hills
October 30, 2014
Page 3 of 3

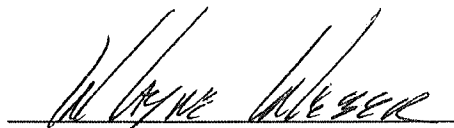
14-43035

Additional Conditions:

1. The above-referenced project is located within the **City of Las Vegas** adjacent to Clark County unincorporated areas. The drainage study was submitted to the County for concurrence on October 16, 2014. In addition, the County has received the City of Las Vegas acceptance letters dated August 27, 2014 and October 20, 2014 for the Technical Drainage Studies (File# DS4691B and File# DS4691D).
2. The County concurs with the acceptance of this Drainage Study by the City of Las Vegas. Please note that the County's review of this development is limited to drainage issues significant to Clark County unincorporated areas.
3. Address any additional redlined comments.

The County's review is solely based on the information submitted by the Engineer of Record. The County's review is strictly limited to compliance with minimum County Codes and Standards. The Engineer of Record is responsible for researching and addressing situations that may require designs above and beyond the minimum codes for issues of public safety and impacts to upstream, downstream and adjacent properties. The County assumes no liability for information data, designs or conclusions of the Engineer of Record.

By



W. Layne Weber, P.E., CFM
Principal Engineer
Clark County Public Works
Development Review

Cc: HERServices, Inc.

 *** FAX TX REPORT ***

TRANSMISSION OK

JOB NO. 0245
 DESTINATION ADDRESS 7022845399
 PSWD/SUBADDRESS
 DESTINATION ID
 ST. TIME 01/07 10:53
 USAGE T 00' 32
 PGS. 2
 RESULT OK

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: January 7, 2015
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FEMA Flood Zone	YES NO X	
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Note to Land Development:

Section Detail 5/D-1 shows a wrought iron fence on top of a wall of a concrete U-channel. Structural design and calculations for the integral structure must be approved by *Building Department* prior to the final acceptance of the improvement plans.

Rec'd: 10/15/14

DS 4691

G-19

Supp. Info.
N/C

S-I-G SLATER
HANIFAN
GROUP

CONSULTING ENGINEERS & PLANNERS

5740 S. ARVILLE STREET, SUITE 216

LAS VEGAS, NEVADA 89118

PHONE: 702-284-5300 • FAX: 702-284-5399

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		October 20, 2014
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
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File Number:	F:\Depot\DSMemos\DS4691D.doc	
Parcel Number:	125-19-301-007 & 125-19-301-008	
Zoning Action:	TMP-52119; GPA-52116; ZON-52117; VAR-52118 & WVR-52169	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO
COPIES TO:		Slater Hanifan Group
		Richmond American Homes
		Bart Anderson, P.E., DevCo
		CCPW

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Note to Land Development:

Section Detail 5/D-1 shows a wrought iron fence on top of a wall of a concrete U-channel. Structural design and calculations for the integral structure must be approved by *Building Department* prior to the final acceptance of the improvement plans.

- The site is adjacent to the jurisdiction of *Clark County* to the north and south. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along the north and south borders. CCPW concurrence is required prior to the final acceptance of the study.
- Sheet G-1:** Clearly label the proposed 10'-public drainage easement (privately maintained by the HOA) and Common Lot along the west boundary on the grading plan. The public drainage easement shall extend into the bulb of cul-de-sac of each of the two interior streets (*Ashlynn Peak St.* and *Bruschi Ridge St.*)

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END OF REMARKS

ays

T/R/S: T19S/R60E/19

AREA G-19

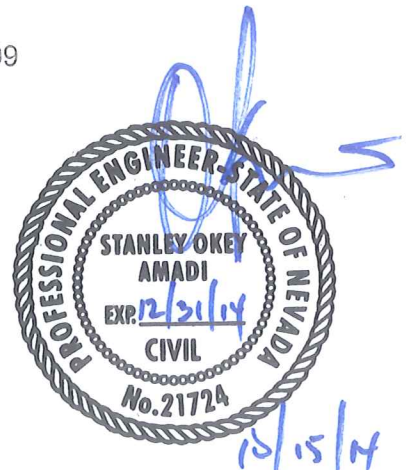
TECHNICAL DRAINAGE STUDY
UPDATE
(SUPPLEMENT)

Connor Hills
City of Las Vegas, Nevada

Job No.: RAH1310.000
Date: October 2014

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

Prepared For:
Richmond American Homes, Inc.
7770 South Dean Martin Drive, Suite 308
Las Vegas, NV 89139
Phone: 702-617-8400 • Fax: 702-617-8499



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

Assisted by: Erick Mata, EI

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Connor Hills Update - Supplement Date: October 2014
 Location of Development: a) Descriptive (Cross Streets): North/South: Grand Canyon Drive
East/West: Deer Springs Way
 b) Section: 19 Township: 19 South Range: 60 East
 c) APN: 125-19-301-007, 125-19-301-008

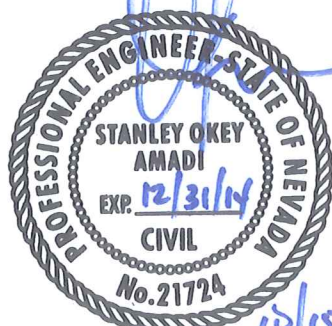
Name of Owner: G Spring LLC/ Richmond American Homes, Inc.
 Telephone No.: (702) 617-8400 Fax No.: (702) 617-8499 E-mail Address: Brian.Walsh@mdch.com
 Address: 7770 South Dean Martin Drive, Suite 308 Las Vegas, Nevada 89139

Contact Person – Name: Stanley Okey Amadi, P.E. Telephone No.: 702-284-5300
 *E-mail Address: samadi@shg-inc.com Fax No.: 702-284-5399
 Firm: Slater Hanifan Group, Inc.
 Address: 5740 S. Arville Street, Suite 216, Las Vegas, Nevada 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	

- Total Owned Land Area: At Site: Approx. 10 ac Being Developed/Disturbed: Approx. 10 ac
- Is a portion or all of the subject property located in a FEMA Flood Hazard Area? ☐ Yes** ☒ No
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☐ Yes** ☒ No
- Proposed type of development (Residential, Commercial, Etc.): Single Family Residential
- Approximate upstream land area which drains to the subject site: Approx. 60 acres
- Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: Technical Drainage Study for Grand Canyon Estates (HTE# 05-891). The study addressed APN# 125-19-301-007.
Technical Drainage Study for Connor Hills (DS4691)
- If known, please briefly identify the proposed discharge point(s) of runoff from the site: The site discharges east onto Grand Canyon Drive through two site entries.
- 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



CONSULTING ENGINEERS & PLANNERS

RAH1310.000

October 15, 2014

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

**Subject: Supplement to the Technical Drainage Study Update for Connor Hills
(CLV #DS4691)**

Dear Mr. Sung:

This letter is submitted in response to your review memorandum dated October 13, 2014, regarding the above referenced project. A copy of the City of Las Vegas (CLV) Department of Public Works comment letter has been provided in Appendix A and the comments have been individually addressed as follows:

1. **Comment:** *The site is adjacent to the jurisdiction of Clark County to the north and south. The engineer must coordinate with Clark County Public Works Department (CCPW) and incorporate any concerns for boundary conditions along the north and south borders. CCPW concurrence is required prior to the final acceptance of the study.*

Response: Copies of the study have been submitted to CCPW for their concurrence review.

2. **Comment:** *It is noted that the west end of Ashlynn Peak Street at the western boundary had been lowered by about 4' from the previous design. This creates a substantial grade cut in the adjacent property versus the previous design which matches the existing grade in the adjacent property at best. Since there is a substantial cut in the adjacent property, a notarized letter of permission must be obtained from the adjacent property owner prior to the final approval of the drainage study.*

Response: The detail cross sections along the western boundary (Sections 5/D-1, 8/D-1 and 15/D-1) have been modified to clarify that the retaining wall height adjusts to match the existing ground to the west. Therefore, there will be no grading on the adjacent property to the west.

3. **Comment: Sheet G-1:** Clearly label the proposed 10' public drainage easement (privately maintained by the HOA) and Common Lot along the west boundary on the grading plan. The public drainage easement shall extend into the bulb of cul-de-sac of each of the two interior streets (Ashlynn Peak St and Bruschi Ridge St).

