

DS #: 4985

APN: 162.03-513-008

PROJECT: Huntbridge Shopping Center - New Comm. Pads

SUBMITTAL: 1st

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 29, 2018
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:	COPIES TO:
	Huntridge Shopping Center – New Commercial Pads	Lochsa Engineering
Cross Streets:	SWC Maryland Pkwy & Charleston Blvd	Ten 15 Huntridge LLC
File Number:	F:\Depot\DSMemos\DS4985A.doc	Bart Anderson, P.E., DevCo
Parcel Number:	162-03-513-008	CCRFCD
Zoning Action:	SDR-72792, VAR-72791	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES NO X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	5/7/2018	5/24/2018	See Comments Below	\$400.00	495653 \$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.

1. Add calculation results for hydraulic cross-section 2 to Appendix B of report.
2. Add existing storm drain facilities in perimeter streets to improvement plans.
3. 10-year, 6-hour Street Flow Summary table on sheet DR1 incorrectly reports dry lane width as 45.19 feet. Revise to reflect actual dry lane width.

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/nw

T/R/S: T21S/R61E/S03
AREA R-03

Technical Drainage Study for Huntridge Shopping Center New Commercial Pads

May, 2018

Prepared for:

Ten 15 Huntridge, LLC
985 White Drive, Suite 100
Las Vegas, Nevada 89119
(702) 733-3622

Prepared by:

Lochsa Engineering
6345 South Jones Boulevard, Suite 100
Las Vegas, Nevada 89118
(702) 365-9312

Lochsa Job No. 181010

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Huntridge Shopping Center New Commercial Pads Date: May 2, 2018

Location of Development: a) Descriptive (Cross Streets) North/South: Maryland Parkway
East/West: Charleston Blvd.

b) Section: 3 Township: 21S Range: 61E

c) APN : 162-03-513-008

Name of Owner: Ten 15 Huntridge LLC

Telephone No.: (702) 733-3622 Fax No.: _____ E-Mail Address: _____

Address: 985 White Drive, Suite 100 Las Vegas, NV 89119

Contact Person-Name: Chris Blake, EI Telephone No.: (702) 365-9312

* E-Mail Address: chris.blake@lochsa.com Fax No.: (702) 365-9317

Firm: Lochsa Engineering

Address: 6345 South Jones Boulevard, Suite 100, 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		

1. Total Owned Land Area: At Site: 4.30+/- Acres Being Developed/Disturbed: 0.93+/- Acres

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

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

4. Proposed type of development (Residential, Commercial, Etc.): Commercial buildings on a dirt rough-graded pad

5. Approximate upstream land area which drains to the subject site: 140+/- 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: to the east to Maryland Parkway

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



Engineer's Seal

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

*New Required Field

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

Revision	Date

Local Entity File No. _____

REFERENCE:

STANDARD FORM 1

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

Project Name: <u>HUNTRIDE SHOPPING CENTER</u>	Map ID:	
Firm Name: <u>LOCHSA ENGINEERING</u>	Engineer: <u>JULIA IZZOLO, PE</u>	
Address: <u>6345 S. JONES BLVD., STE. 100</u>		
City: <u>LAS VEGAS</u>	State: <u>NV</u>	Zip: <u>89118</u>
Phone Number: <u>(702) 365-9312</u>	Fax Number: <u>(702) 365-9317</u>	
Property Owner: <u>TEN 15 HUNTRIDGE, LLC</u>		
Address: <u>985 WHITE DR., ST. 100</u>		
City: <u>LAS VEGAS</u>	State: <u>NV</u>	Zip: <u>89119</u>
Reviewed By:	Date Received:	Date Accepted for Review:

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

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

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

I. GENERAL REQUIREMENT

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

II. MAPS AND EXHIBITS

Yes	No	
☒	☐	A copy of a current Flood Insurance Rate Map (FIRM) with the site delineated.
☒	☐	A copy of the current CCRFCD Master Plan Update Figure, (F-x), for Flood Control Facilities and Environmental areas with the site delineated.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

II. MAPS AND EXHIBITS (Continued)

Yes	No	
☒	☐	Off-site drainage basin maps for existing, interim and future conditions showing the existing topography, basin boundaries, concentration points, and flows in cfs.
☒	☐	On-site drainage basin maps for existing and proposed conditions showing the existing topography, basin boundaries, concentration points, and on-site and off-site flows in cfs.
☒	☐	Vicinity Map with local and major cross streets identified and a north arrow.