Response: The grading plans have been updated to show the public drainage easement to be privately maintained by the HOA including the cul-de-sac extensions (see note 22).

4. **Comment:** All drainage easements must be **PUBLIC** drainage easements to be privately maintained and **COMMON LOTS** to be labeled on the grading plans and to be dedicated as such in the final map.

Response: All drainage easements are labeled as public on the grading plans and will be on the Final Map. The Common Lots are labeled on the grading plan and will correspond to the Final Map.

The revised plan, profile and detail sheets adopting the revisions addressed in this letter have been included in Appendix B of the submittal. If you have any questions or require additional information, please do not hesitate to contact us at 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP



Todd Steadham, P.E., LEED-AP
Associate

cc: Mark Failla, P.E., CFM – SHG
Stanley Okey Amadi, P.E. – SHG

Attachments

Appendix A – CLV Comment Letter

Appendix B – Revised Grading Plan, Profile and Detail Sheets

Appendix C – CD of Electronic Files in PDF Format

APPENDIX A

CLV Comment Letter

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END OF REMARKS
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T/R/S: T19S/R60E/19
AREA G-19

APPENDIX B

Revised Grading Plan, Profile and Detail Sheets

APPENDIX C

CD of Electronic Files in PDF Format

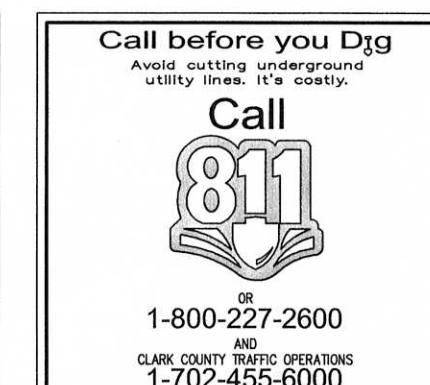


OWNER		PROJECT INFORMATION	
APN: 125-119-001-007 & 008 G SPRING LLC 9315 W SUNSET ROAD LAS VEGAS, NV 89148		EXISTING ZONING: R-1 ACREAGE (GROSS): 10.13 AC ACREAGE (NET): 6.9 AC TOTAL DWELLING UNITS: 40 TYP. LOT SIZE: 60'x123' MIN. LOT WIDTH: 60' MIN. LOT SOFT: 6,628 SQFT MAX LOT SOFT: 8,933 SQFT DENSITY (NET ACREAGE): 3.95 DU/AC MAX. LOT COVERAGE: 52%	
DEVELOPER			
RICHMOND AMERICAN HOMES 7770 S. DEAN MARTIN DR. SUITE 600 LAS VEGAS, NV 89139 PH (702) 347-8400 FX (702) 348-5964			
ENGINEER			
SLATER HANIFAN GROUP 1700 S. ARVILLE ST #216 LAS VEGAS, NV 89118 PH (702) 284-5300 FX (702) 284-5399			

[illegible]

NORTH 00°03'58" WEST, BEING THE BEARING OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW1/4) OF THE NORTHEAST QUARTER (NE1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 132, PAGE 11 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

CITY OF LAS VEGAS BENCHMARK NUMBER: 6LV9019C4
RIVET AND PLATE IN TOP OF CURB ON THE NORTHEAST CORNER OF
DEER SPRINGS WAY AND GRAND CANYON DRIVE.
ELEVATION: 2724.21 US SURVEY FEET (NAVD88)
830.340 METERS
PER CITY OF LAS VEGAS BENCHMARKS, 2008 ADJUSTMENT
(UPDATED MAY 24, 2010)



C-1

#####

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 MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.

4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.

6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.

8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE UP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.

9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.

10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.

11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.

12. ALL GRADING WORK SHALL CONFORM TO THE SOLIS REPORT AS PREPARED BY ANGLE ENGINEERING, REPORT #26165-1, DECEMBER 6, 2013 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

13. EXACT LOCATION OF ALL SAWJUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.

14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.

15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER. ALL ABOVE GROUND UTILITY APPEARANCES SHALL CONFORM TO THE REQUIREMENTS OF 1912.400.

WALL NOTES:

16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.

18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.

19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.

21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE OFFSITE INSPECTION AND TESTING SECTION PRIOR TO PROJECT ACCEPTANCE AND BOND RELEASE. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXITS THE PUBLIC RIGHT-OF-WAY. THE LOCATION SHALL BE DESCRIBED BY STATE PLANE COORDINATES WHICH SHALL BE BASED ON THE "NEVADA COORDINATE SYSTEM OF 1983, EAST ZONE" AS DEFINED BY THE NEVADA REVENUE STATUTES CHAPTER 327, AND TIED TO THE CITY OF LAS VEGAS VERTICAL CONTROL, BENCHMARK NETWORK. COORDINATES MUST BE CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF +/- 0.1 METER (+/- 0.3 FEET). A SEPARATE ELECTRONIC CDMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

22. STORM DRAIN LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE STORM DRAIN LATERAL TO THE STORM DRAIN MAIN AND WHERE THE STORM DRAIN LATERAL EXITS THE PUBLIC RIGHT-OF-WAY OR WHERE THE STORM DRAIN LATERAL CONNECTION TO A DROP INLET. THE MARKER BALL SHALL BE 3M 4" MARKER BALL 1404-XR OR APPROVED EQUIV.

23. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.

24. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

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 "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.

4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE I AGGREGATE BASE.

5. ALL MANHOLES PAVED IN STREETS EIGHTY (80) FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80) FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.

6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.

7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.

8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.

9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.

10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADE, 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. THESE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.

4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE AND THE STUDENTS ARE REQUIRED TO TAKE A DETOUR, THE STUDENTS SHALL BE ASSURED 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 THE 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 ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL HAVE ASSIGNMENTS WITH DIAMOND GRADE WP 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 PLANS SHOWN ON THE PLANS, THE SIGN SHALL BE MOUNTED ON THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE REMOVED.

8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.

10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR MSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.

11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR CAUSES 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 PROJECTS OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAFTING APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPENDING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS THAT AFFECT ADJACENT ROADWAY SEGMENTS 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, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.

2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC ENGINEERING AND THE CITY ENGINEER.

3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.

4. ALL STREET LIGHTING CONDUITS SUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.

5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 3004.

6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TETO PRIOR TO ANY PRE-FINAL INSPECTION. THE ASBUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.

7. SERVICE POINT MUST BE COORDINATED WITH NV ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE CIVIL PLANS.

8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.

9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POWER LINES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED, AT NO EXPENSE TO THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BASES ARE INSTALLED.

10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.

11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE, OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHTS AND/OR SERVICE IS INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THE PROJECT COMPLETION, COORDINATE, MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TETO) AT (702) 229-6331.

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 RELATIVE TO THE 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 UTILITIES 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 TO FILL EXISTING 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. THE 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 NOTICED:

	HORIZONTAL	VERTICAL COMPACTION	
A. PAVEMENT AREA SUBGRADE	0.1+	+0.070 -0.1"	SEE SOLIS REPORT
B. ENGINEERED FILL	0.5+	+0.170 -0.1"	SEE SOLIS 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 PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.

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 DISCRETION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

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 # 6124 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS. AUTHORIZED FIRE HYDRANTS ARE AS FOLLOWS:

- KENNEDY – GUARDIAN MODELS KB1A AND KB1D
- MUELLER – CENTURION 350, MODEL A – 423
- CLOW – MEDALLION M-25=254BLVD
- U.S.P.E. – METROFLOW M-03

2. 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.

3. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. SNFC #8124, SECTION 503.2.7.2

4. 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. SNFC #1124 SECTION 503.2.7.3

5. 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.

6. 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. SNFC 507.2.1, NFPA 24

7. 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, SNFC 507.5.7

8. PRIVATE HYDRANTS SHALL BE PAINTED RED. SNFC 507.5.7.1

9. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE REQUESTED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. IFC 507, SNFC 507.7.

10. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: SNFC C102

- RESIDENTIAL – 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
- COMMERCIAL – 500 FT UNSPRINKLERED; 400 FT SPRINKLERED.

11. 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 CONTROL SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY. SNFC C102.14

12. 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.

13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. SNFC C102.12

14. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. SNFC 102.4

15. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. SNFC C1 02.7

16. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. SNFC 102.6

17. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS A MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN.

18. 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. SNFC 503.2.3

19. 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%. SNFC 503.2.7 / 503.2.8

20. THE TURNING RADII OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADII. SNFC 503.2.4

21. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 IN. SNFC 503.2.1.1 IFC 503

22. FIRE DEPARTMENT ACCESS ROADS IN ALL RESIDENTIAL DEVELOPMENTS (EXCEPT APARTMENT BUILDINGS) SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 36 FT FLOW LINE TO FLOW LINE (THIS WIDTH MAY BE REDUCED TO 24 FT IF ALL BUILDINGS FRONTING THE STREET ARE SPRINKLERED) FOR MAIN RESIDENTIAL STREETS, WITH PARKING PERMITTED ON BOTH SIDES OF THE STREET. PRIVATE DRIVE AISLES, DRIVEWAYS, ETC., SHALL BE ALLOWED TO BE REDUCED TO A MINIMUM WIDTH OF 24 FT FLOW LINE TO FLOW LINE WHEN SERVING NO MORE THE 6 RESIDENTS, AND WHEN ON STREET PARKING IS DISALLOWED. SNFC 503.2.1.1 / 503.2.11

23. ALL FIRE APPARATUS ACCESS ROADS IN COMMERCIAL, DEVELOPMENTS AND APARTMENT COMPLEXES SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 24 FT (FLOW LINE TO FLOW LINE), PROVIDED NO PARKING IS ALLOWED ON EITHER SIDE; 32 FT (FLOW LINE TO FLOW LINE), WITH PARALLEL PARKING ON ONE SIDE, AND 36 FT (FLOW LINE TO FLOW LINE), IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. THESE WIDTHS MAY BE REDUCED TO 24 FT IF SPRINKLERED. SNFC 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. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. IFC 503.1.11 SNFC 503.11

25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROADS(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT, AND FOR ALL COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY RESIDENTIAL DEVELOPMENTS. SNFC 503.1.2

26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LINES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. SNFC 503.2.5

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 300 FT ALONG THE DESIGNATED FIRE LANE. 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. SNFC 503.2.3

28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES. IFC 1 SNFC 503.6

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 ORDINANCE MC 14.18 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 NVIR00000, SECTION II.A.1.5.

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 OPERATIONS. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVIR00000, SECTION II.A.12.

6. 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.

UTILITY LOCATION NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: 1 (800) 227-2600

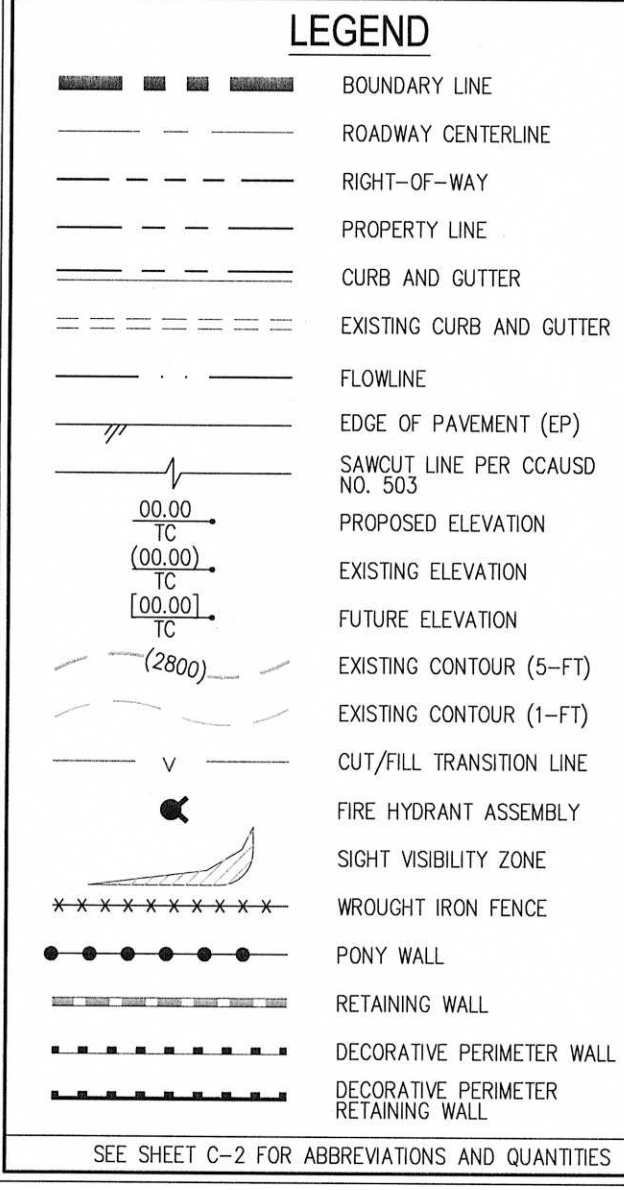
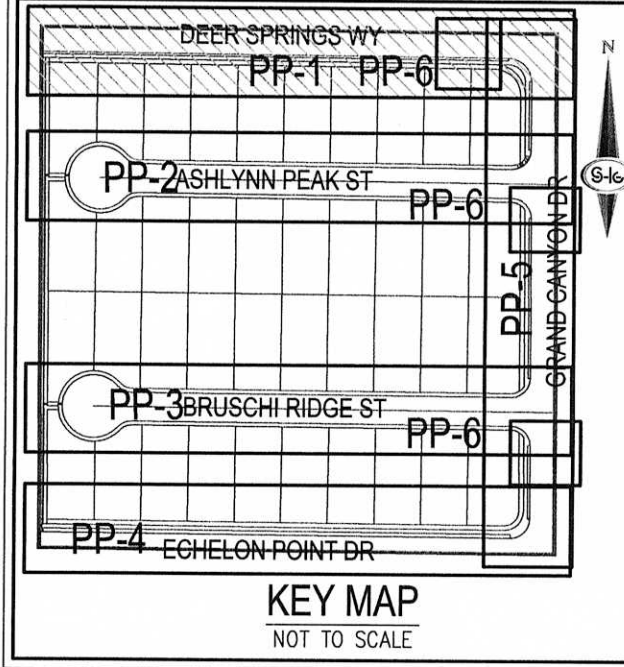
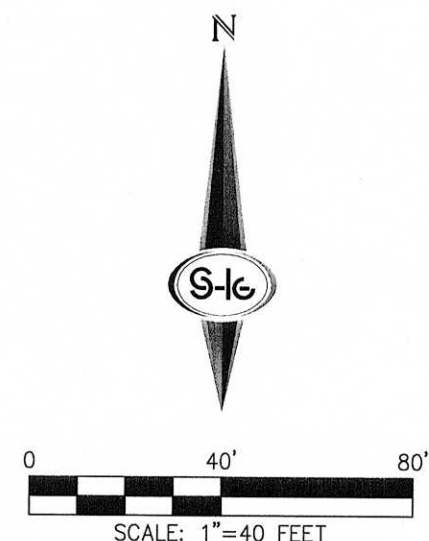
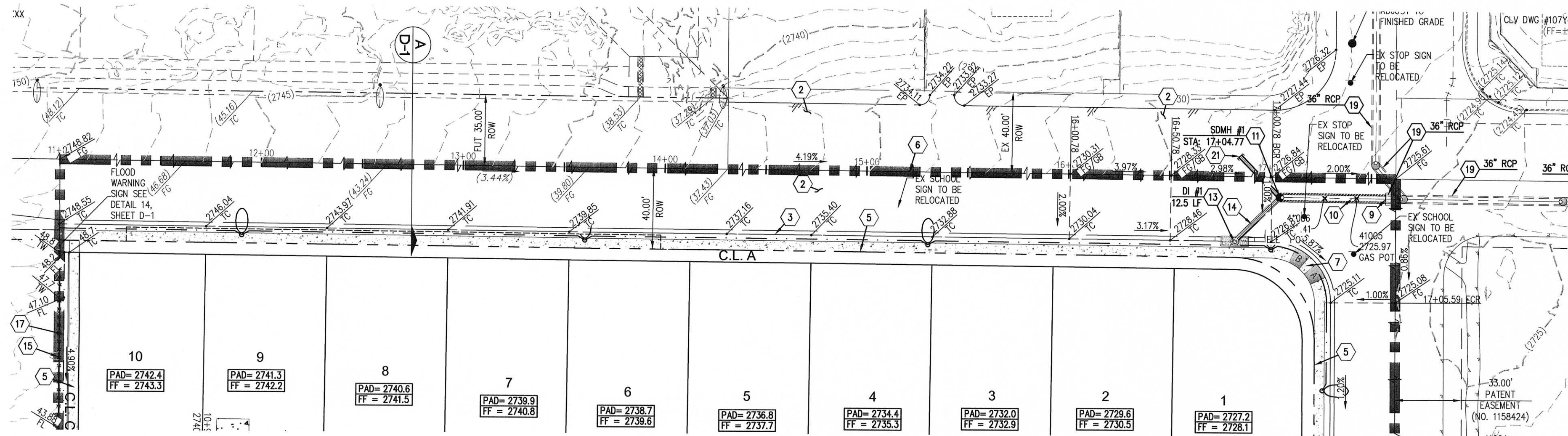
NOTE TO CONTRACTOR