III. DRAINAGE PLAN

Yes	No	
☒	☐	Sheet size: 24" x 36" sealed by a registered engineer in the State of Nevada.
☒	☐	Minimum scale: 1" = 60'.
☒	☐	Project name.
☒	☐	Vicinity Map with local and major cross streets.
☒	☐	Revision box.
☒	☐	North arrow and bar scale.
☒	☐	Engineer's/consultant's address and phone number.
☒	☐	Elevation datum and benchmark.
☒	☐	Legend for symbols and abbreviations.
☒	☐	Cut/fill scarps, where applicable.
☒	☐	Street names, grades, widths.
☒	☐	Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street.
☒	☐	Existing contours encompassing the site and 100 feet beyond with spot elevations for important locations, where appropriate.
☒	☐	Minimum finish floor elevations with top-of-curb elevations at upstream end of lot.
☒	☐	Proposed typical street sections.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
☒	☐	Streets with off-set crowns.
☒	☐	Proposed contours or spot elevations in sufficient detail to exhibit intended drainage patterns and slopes.
☒	☐	Property lines.
☒	☐	Right-of-way lines and widths, existing and proposed.
☒	☐	Existing improvements and their elevations.
☒	☐	Delineation of proposed on-site drainage basins indicating area and 10-year and 100-year storm peak flows at basin concentration points.
☒	☐	Concentration points and drainage flow direction with Q_{100} and V_{100} and D_{100} in streets.
☒	☐	Cumulative flows, velocity, and direction of flow at upstream and downstream ends of site for the 10-year and 100-year flows.
☒	☐	Location and cross-section of street capacity calculations.
☐	<u>N/A</u>	Cross-sectional detail for channels, including cutoff wall locations.
☒	☐	Existing and proposed drainage facilities, appurtenances, and connections (i.e., sidewalk, ditches, swales, storm drain systems, unimproved and improved channels, and culverts, etc.) stating size, material, shape, and slope with plan and profile and HGL calculations.
☐	<u>N/A</u>	Existing and proposed drainage easements and widths shown with sufficient detail. A cross sectional detail must be provided that shows appropriate lining and reinforcement.
☐	<u>N/A</u>	Location and detail of existing, proposed, and future block wall openings. Minimum size is 16" x 48". Wrought iron gate is required for flows > 10 cfs.
☐	<u>N/A</u>	Location and detail of flood walls illustrating depth of flow, proposed grouting height, etc.
☐	<u>N/A</u>	Perimeter retaining wall locations. All existing and proposed walls (retaining screen and flood) must be shown with adjacent ground elevations. Flood walls with 8-inch concrete masonry unit.
☒	☐	Building and/or lot numbers.
☐	<u>N/A</u>	Alignment of all existing, proposed, or future Regional Facilities adjacent to the site.
☐	<u>N/A</u>	Limits of existing floodplain based on current FIRM or best available information; limits of proposed floodplains based on best available information.

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
☐	☒ N/A	For areas in Zone A, AE, AH, and AO, base flood elevations (BFEs) must be shown for each lot; BFEs may be listed on each lot, or in a table. Finish floor elevations must be a minimum of 18 inches above BFE.
☒	☐	Appropriately elevated "humps" 6 inches above the 100 year water surface elevation at site accesses where the intent is to protect the site from the Q_{100} flows.
☒	☐	Street slopes for perimeter and interior streets. The minimum slope is 0.4 percent.
☐	☒ N/A	Location and detail of best management practice (BMP) for parking lots and low impact development (LID) (if required).

IV. HYDROLOGIC ANALYSIS

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

REFERENCE:

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

V. HYDRAULIC ANALYSIS

Yes

No

- | | | |
|----------|------------|---|
| _____ | <u>N/A</u> | Flow split calculations and supporting documentation or reference for the method of flow split calculations used. |
| <u>✓</u> | _____ | Normal depth street flow calculations and cross section diagrams for all interior and perimeter streets. Provide "d x v" products for the Q_{100} and Q_{10} flows representing the worst case for interior and all perimeter streets. $Q_{100} d \times v \leq 8$. $Q_{10} d \times v \leq 6$ and 12 foot dry lane for rights-of-way ≥ 80 feet. Calculations must be labeled by street name as indicated on the Grading Plan. |
| <u>✓</u> | _____ | A summary table of interior and exterior street capacity calculations showing the street name, Q_{100} flow, slope, depth of flow, velocity and depth times velocity product and streets needing to meet 12 foot dry lane criteria. |
| _____ | <u>N/A</u> | Appropriate hydraulic calculations for block wall openings assuming a 50 percent vertical clogging factor. (Assume the lower half of the opening is plugged.) |
| _____ | <u>N/A</u> | Appropriate hydraulic calculations at drainage easement entrance and discharge locations to set finish floor elevations. Hydraulic calculations must include submerged weir, superelevation and tee intersection losses, where appropriate. |
| <u>✓</u> | _____ | Provide necessary freeboard requirements to set the finished floor elevations of all proposed buildings, 2 x depth of flow or depth of flow plus 18 inches of freeboard, whichever is less. The minimum requirement is 6 inches above adjacent upstream top of curb. Buildings adjacent to drainage easements must always be provided with 18 inches of freeboard above the Q_{100} weir height or flow depth, whichever is greater. |
| _____ | <u>N/A</u> | A complete water surface profile analysis (HEC-2, HEC-RAS, etc.) for channel flows and FEMA Zone A flood zones. <ul style="list-style-type: none"> • Field survey data. • Input and output information. • Plotted cross-sections based on survey with proper encroachments. • A map showing the location of the cross-sections. • Analysis of both sub and super-critical flow segments. • A summary table and a discussion of the results in the text of the report. |
| _____ | <u>N/A</u> | Provide a 50 percent clogging factor in the capacity calculation for drop inlets. |
| _____ | <u>N/A</u> | Hydraulic calculations for culverts and storm drains. D-Load calculations must be provided for storm drain pipes in public rights-of-way, including headwater pool inundation. |
| <u>✓</u> | _____ | The mitigation of nuisance water, both during construction and in the fully developed condition, must be addressed. |
| _____ | <u>N/A</u> | Provide BMP type, size and supporting calculations for parking lots and LIDs (if required). |

REFERENCE:

STANDARD FORM 2



CITY OF LAS VEGAS

MINIMUM DRAINAGE STUDY CRITERIA STANDARD FORM 2 CHECKLIST SUPPLEMENT

(Revised 5/18/11)

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

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

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

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

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

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

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

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

CITY OF LAS VEGAS MINIMUM DRAINAGE STUDY CRITERIA CHECKLIST

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

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

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

PLANNING REVIEW CONDITIONS

Notice of Final Action

WE WILL NOT HAVE A NOFA UNTIL AFTER THE
CITY COUNCIL HEARING ON MAY 16, 2018.