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

LAS VEGAS VALLEY WATER DISTRICT (LVWD) STANDARD NOTES

LVWD PROJECT # #####

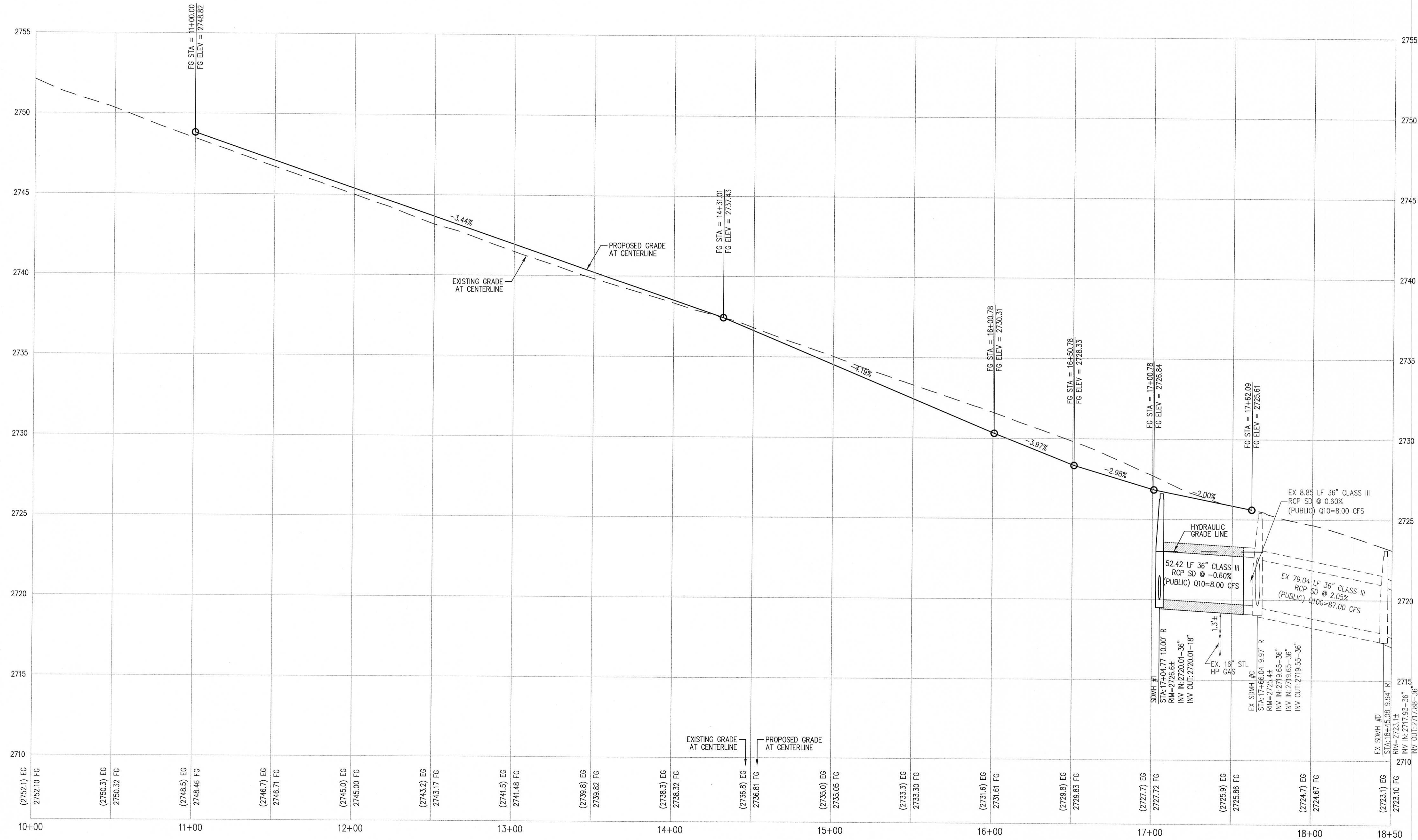
1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LV



- ### CONSTRUCTION NOTES
- CONSTRUCT 2.5" AC PAVEMENT WITH 6" TYPE I AGGREGATE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
 - CONSTRUCT 3.5" AC PAVEMENT WITH 7" TYPE I AGGREGATE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
 - CONSTRUCT 1" TYPE CURB AND GUTTER PER CCAUSD NO. 216.
 - CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228.
 - CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234.
 - SAWCUT AND MATCH EXISTING IMPROVEMENTS.
 - CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT PER CCAUSD NO. 233, CASE 1.
 - INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236.
 - FIELD VERIFY, REMOVE EXISTING CAP AND CONNECT TO EXISTING STORM DRAIN STUB.
 - INSTALL 36" RCP CLASS III STORM DRAIN.
 - INSTALL 60" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405.
 - INSTALL 24" RCP CLASS III STORM DRAIN.
 - INSTALL TYPE CM2 DROP INLET PER CCAUSD NO. 412.1 & 421. SEE PROFILE, SHEET PP-6.
 - INSTALL 18" RCP CLASS III STORM DRAIN.
 - INSTALL 6" HIGH WROUGHT IRON FENCE PER DETAIL 9 ON SHEET D-1.
 - INSTALL STUB AND CAP.
 - CONSTRUCT 4" U-CHANNEL PER DETAIL 8 ON SHEET D-1.
 - CONSTRUCT 4" U-CHANNEL PER DETAIL 11 ON SHEET D-1.
 - EXISTING STORM DRAIN PER TOWN CENTER 60/75 NO. 5, CLV DWG NO. 1074719-5.
 - EXISTING STORM DRAIN PER GRAND CANYON/ROME MIDDLE SCHOOL, CLV DWG NO. 715-163.
 - CONSTRUCT STUB AND CAP 10' PAST CENTERLINE OF DEER SPRINGS WAY.
 - PUBLIC DRAINAGE AND PEDESTRIAN ACCESS EASEMENT TO BE PRIVATELY MAINTAINED.
- SEE SHEET C-2 FOR ABBREVIATIONS, LEGEND & QUANTITIES

DEER SPRINGS WY
(PUBLIC)

GRAND CANYON DR
SEE SHEET PP-4



PROFILE
HOR. : 1"=40'
VERT. : 1"=4'

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.

SOILS REPORT BY: ANGLE ENGINEERING
PROJECT NO. 26184-1, DATED 12/06/13
EARTHWORK QUANTITIES (RAW):
CUT=19,307 CU YDS/FILL=8,160 CU YDS

GENERAL NOTES

- FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2009, SECTION 2304.11.2.2.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- ALL PUBLIC AND PRIVATE DRIVEWAY IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CLARK COUNTY BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
- NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.

FEMA FLOOD ZONE DESIGNATION

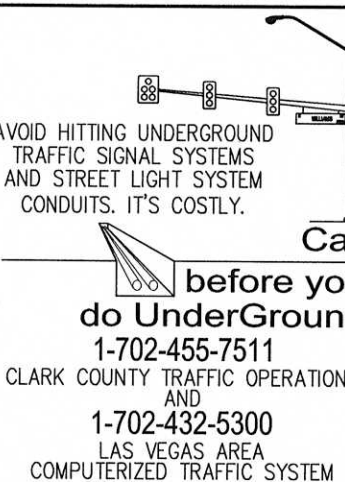
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X', (OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD), PER FIRM PANEL 32003C1745E, DATED SEPTEMBER 27, 2002.

BASIS OF BEARING

NORTH 0°03'58" WEST, BEING THE BEARING OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW1/4) OF THE NORTHEAST QUARTER (NE1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 132, PAGE 11 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK NUMBER: 6LV9019C4
RIVET AND PLATE IN TOP OF CURB ON THE NORTHEAST CORNER OF DEER SPRINGS WAY AND GRAND CANYON DRIVE.
ELEVATION: 2724.21 US SURVEY FEET (NAVD88)
830.340 METERS
PER CITY OF LAS VEGAS BENCHMARKS, 2008 ADJUSTMENT (UPDATED MAY 24, 2010)



SLATER
HANIFAN
GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5389

CITY OF LAS VEGAS, NV

RICHMOND
AMERICAN HOMES
CONNOR HILLS

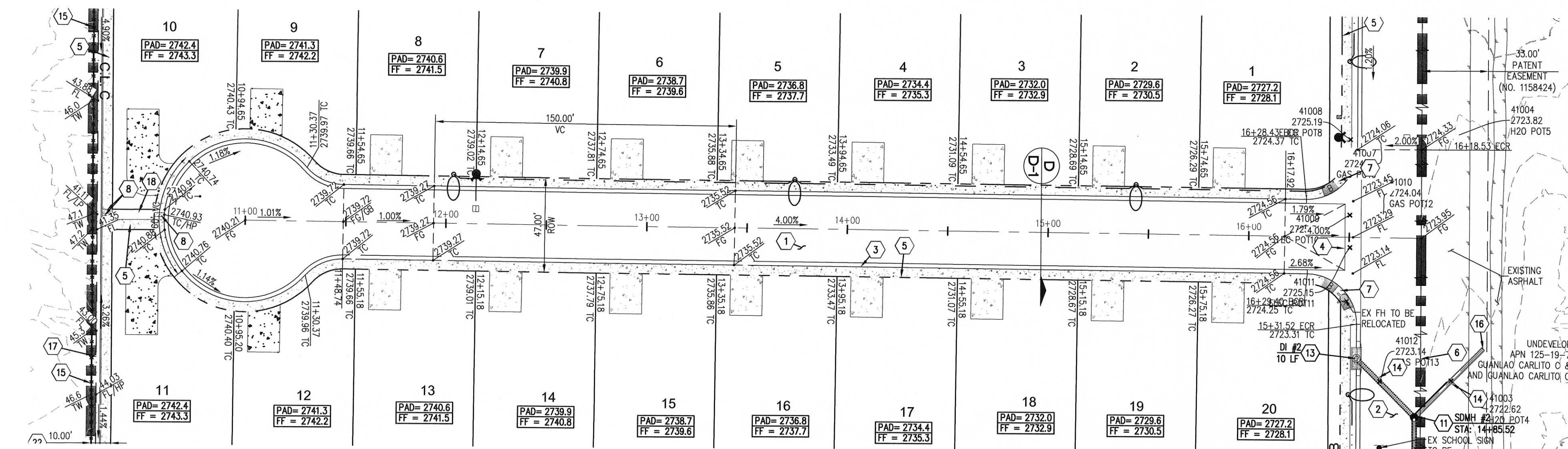
PLAN AND PROFILE - DEER SPRINGS WY

DATE: 10/14/14
DRAFTER: CZ
DESIGNER: CZ
CHECKED: TJS
PROJECT NO. RAH1310

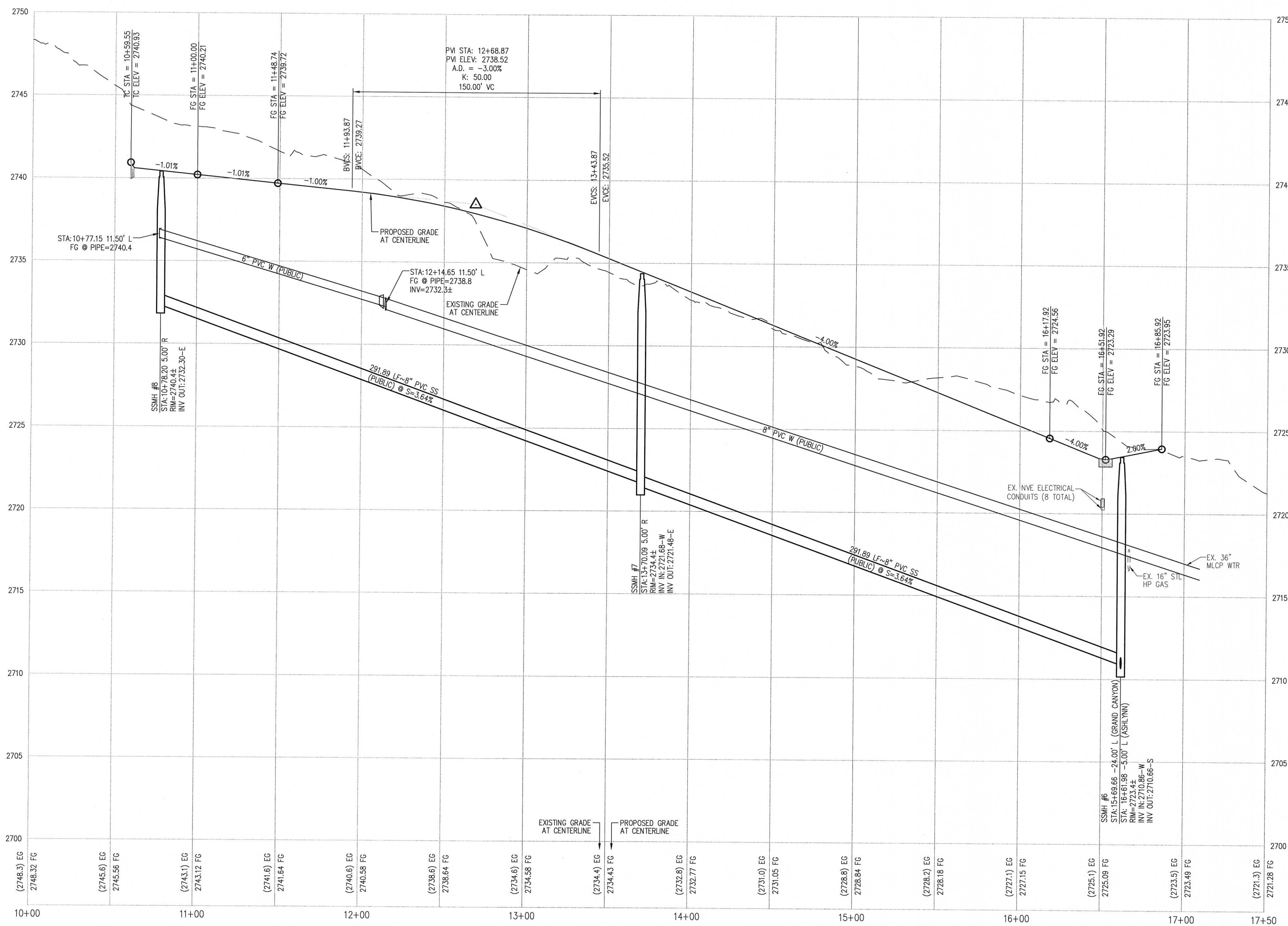
ANGELA R. PINLEY
Exp. 12/31/2015
CIVIL
No. 21573 (N.T.S.)