WE WILL GET YOU THE NOFA ASAP. THANKS

City of Las Vegas

AGENDA MEMO - PLANNING

PLANNING COMMISSION MEETING DATE: APRIL 10, 2018

DEPARTMENT: PLANNING

ITEM DESCRIPTION: APPLICANT/OWNER: TEN15 HUNTRIDGE, LLC

**** STAFF RECOMMENDATION(S) ****

CASE NUMBER	RECOMMENDATION	REQUIRED FOR APPROVAL
SDR-72792	Staff recommends APPROVAL, subject to conditions:	

**** NOTIFICATION ****

NEIGHBORHOOD ASSOCIATIONS NOTIFIED 38

NOTICES MAILED 379

PROTESTS 0

APPROVALS 5

**** CONDITIONS ****

SDR-72792 CONDITIONS

Planning

1. 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.
2. All development shall be in conformance with the site plan and landscape plan, date stamped 03/15/18 and building elevations, date stamped 02/23/18, except as amended by conditions herein.
3. A Waiver from Title 19.08.040(H) is hereby approved, to allow a building setback of 40 feet from residentially zoned property where Residential Adjacency Standards require 84 feet, and to allow a trash enclosure setback of 23 feet where Residential Adjacency Standards require 50 feet.
4. A Waiver from Title 19.12.070 is hereby approved, to allow 167 parking spaces where 198 spaces are required for the shopping center.
5. An Exception from Title 19.08.040 is hereby approved, to allow seven (7) perimeter buffer trees along the east property line adjacent to new development where nine (9) trees are required.
6. 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.
7. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
8. All utility or mechanical equipment shall comply with the provisions of LVMC Title 19 Appendix F Interim Downtown Las Vegas Development Standards, unless approved by a separate Waiver.

Conditions Page Two
April 10, 2018 - Planning Commission Meeting

9. 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 application is made for a building permit. 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. The technical landscape plan shall include the following change from the conceptual landscape plan: 15-gallon trees shall be replaced by 24-inch box trees where shown along the east property line.
10. 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.
11. Prior to the submittal of a building permit application, the applicant shall meet with Department of Planning staff to develop a comprehensive address plan for the subject site. A copy of the approved address plan shall be submitted with any future building permit applications related to the site.
12. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

13. Prior to the issuance of permits, grant a Bus Shelter Pad Easement in conformance with Standard Drawing #234.2 for the existing bus stop on Main Street adjacent to this site unless the Regional Transportation Commission (RTC) acknowledges in writing that this easement is not required. Additionally, grant Public Pedestrian Access Easements for all public sidewalks located outside the public right of way.
14. Correct all Americans with Disabilities Act (ADA) deficiencies, if any, on the sidewalk along Maryland Parkway adjacent to this site in accordance with code requirements of Title 13.56.040 to the satisfaction of the City Engineer concurrent with development of this site. All existing paving damaged or removed by this development shall be restored at its original location and to its original width concurrent with development of this site. The "pan style" driveways on Maryland Parkway may remain as long as the sidewalk path along Maryland Parkway complies with Americans with Disabilities Act (ADA) guidelines.
15. Landscape and maintain all unimproved rights-of-way, if any, 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.

Conditions Page Three
April 10, 2018 - Planning Commission Meeting

16. A Traffic Impact Analysis 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 subdividing this site, whichever may occur first. Comply with the recommendations of the approved Traffic Impact Analysis prior to occupancy of the site. The Traffic Impact Analysis shall also include a section addressing Standard Drawings #234.1 #234.2 and #234.3 to determine additional right-of-way requirements for bus turnouts adjacent to this site, if any; dedicate all areas recommended by the approved Traffic Impact Analysis. All additional rights of way required by Standard Drawing #201.1 for exclusive right turn lanes and dual left turn lanes shall be dedicated prior to or concurrent with the commencement of on site development activities unless specifically noted as not required in the approved Traffic Impact Analysis. Phased compliance will be allowed if recommended by the approved Traffic Impact Analysis. No recommendation of the approved Traffic Impact Analysis, nor compliance therewith, shall be deemed to modify or eliminate any condition of approval imposed by the Planning Commission or the City Council on the development of this site.
17. 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 or submittal of any construction drawings, 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.

Staff Report Page One
April 10, 2018 - Planning Commission Meeting

**** STAFF REPORT ****

PROJECT DESCRIPTION

The applicant is proposing to add two single-story commercial pad buildings (labeled as Buildings 3 and 4 on the submitted site plan) totaling 4,015 square feet in an existing shopping center located at the southwest corner of Charleston Boulevard and Maryland Parkway. A drive through lane is proposed on the east side of both buildings, but only Building 3 will contain a pick-up service window. Additional landscaping is proposed along the east property line.

ISSUES

- The site is located within Area 2 of the Downtown Las Vegas Overlay District. As such, it is subject to the requirements of LVMC Title 19.10.110. Where proposed plans deviate from these standards, they may be waived by the City Council when clear and convincing evidence is shown supporting the Vision 2045 Downtown Las Vegas Master Plan.
- A Waiver of Title 19.08.040 Residential Adjacency Standards is required to allow a 40-foot building setback from R-1 (Single Family Residential) zoned property where the standards require a minimum setback of 84 feet. Staff supports this waiver.
- A Waiver of Title 19.08.040 Residential Adjacency Standards is required to allow a 23-foot trash enclosure setback from R-1 (Single Family Residential) zoned property where the standards require a minimum setback of 50 feet. Staff supports this waiver.
- A Waiver of Title 19.12.070 is required to allow 167 parking spaces where 198 spaces are required for the shopping center. Staff supports this waiver.
- A Waiver of Title 19.08.070 is required to allow an eight-foot wide perimeter landscape buffer where 15 feet is required. Staff supports this waiver.
- An Exception of Title 19.08.040 is approved to allow seven trees in the landscape buffer along Maryland Parkway where nine trees are required.
- A condition of approval requires the technical landscape plan to show 24-inch box trees in lieu of 15-gallon sized trees.