PP-1
SHEET 5 OF 5

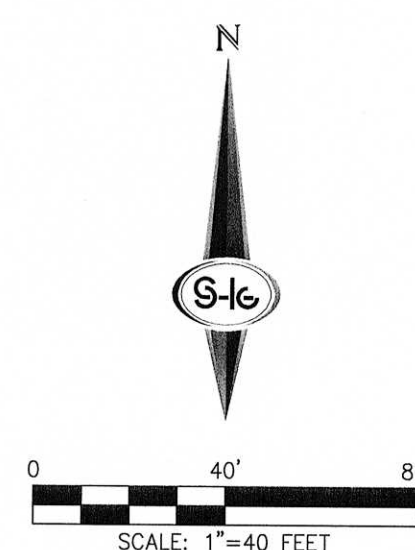
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ASHLYNN PEAK ST (PUBLIC)



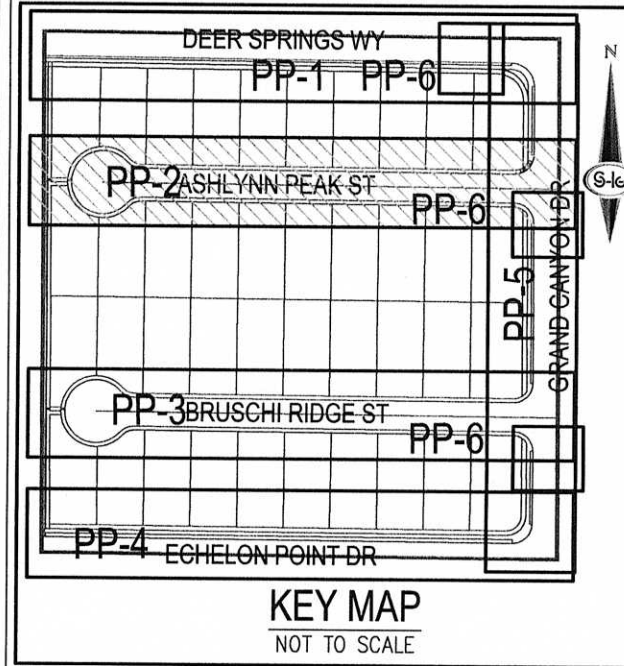
PROFILE HOR. : 1"=40' VERT. : 1"=4'



CONSTRUCTION NOTES

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- CONSTRUCT 4' U-CHANNEL PER DETAIL 11 ON SHEET D-1.
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SEE SHEET C-2 FOR ABBREVIATIONS, LEGEND & QUANTITIES



LEGEND

- BOUNDARY LINE
- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- PROPERTY LINE
- CURB AND GUTTER
- EXISTING CURB AND GUTTER
- FLOWLINE
- EDGE OF PAVEMENT (EP)
- SAW CUT LINE PER CCAUSD NO. 503
- PROPOSED ELEVATION
- EXISTING ELEVATION
- FUTURE ELEVATION
- EXISTING CONTOUR (5-FT)
- EXISTING CONTOUR (1-FT)
- CUT/FILL TRANSITION LINE
- FIRE HYDRANT ASSEMBLY
- SIGHT VISIBILITY ZONE
- WROUGHT IRON FENCE
- PONY WALL
- RETAINING WALL
- DECORATIVE PERIMETER WALL
- DECORATIVE PERIMETER RETAINING WALL

SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

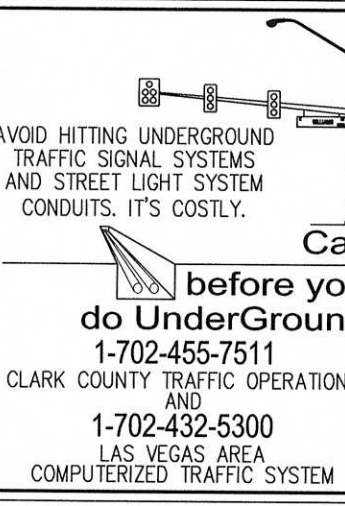
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PROJECT NO.: 26184-L, DATED 12/06/13
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CITY OF LAS VEGAS, NV

RICHMOND AMERICAN HOMES
CONNOR HILLS

PLAN AND PROFILE - PINLEY RISE ST

DATE: 10/14/14

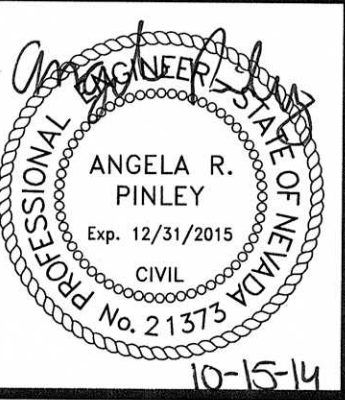
DRAFTER: CZ

DESIGNER: CZ

CHECKED: TJS

PROJECT NO.

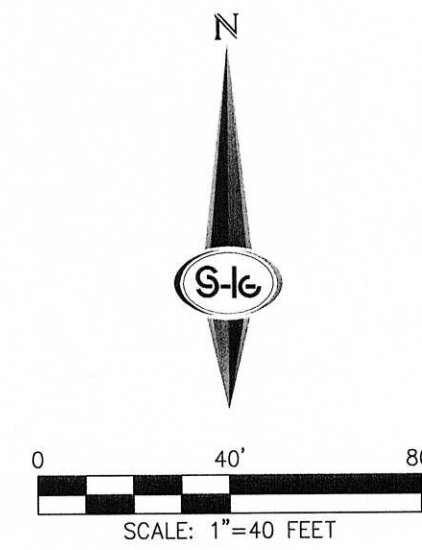
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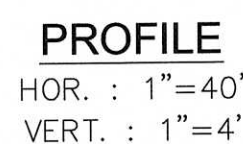
PP-2

SHEET 6 OF

###



GRAND CANYO
SEE SHEET PP-3



- 1) CONSTRUCT 2.5" AC PAVEMENT WITH 7" TYPE II HOT BITUMASTONE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
- 2) CONSTRUCT 3.5" AC PAVEMENT WITH 7" TYPE II HOT BITUMASTONE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
- 3) CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216.
- 4) CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228.
- 5) CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234.
- 6) SAWCUT AND MATCH EXISTING IMPROVEMENTS
- 7) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRIMMED DOMES OR EQUIVALENT PER CCAUSD NO. 235, CASE I.
- 8) INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236.
- 9) FIELD VERIFY, REMOVE EXISTING CAP AND CONNECT TO EXISTING STORM DRAIN STUB
- 10) INSTALL 36" RCP CLASS III STORM DRAIN
- 11) INSTALL 60" TYPE III STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405
- 12) INSTALL 24" RCP CLASS III STORM DRAIN
- 13) INSTALL TYPE CM2 DRAIN INLET PER CCAUSD NO. 412.1 & 421. SEE PROFILE, SHEET PP-6
- 14) INSTALL 18" RCP CLASS III STORM DRAIN
- 15) INSTALL 6" HIGH ROUGH IRON FENCE PER DETAIL 8 ON SHEET D-1
- 16) INSTALL STUB AND CAP
- 17) CONSTRUCT 4" U-CHANNEL PER DETAIL 8 ON SHEET D-1
- 18) CONSTRUCT 4" U-CHANNEL PER DETAIL 11 ON SHEET D-1
- 19) EXISTING STORM DRAIN PER TOWN CENTER 60/75 N. S. 5, DLY GWD NO. 10774719-5
- 20) EXISTING STORM DRAIN PER GRAND CANYON/ROME MIDDLE SCHOOL, DLY GWD NO. 715-763
- 21) EXISTING STORM DRAIN AND CAP 10" PAST CENTERLINE OF DETR SPRINGS RD
- 22) PUBLIC DRAINAGE AND PEDESTRIAN ACCESS EASEMENT TO BE PRIVATELY MAINTAINED

SEE SHEET C-2 FOR ABBREVIATIONS, LEGEND & QUANTITIES



- | | |
|--|-------------------------------------|
| | BOUNDARY LINE |
| | ROADWAY CENTERLINE |
| | RIGHT-OF-WAY |
| | PROPERTY LINE |
| | CURB AND GUTTER |
| | EXISTING CURB AND GUTTER |
| | FLOWLINE |
| | EDGE OF PAVEMENT (EP) |
| | SAWTOOTH LINE PER CCAUSD NO. 503 |
| | PROPOSED ELEVATION |
| | EXISTING ELEVATION |
| | FUTURE ELEVATION |
| | EXISTING CONTOUR (5-FT) |
| | EXISTING CONTOUR (1-FT) |
| | CUT/FILL TRANSITION LINE |
| | FIRE HYDRANT ASSEMBLY |
| | SIGHT VISIBILITY ZONE |
| | WROUGHT IRON FENCE |
| | PONY WALL |
| | RETAINING WALL |
| | DECORATIVE PERIMETER WALL |
| | DECORATIVE PERIMETER RETAINING WALL |
- SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

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 ANY WORK INVOLVING THE EXISTING UTILITY 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.

1. FINAL GRADES ADJUSTED TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2009, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND CONDITIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SUMP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STRUCTURE SECTION SHALL NOT EXCEED THAT SHOWN ON GEOTECH REPORT.
5. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
6. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE EROSION CONTROL APPROVAL BY THE CLARK COUNTY BUILDING DEPARTMENT.
7. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY THE UTILITY OWNERS PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE EXISTING UTILITY STRUCTURES AND FACILITIES. IF NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION, CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR OF EXISTING FACILITIES. IF ENGINEER/OWNER IS NOTIFIED OF EXISTING FACILITIES PRIOR TO CONSTRUCTION COMMENCING, DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
8. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND TO BE REMOVED OR CUTTED WITHIN (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT TRIANGLE.

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X', (OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD), PER FIRM PANEL 32003C1745E, DATED SEPTEMBER 27, 2002.

NORTH 00°03'58" WEST, BEING THE BEARING OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW1/4) OF THE NORTHEAST QUARTER (NE1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 132, PAGE 1 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

CITY OF LAS VEGAS BENCHMARK NUMBER: 6LV9019C4
RIVET AND PLATE IN TOP OF CURB ON THE NORTHEAST CORNER OF
DEER SPRINGS WAY AND GRAND CANYON DRIVE.
ELEVATION: 2724.21 US SURVEY FEET (NAVD88)
830.340 METERS
PER CITY OF LAS VEGAS BENCHMARKS, 2008 ADJUSTMENT
(UPDATED MAY 24, 2010)

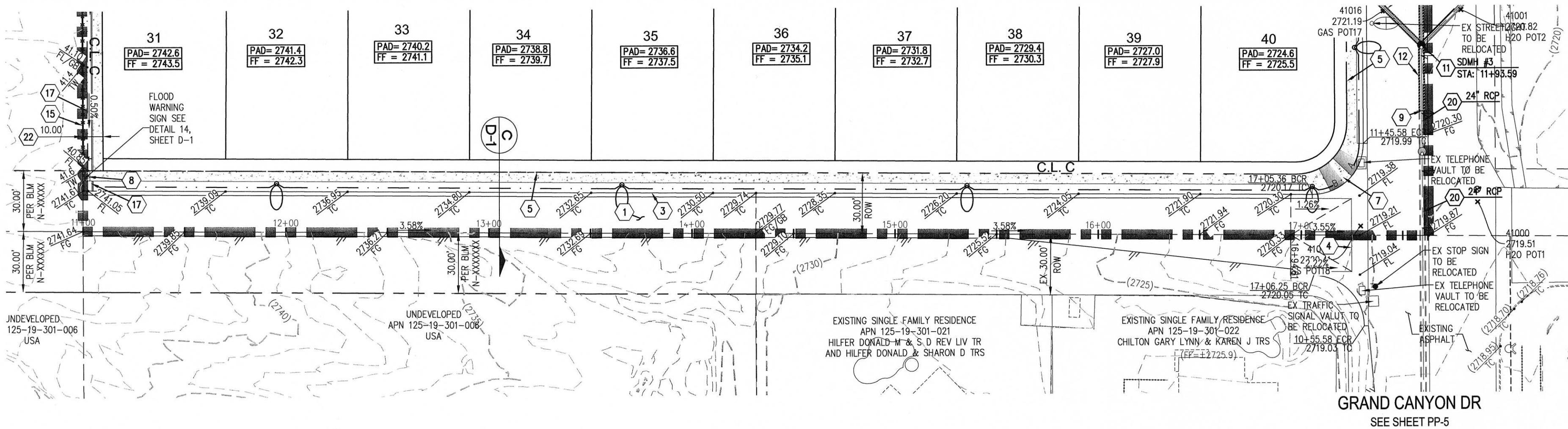


Call before you Dig
Avoid cutting underground utility lines. It's costly.

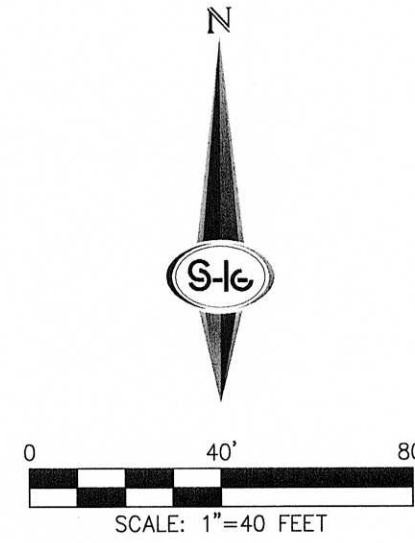
Call

811

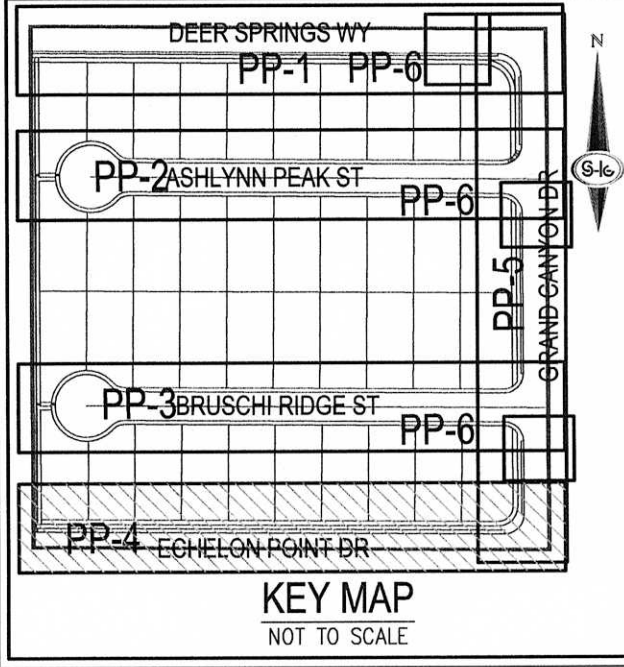
OR
1-800-272-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7544



ECHELON POINT DR
(PUBLIC)



- ### CONSTRUCTION NOTES
1. CONSTRUCT 2.5" AC PAVEMENT WITH 6" TYPE II AGGREGATE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
 2. CONSTRUCT 3.5" AC PAVEMENT WITH 7" TYPE II AGGREGATE BASE OVER NATIVE MATERIAL PER SOILS REPORT.
 3. CONSTRUCT "L" TYPE CURB AND GUTTER PER CCAUSD NO. 216.
 4. CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228.
 5. CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234.
 6. SAWCUT AND MATCH EXISTING IMPROVEMENTS.
 7. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER CCAUSD NO. 234, CASE 1.
 8. INSTALL SIDEWALK DRAIN PER CCAUSD NO. 236.
 9. FIELD VERIFY, REMOVE EXISTING CAP AND CONNECT TO EXISTING STORM DRAIN STUB.
 10. INSTALL 36" RCP CLASS III STORM DRAIN.
 11. INSTALL 60" TYPE II STORM DRAIN MANHOLE PER CCAUSD NO. 401 & 405.
 12. INSTALL 24" RCP CLASS III STORM DRAIN.
 13. INSTALL TYPE CM2 DROP INLET PER CCAUSD NO. 412.1 & 421. SEE PROFILE, SHEET PP-6.
 14. INSTALL 18" RCP CLASS III STORM DRAIN.
 15. INSTALL 6" HIGH WROUGHT IRON FENCE PER DETAIL 9 ON SHEET D-1.
 16. INSTALL STUB AND CAP.
 17. CONSTRUCT 4' U-CHANNEL PER DETAIL 8 ON SHEET D-1.
 18. CONSTRUCT 4' U-CHANNEL PER DETAIL 11 ON SHEET D-1.
 19. EXISTING STORM DRAIN PER TOWN CENTER 60/75 NO. 5, CLV DWG NO. 10774719-5.
 20. EXISTING STORM DRAIN PER GRAND CANYON/ROME MIDDLE SCHOOL, CLV DWG NO. 715-163.
 21. CONSTRUCT STUB AND CAP 10' PAST CENTERLINE OF DEER SPRINGS WAY.
 22. PUBLIC DRAINAGE AND PEDESTRIAN ACCESS EASEMENT TO BE PRIVATELY MAINTAINED.
- SEE SHEET C-2 FOR ABBREVIATIONS, LEGEND & QUANTITIES



- ### LEGEND
- BOUNDARY LINE
 - ROADWAY CENTERLINE
 - RIGHT-OF-WAY
 - PROPERTY LINE
 - CURB AND GUTTER
 - EXISTING CURB AND GUTTER
 - FLOWLINE
 - EDGE OF PAVEMENT (EP)
 - SAW CUT LINE PER CCAUSD NO. 503
 - PROPOSED ELEVATION
 - EXISTING ELEVATION
 - FUTURE ELEVATION
 - EXISTING CONTOUR (5'-FT)
 - EXISTING CONTOUR (1'-FT)
 - CUT/FILL TRANSITION LINE
 - FIRE HYDRANT ASSEMBLY
 - SIGHT VISIBILITY ZONE
 - WROUGHT IRON FENCE
 - PONY WALL
 - RETAINING WALL
 - DECORATIVE PERIMETER WALL
 - DECORATIVE PERIMETER RETAINING WALL
- SEE SHEET C-2 FOR ABBREVIATIONS AND QUANTITIES

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.