ANALYSIS

The pad sites will replace a demolished commercial building located at 1122 South Maryland Parkway and its associated parking. No additional parking spaces are proposed in conjunction with the new construction. The site is parking impaired,

Staff Report Page Two
April 10, 2018 - Planning Commission Meeting

meaning that the parking provided conformed to code requirements at the time of initial construction but no longer conforms to updated codes. As the site contains various commercial uses exceeding 25,000 square feet functioning as a unit, the parking standard of one space per 250 square feet of gross floor area is applied. The proposed additional 4,015 square feet of commercial uses would require an additional 17 parking spaces. The applicant has opted to provide a new parking baseline for the entire shopping center with this project, to establish the remaining 167 spaces as adequate for the commercial uses, which will require approval of a waiver. This is a 15.6% deviation from the required number of spaces.

The Vision 2045 Downtown Las Vegas Master Plan indicates the corner of Charleston Boulevard and Maryland Parkway as a “secondary lifestyle hub,” which has as its focus the provision of diverse housing types and community amenities, which can include commercial services. As a future transit hub for Downtown Las Vegas, it is anticipated that fewer commercial patrons in this area will use their personal vehicles to get around. The onsite parking that would remain for this site after construction of the proposed pads should therefore be sufficient to meet the needs of the shopping center.

The site is located within Area 2 of the Downtown Las Vegas Overlay District, which requires conformance with LVMC Title 19 development standards. Deviations from the standards contained within Title 19 require the approval of a Waiver by the City Council. Three such waivers are included with this request, including a decrease in the amount of required parking, a decrease in the side yard building setback due to residential adjacency and a decrease in the setback of the proposed trash enclosure from an existing residential property. An additional waiver is necessary to allow a reduced landscape buffer width along the east property line.

According to Title 19.08.040 and 19.18.010, property is “adjacent” to other property if the properties share a common property line or are separated only by a street right-of-way or easement. In this case, a public alley separates the subject property from a residential property zoned R-1 (Single Family Residential). The proposed Building 4 would be 45 feet from the nearest R-1 zoned property south of the alley at a height of approximately 28 feet. The buildings vary in height from 15-25 feet due to a swooping roofline that connects the two buildings to form a covered patio in the middle. The elevation is at its highest on the ends of the buildings. The curved roof element adds another three feet to the height. The building would be in direct view of a nonresidential building in a nonresidential zoning district [C-D (Designed Commercial)]. The single family residence most impacted is located behind a six-foot wall and is screened from clear view of the proposed building by a large tree in the back yard. The proposed building is of similar height to the existing retail building along the south alley and therefore maintaining the physical character of the shopping center. For these reasons,

Staff Report Page Three
April 10, 2018 - Planning Commission Meeting

staff supports the waiver of residential adjacency building setback. Likewise, the proposed trash enclosure would be located along the south alley away from Maryland Parkway and again screened from view of the adjacent residential properties. Staff also supports this waiver.

A new landscape buffer is proposed along Maryland Parkway adjacent to the new pad sites. This buffer ranges in depth from eight to 15 feet from the back of the sidewalk. The reduction is due to relocation of the existing bus stop along Maryland Parkway from the sidewalk. As this is the ideal location for the bus stop, staff supports the waiver to reduce the landscape buffer.

The buffer along the east property line contains 15-gallon Palo Verde trees as the main feature, with various shrubs and groundcover as complements. Because of the relocation of the bus stop, fewer trees are able to be provided, and staff supports an Exception for seven trees where nine trees are required in this area. However, Title 19 requires these trees to be of 24-inch box size to provide additional canopy for the adjacent sidewalk once mature, and there is nothing about the site that warrants a smaller tree size. A condition of approval will require the 15-gallon trees indicated on the landscape plan to be replaced by 24-inch box trees.

The provided building elevations are visually interesting and compatible with the existing shopping center and adjacent development. They feature a swooping roof design that connects both pad buildings and creates a 554 square-foot interior covered patio area. The proposed drive through will be screened from rights-of-way through the use of landscaping as required by the Drive Through use.

As the proposed commercial pad development will be integrated into the existing shopping center, and the deviations from Title 19 are justified through the policies of the Vision 2045 Downtown Las Vegas Master Plan to concentrate commercial investment into identified urban hubs with an emphasis on walkable neighborhoods, staff recommends approval subject to conditions.

FINDINGS (SDR-72792)

In order to approve a Site Development Plan Review application, per Title 19.16.100(E) the Planning Commission and/or City Council must affirm the following:

- 1. The proposed development is compatible with adjacent development and development in the area;**

Staff Report Page Four
April 10, 2018 - Planning Commission Meeting

The proposed retail/restaurant pad development will be integrated into the existing shopping center, which contains similar uses. The proposed drive through will be screened from rights-of-way.

- 2. The proposed development is consistent with the General Plan, this Title, and other duly-adopted city plans, policies and standards;**

The proposed Building 4 setback and the proposed trash enclosure setback do not meet Title 19 Residential Adjacency Standards, and no additional parking is provided while some existing parking will be displaced by proposed development. In addition, the proposed landscape buffer along the east property line will be less than 15 feet for a portion of its length. Waivers of these standards are required and supported by staff. The proposed development furthers the Community Resources and Services Policy of the Vision 2045 Downtown Master Plan by attempting to integrate commercial amenities such as shopping, dining and personal services within walkable transit hubs.

- 3. Site access and circulation do not negatively impact adjacent roadways or neighborhood traffic;**

Access to the site will not be modified, and thus there should be little to no impact to neighborhood traffic. The pad sites can be approached from both a driveway and alley from southbound Maryland Parkway, with secondary access coming from Charleston Boulevard through the north side of the shopping center. The drive through design will contain adequate queuing space and minimize vehicle conflicts.

- 4. Building and landscape materials are appropriate for the area and for the City;**

The number and species of plants are drought tolerant and appropriate for this area; however, the trees in the proposed landscape buffer along the east property line are shown as 15-gallon size, which is not in conformance with the size requirements of Title 19. A condition of approval has been included to require compliance with these requirements.

- 5. Building elevations, design characteristics and other architectural and aesthetic features are not unsightly, undesirable, or obnoxious in appearance; create an orderly and aesthetically pleasing environment; and are harmonious and compatible with development in the area;**

The provided building elevations are visually interesting and compatible with the existing shopping center and adjacent development.

Staff Report Page Five
April 10, 2018 - Planning Commission Meeting

6. **Appropriate measures are taken to secure and protect the public health, safety and general welfare.**

Site development is subject to building permit review and inspection, thereby protecting the public health, safety and general welfare.

BACKGROUND INFORMATION

<i>Related Relevant City Actions by Planning, Fire, Bldg., etc.</i>	
07/21/93	The City Council approved a Variance (V-0052-93) to allow the secondhand sale of clothing, furniture and household items where a Secondhand Dealer use is not permitted on property located at 1110 East Charleston Boulevard. The Board of Zoning Adjustment recommended approval while staff recommended denial.
08/23/94	The Board of Zoning Adjustment approved a Variance (V-0111-94) to allow a proposed freestanding sign to be 80 feet from an existing freestanding on-premise sign where a 100-foot separation distance is required at 1122 East Charleston Boulevard. Staff recommended denial.
10/19/94	The City Council approved a Special Use Permit (U-0205-94) for the sale of Beer/Wine/Cooler Off-Sale Establishment use within an existing grocery store on property located at 1110 East Charleston Boulevard. Planning Commission and staff recommended approval. This use has since expired.
04/14/15	The Planning Commission approved a Special Use Permit (SUP-58109) for a proposed Beer/Wine/Cooler Off-Sale Establishment Use within a proposed 20,623 square-foot General Retail Store [Grocery Store] with a Waiver to allow a 245-foot distance separation from a city park where 400 feet is required at 1110 East Charleston Boulevard. Staff recommended approval.
06/14/16	The Planning Commission approved a Variance (VAR-64466) to allow a proposed 60-foot tall freestanding sign where 40 feet is allowed and to allow 1,032 square feet of signage area where 898 square feet is allowed on 4.30 acres at the southwest corner of Charleston Boulevard and Maryland Parkway. Staff recommended denial.
09/13/16	The Planning Commission approved a Special Use Permit (SUP-65847) for a proposed Beer/Wine/Cooler On-Sale Establishment use within a proposed Restaurant with a 150-foot distance separation from a City Park where 400 feet is required at 1122 East Charleston Boulevard. Staff recommended approval.

Staff Report Page Six
April 10, 2018 - Planning Commission Meeting

<i>Related Relevant City Actions by Planning, Fire, Bldg., etc.</i>	
02/21/17	Department of Planning staff administratively approved a Minor Amendment of an approved Special use Permit (SUP-65847) to add a 264 square-foot outdoor seating area for a 2,100 square-foot Beer/Wine/Cooler On-Sale Establishment use at 1124 East Charleston Boulevard.
12/12/17	The Planning Commission approved a Variance (VAR-71970) to allow a proposed 45-foot tall freestanding sign where 40 feet is allowed, to allow 1,404 square feet of signage area along Charleston Boulevard where 1,032 square feet is allowed, to allow two canopy signs to extend above the edge of the canopy where such is not allowed, the area of the canopy signs to exceed 51 percent of the canopy faces where 20 percent is allowed and a wall sign to extend six feet above the top of the building wall where 12 inches is allowed on 4.30 acres at 1140 East Charleston Boulevard. Staff recommended denial.

<i>Most Recent Change of Ownership</i>	
10/07/15	A deed was recorded for a change in ownership.

<i>Related Building Permits/Business Licenses</i>	
11/18/15	A building permit (304957) was issued for demolition of an existing commercial building at 1122 South Maryland Parkway. A final inspection has not been completed.
12/06/16	A building permit (331334) was issued for a wall sign for a proposed restaurant at 1124 East Charleston Boulevard. A final inspection has not been completed.
01/11/17	A building permit (331404) was issued for a tenant improvement at 1124 East Charleston Boulevard. A final inspection has not been approved.
03/27/17	A building permit (331127) was issued for a proposed 2,167 square-foot Restaurant at 1124 East Charleston Boulevard. A final inspection was approved on 05/23/17.

<i>Pre-Application Meeting</i>	
02/20/18	A pre-application meeting was held with the applicant, where the submittal requirements for the proposed development were discussed. The Huntridge Center was previously determined to be parking impaired; therefore, the additional spaces needed to accommodate the new development will require a waiver of Title 19 parking standards.