SOILS REPORT BY: ANGLE ENGINEERING
PROJECT NO. 28164-1, DATED 12/06/13
EARTHWORK QUANTITIES (RAW):
CUT= 19,307 CU YDS/FILL= 8,160 CU YDS

- ### GENERAL NOTES
1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2009, SECTION 2304.11.2.2.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
 3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
 4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
 5. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
 6. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CLARK COUNTY BUILDING DEPARTMENT.
 7. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLETING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
 8. 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.

FEMA FLOOD ZONE DESIGNATION

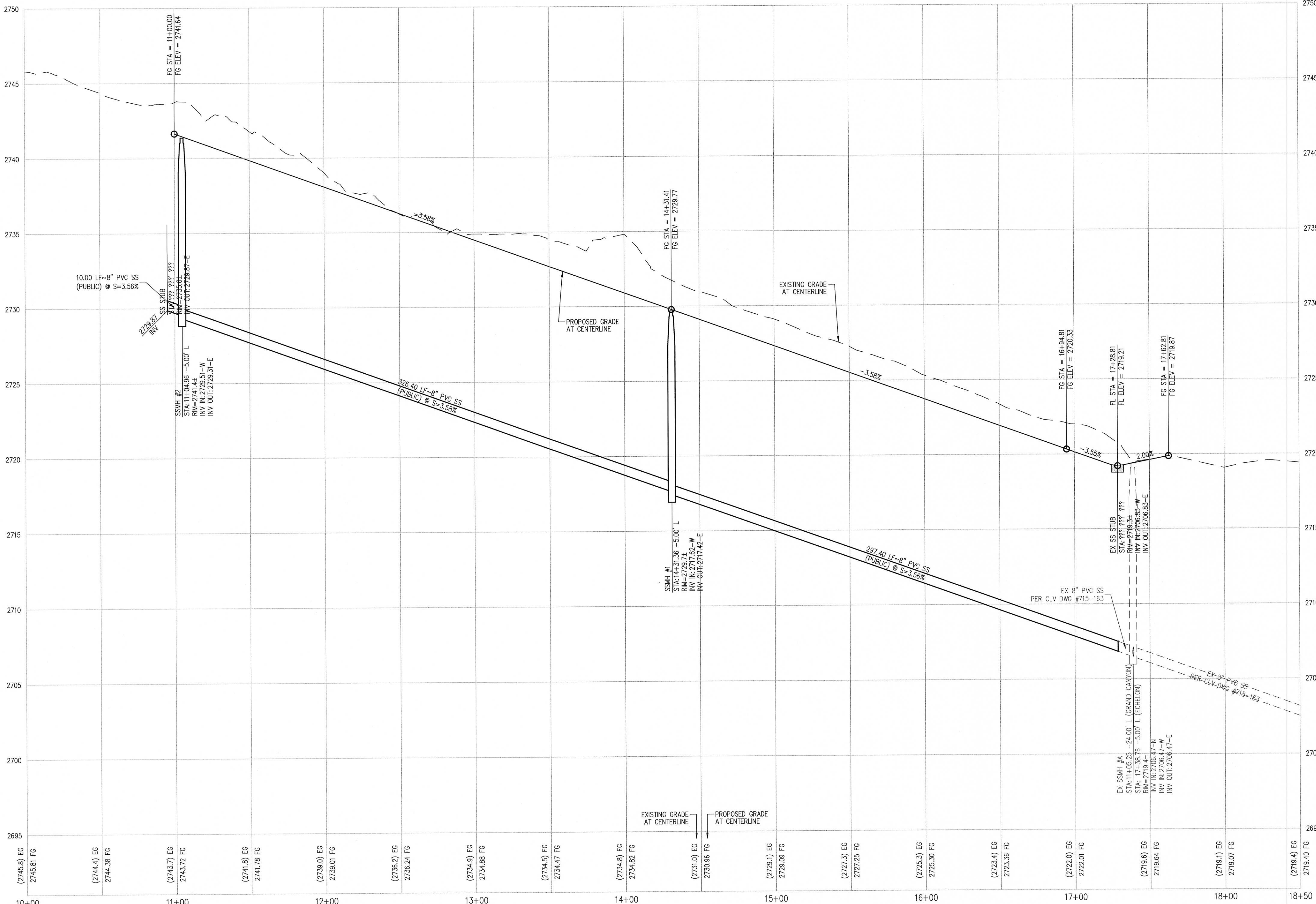
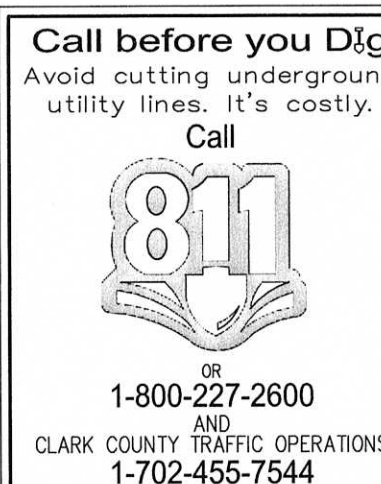
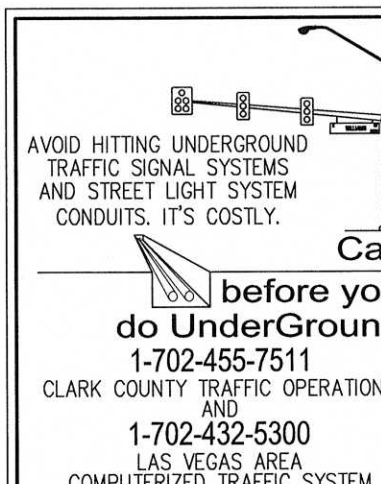
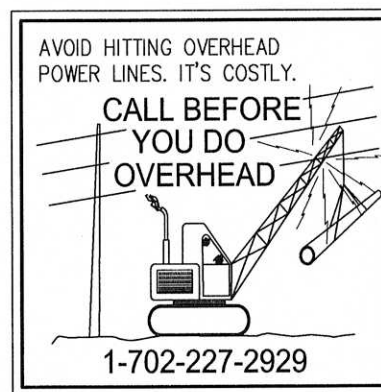
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE 'X', (OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD), PER FIRM PANEL 52003C1745E, DATED SEPTEMBER 27, 2002.

BASIS OF BEARING

NORTH 0°03'58" WEST, BEING THE BEARING OF THE WEST LINE OF THE SOUTHWEST QUARTER (SW1/4) OF THE NORTHEAST QUARTER (NE1/4) OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 132, PAGE 11 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK NUMBER: 6LV8019C4
RIVET AND PLATE IN TOP OF CURB ON THE NORTHEAST CORNER OF DEER SPRINGS WAY AND GRAND CANYON DRIVE.
ELEVATION: 2724.21 US SURVEY FEET (NAVD88)
850.340 METERS
PER CITY OF LAS VEGAS BENCHMARKS, 2008 ADJUSTMENT (UPDATED MAY 24, 2010)



PROFILE
HOR. : 1"=40'
VERT. : 1"=4'

SLATER HANIFAN GROUP

CONSULTING ENGINEERS & PLANNERS

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

CITY OF LAS VEGAS, NV

RICHMOND AMERICAN HOMES

CONNOR HILLS

PLAN AND PROFILE - ECHELON POINT DR

DATE: 10/14/14

DRAFTER: CZ

DESIGNER: CZ

CHECKED: TJS

PROJECT NO. **RAH1310**

PP-4

SHEET 8 OF ----