Staff Report Page Seven
April 10, 2018 - Planning Commission Meeting

<i>Neighborhood Meeting</i>

A neighborhood meeting was not required, nor was one held.
--

<i>Field Check</i>

03/09/18	The subject site contains an existing shopping center containing a large retail building and a corner convenience store with fuel pumps. A third building located on Maryland Parkway was demolished in the area that is the subject of this request.
----------	---

<i>Details of Application Request</i>
--

<i>Site Area</i>

Net Acres	4.30
-----------	------

<i>Surrounding Property</i>	<i>Existing Land Use Per Title 19.12</i>	<i>Planned or Special Land Use Designation</i>	<i>Existing Zoning District</i>
Subject Property	Shopping Center	C (Commercial)	C-2 (General Commercial)
North	Auto Repair Minor	C (Commercial)	C-2 (General Commercial)
	Restaurant		
	General Retail Store, Other Than Listed		
South	Single Family, Detached	L (Low Density Residential)	R-1 (Single Family Residential)
	General Retail Store, Other than Listed	SC (Service Commercial)	C-D (Designed Commercial)
East	General Retail Store, Other than Listed	C (Commercial)	C-2 (General Commercial)
West	Office, Other than Listed	C (Commercial)	C-1 (Limited Commercial)
	Single Family, Detached	L (Low Density Residential)	R-1 (Single Family Residential)

Staff Report Page Eight
April 10, 2018 - Planning Commission Meeting

Master and Neighborhood Plan Areas	Compliance
No Applicable Master Plan Area	N/A
Special Area and Overlay Districts	Compliance
Downtown Las Vegas Overlay District (DTLV-O) – Area 2	*Y
Other Plans or Special Requirements	Compliance
Trails	N/A
Las Vegas Redevelopment Plan Area	Y
Interlocal Agreement	N/A
Project of Significant Impact (Development Impact Notification Assessment)	N/A
Project of Regional Significance	N/A

*The applicant has requested waivers to several development standards, however staff supports these waivers as they support the Vision 2045 Downtown Las Vegas Master Plan.

DEVELOPMENT STANDARDS

Pursuant to Title 19.08 and the Interim Downtown Las Vegas Development Standards, the following standards apply:

Standard	Required/Allowed	Provided	Compliance
Min. Lot Size	N/A	187,308 SF	N/A
Min. Lot Width	100 Feet	378 Feet	Y
Min. Building Setbacks*			
• Front	10 Feet	32 Feet	Y
• Side	10 Feet	20 Feet	Y
• Corner	10 Feet	208 Feet	Y
• Rear	20 Feet	452 Feet	Y
Max. Lot Coverage	50 %	34 %	Y
Max. Building Height	N/A	29 Feet	N/A
Trash Enclosure	Screened, Gated, w/ a Roof or Trellis	Screened, Gated, w/ a Roof or Trellis	By condition
Mech. Equipment	Screened	Screened	Y

*Building setbacks apply only to the proposed buildings, not to any established buildings.

Staff Report Page Nine
April 10, 2018 - Planning Commission Meeting

Residential Adjacency Standards	Required/Allowed	Provided	Compliance
3:1 proximity slope setback	84 Feet	45 Feet	N*
Adjacent development matching setback	20 Feet	45 Feet	Y
Trash Enclosure setback	50 Feet	23 Feet	N*

*Pursuant to Title 19 Appendix F (Interim Downtown Las Vegas Area 2 Development Standards), the residential adjacency standards of Title 19.08.040 are applied. Proposed building heights located within the Residential Adjacency Setback as defined in Title 19.08.040(H) will require a waiver.

Pursuant to Title 19.08, the following standards apply:

Landscaping and Open Space Standards				
Standards	Required		Provided	Compliance
	Ratio	Trees		
Buffer Trees:				
• East	1 Tree / 20 Linear Feet	9 Trees	7 Trees	*N
TOTAL PERIMETER TREES		9 Trees	7 Trees	* N
Parking Area Trees	1 Tree / 6 Uncovered Spaces, plus 1 tree at the end of each row of spaces	No new trees required	0 Trees	N/A
LANDSCAPE BUFFER WIDTHS				
Min. Zone Width				
• East	15 Feet		15 Feet	Y
• South	0 Feet		0 Feet	Y
Wall Height	6 to 8 Feet Adjacent to Residential		No walls proposed; adjacent to alley	Y

*The applicant has requested an exception to allow 7 trees within the east perimeter buffer where 9 trees are required. Staff supports the exception as it allows a bus shelter for mass transit facilities.

Staff Report Page Ten
April 10, 2018 - Planning Commission Meeting

Street Name	Functional Classification of Street(s)	Governing Document	Actual Street Width (Feet)	Compliance with Street Section
Charleston Boulevard	Primary Arterial	Master Plan of Streets and Highways Map	102	Y
Maryland Parkway	Primary Arterial	Master Plan of Streets and Highways Map	110	Y

Pursuant to Title 19.08 and 19.12, the following parking standards apply (building numbers are as shown on the submitted site plan date stamped 03/15/18):

Parking Requirement - Downtown							
Use	Gross Floor Area or Number of Units	Base Parking Requirement		Provided		Compliance	
		Parking Ratio	Parking		Parking		
			Regular	Handi-capped	Regular		Handi-capped
Shopping Center	Existing Building 1: 56,252 sf	1 space per 250 SF GFA	181*				
	Existing Building 2: 2,909 sf						
	Proposed Buildings 3 and 4: 4,015 sf	1 space per 250 SF GFA	17				
TOTAL SPACES REQUIRED			198		167		N*
Regular and Handicap Spaces Required			192	6	156	11	N*

*The shopping center development is parking impaired per Title 19.18.030. The current parking requirement is 181 parking spaces, based on the existing number of spaces in the shopping center as confirmed through SUP-65847. A Waiver to allow 167 spaces where 198 spaces are required in the shopping center is requested and is supported by staff.

Staff Report Page Eleven
April 10, 2018 - Planning Commission Meeting

<i>Waivers</i>		
<i>Requirement</i>	<i>Request</i>	<i>Staff Recommendation</i>
Total parking requirement of 198 spaces	To allow 167 parking spaces in the shopping center	Approval
Residential adjacency building setback of 84 feet	To allow Building 4 a residential adjacency setback of 40 feet	Approval
Residential adjacency trash enclosure setback of 50 feet	To allow a trash enclosure setback of 23 feet	Approval
Landscape buffers adjacent to rights-of-way shall be a minimum of 15 feet in width	To allow an 8-foot buffer along a portion of the east PL	Approval

<i>Exceptions</i>		
<i>Requirement</i>	<i>Request</i>	<i>Staff Recommendation</i>
24-inch box size trees	To allow 15-gallon size trees	Denial
1 tree per 20 feet on center in buffer zones (9 trees required)	To allow 7 perimeter buffer trees	Approval



PLANNING COMMISSION AGENDA

COUNCIL CHAMBERS · 495 SOUTH MAIN STREET · PHONE 229-6011

CITY OF LAS VEGAS INTERNET ADDRESS: www.lasvegasnevada.gov

LAS VEGAS CITY COUNCIL

Mayor Carolyn G. Goodman, (At-Large)
 Mayor Pro-Tem Lois Tarkanian, (Ward 1)
 Councilman Stavros S. Anthony, (Ward 4)
 Councilman Bob Coffin, (Ward 3)
 Councilman Steven G. Seroka, (Ward 2)
 Councilwoman Michele Fiore, (Ward 6)
 Vacant (Ward 5)
 City Manager Scott D. Adams

COMMISSIONERS

Sam Cherry, Chair
 Vicki Quinn, Vice Chair
 Trinity Haven Schlottman
 Donna Toussaint
 Christina E. Roush
 Louis De Salvio

Facilities are provided throughout City Hall for convenience of persons with disabilities. For meetings held in the Council Chambers, sound equipment is available for persons with hearing impairments. Reasonable efforts will be made to assist and accommodate persons with disabilities or impairments. If you need an accommodation to attend and participate in this meeting, please call the DEPARTMENT DESIGNEE at 702-229-6301 and advise of your need at least 48 hours in advance of the meeting. Dial 7-1-1 for Relay Nevada.

April 10, 2018

6:00 PM

ITEMS MAY BE TAKEN OUT OF THE ORDER PRESENTED AT THE DISCRETION OF THE CHAIRPERSON. TWO OR MORE AGENDA ITEMS FOR CONSIDERATION MAY BE COMBINED; AND ANY ITEM ON THE AGENDA MAY BE REMOVED OR RELATED DISCUSSION MAY BE DELAYED AT ANY TIME. BACKUP MATERIAL FOR THIS AGENDA MAY BE OBTAINED FROM MILAGROS ESCUIN, DEPARTMENT OF PLANNING, 333 NORTH RANCHO DRIVE, 3RD FLOOR, (702)-229-6301 OR ON THE CITY'S WEBPAGE AT www.lasvegasnevada.gov.

NOTICE: This meeting has been properly noticed and posted at the following locations:

City Hall, 495 South Main Street, 1st Floor
 Clark County Government Center, 500 South Grand Central Parkway
 Grant Sawyer Building, 555 East Washington Avenue
 City of Las Vegas Development Services Center, 333 North Rancho Drive

ACTIONS: ALL ACTIONS EXCEPT GENERAL PLAN AMENDMENTS, REZONINGS AND RELATED CASES THERETO ARE FINAL UNLESS AN APPEAL IS FILED BY THE APPLICANT OR AN AGGRIEVED PERSON, OR A REVIEW IS REQUESTED BY A MEMBER OF THE CITY COUNCIL WITHIN TEN DAYS AND PAYMENT OF THOSE COSTS SHALL BE MADE UPON FILING OF THE APPLICATION.

ANY ITEM LISTED IN THIS AGENDA MAY BE TAKEN OUT OF ORDER IF SO REQUESTED BY THE APPLICANT, STAFF, OR A MEMBER OF THE PLANNING COMMISSION AND AGREED TO BY THE PLANNING COMMISSION. THE PLANNING COMMISSION MAY IMPOSE TIME LIMITATIONS, AS NECESSARY, ON THOSE PERSONS WISHING TO BE HEARD ON ANY AGENDAED ITEM.

PLANNING COMMISSION MEETING RULES OF CONDUCT:

1. Staff will present each item to the Commission in order as shown on the agenda, along with a recommendation and suggested conditions of approval, if appropriate.
2. The applicant is asked to be at the public microphone during the staff presentation. When the staff presentation is complete, the applicant should state his name and address, and indicate whether or not he accepts staff's conditions of approval.
3. If areas of concern are known in advance, or if the applicant does not accept staff's condition, the applicant or his representative is invited to make a brief presentation of his item with emphasis on any items of concern.
4. Persons other than the applicant who support the request are invited to make brief statements after the applicant. If more than one supporter is present, comments should not be repetitive. A representative is welcome to speak and indicate that he speaks for others in the audience who share his view.
5. Objectors to the item will be heard after the applicant and any other supporters. All who wish to speak will be heard, but in the interest of time it is suggested that representatives be selected who can summarize the views of any groups of interested parties.
6. After all objectors' input has been received; the applicant will be invited to respond to any new issues raised.
7. Following the applicant's response, the public hearing will be closed; Commissioners will discuss the item amongst themselves, ask any questions they feel are appropriate, and proceed to a motion and decision on the matter.
8. Letters, petitions, photographs and other submissions to the Commission will be retained for the record. Large maps, models and other materials may be displayed to the Commission from the microphone area, but need not be handed in for the record unless requested by the Commission.

As a courtesy, we would ask those not speaking to be seated and not interrupt the speaker or the Commission. We appreciate your courtesy and hope you will help us make your visit with the Commission a good and fair experience.

BUSINESS ITEMS:

1. [CALL TO ORDER](#)
2. [ANNOUNCEMENT: COMPLIANCE WITH OPEN MEETING LAW](#)
3. [ROLL CALL](#)
4. [PUBLIC COMMENT DURING THIS PORTION OF THE AGENDA MUST BE LIMITED TO MATTERS ON THE AGENDA FOR ACTION. IF YOU WISH TO BE HEARD, COME TO THE PODIUM AND GIVE YOUR NAME FOR THE RECORD. THE AMOUNT OF DISCUSSION, AS WELL AS THE AMOUNT OF TIME ANY SINGLE SPEAKER IS ALLOWED, MAY BE LIMITED](#)
5. [FOR POSSIBLE ACTION TO APPROVE THE FINAL MINUTES FOR THE PLANNING COMMISSION MEETING OF MARCH 13, 2018.](#)
6. [FOR POSSIBLE ACTION - Any Items from the Planning Commission, staff and/or the applicant wish to be stricken or held in abeyance to a future meeting may be brought forward and acted upon at this time.](#)

CONSENT ITEMS:

CONSENT ITEMS ARE CONSIDERED ROUTINE BY THE PLANNING COMMISSION AND MAY BE ENACTED BY ONE MOTION. HOWEVER, ANY ITEM MAY BE DISCUSSED IF A COMMISSION MEMBER OR APPLICANT SO DESIRES.

7. **EOT-72763 - EXTENSION OF TIME - SPECIAL USE PERMIT - APPLICANT/OWNER: DURANGO I-95, LLC -**
For possible action on a request for an Extension of Time of an approved Special Use Permit (SUP-64857) FOR A PROPOSED 75,000 SQUARE-FOOT MINI-STORAGE FACILITY on 4.81 acres at 7737 North El Capitan Way (APN 125-17-214-001), T-C (Town Center) Zone [SC-TC (Service Commercial - Town Center) Special Land Use Designation], Ward 6 (Fiore). Staff recommends APPROVAL.
8. **EOT-72748 - EXTENSION OF TIME RELATED TO EOT-72763 - SITE DEVELOPMENT PLAN REVIEW -**
APPLICANT/OWNER: DURANGO I-95, LLC - For possible action on a request for an Extension of Time of an approved Site Development Plan Review (SDR-64859) FOR A PROPOSED 75,000 SQUARE-FOOT MINI-STORAGE FACILITY on 4.81 acres at 7737 North El Capitan Way (APN 125-17-214-001), T-C (Town Center) Zone [SC-TC (Service Commercial - Town Center) Special Land Use Designation], Ward 6 (Fiore). Staff recommends APPROVAL.
9. **TMP-72766 - TENTATIVE MAP - SKYE CANYON II PARCEL 2.14 - APPLICANT: NINETY-FIVE**
MANAGEMENT, LLC - OWNER: KAG DEVELOPMENT WEST, LLC - For possible action on a request for a Tentative Map FOR A 61-LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION on 12.25 acres on the northwest corner of Eagle Canyon Drive and Skye Village Road (APN 125-12-710-002), T-D (Traditional Development) Zone [L (Residential Low) Kyle Canyon Special Land Use Designation], Ward 6 (Fiore) [PRJ-72678]. Staff recommends APPROVAL.

ONE MOTION - ONE VOTE

THE FOLLOWING ARE ITEMS THAT MAY BE CONSIDERED IN ONE MOTION/ONE VOTE. THEY ARE CONSIDERED ROUTINE NON-PUBLIC AND PUBLIC HEARING ITEMS. ALL PUBLIC HEARINGS AND NON-PUBLIC HEARINGS WILL BE OPENED AT ONE TIME. ANY PERSON REPRESENTING AN APPLICATION OR A MEMBER OF THE PUBLIC OR A MEMBER OF THE PLANNING COMMISSION NOT IN AGREEMENT WITH THE CONDITIONS AND ALL STANDARD CONDITIONS FOR THE APPLICATION RECOMMENDED BY STAFF, SHOULD REQUEST TO HAVE THAT ITEM REMOVED FROM THIS PART OF THE AGENDA.

10. **SUP-72749 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: SUMMERLIN RANCH PLAZA, LLC -**
For possible action on a request for a Special Use Permit FOR A PROPOSED 5,320 SQUARE-FOOT GAMING (RESTRICTED) USE at 9436 West Lake Mead Boulevard, Suites #1-5 (APN 138-18-821-009), P-C (Planned Community) Zone, Ward 4 (Anthony) [PRJ-72682]. Staff recommends APPROVAL.
11. **SUP-72750 - SPECIAL USE PERMIT RELATED TO SUP-72749 - PUBLIC HEARING - APPLICANT/OWNER: SUMMERLIN RANCH PLAZA, LLC -**
For possible action on a request for a Special Use Permit FOR A PROPOSED 5,320 SQUARE-FOOT PUBS, BARS & LOUNGES [LIQUOR ESTABLISHMENT (TAVERN)] USE at 9436 West Lake Mead Boulevard, Suites #1-5 (APN 138-18-821-009), P-C (Planned Community) Zone, Ward 4 (Anthony) [PRJ-72682]. Staff recommends APPROVAL.
12. **SUP-72688 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: NO DRAMA BAIL BONDS -**
OWNER: DANIAL AND LINDA R. READ - For possible action on a request for a Special Use Permit FOR A PROPOSED BAILBOND SERVICE USE at 1610 East Charleston Boulevard, Suite #110 (APN 162-02-112-001), C-1 (Limited Commercial) Zone, Ward 3 (Coffin) [PRJ-72687]. Staff recommends APPROVAL.
13. **SUP-72734 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: ANGEL ZENEN MIRANDA -**
For possible action on a request for a Special Use Permit FOR A PROPOSED 599 SQUARE-FOOT ACCESSORY STRUCTURE (CLASS I) [CASITA] USE at 6929 Raleigh Avenue (APN 138-10-511-020), R-PD6 (Residential Planned Development - 6 Units per Acre) Zone, Ward 4 (Anthony) [PRJ-72025]. Staff recommends APPROVAL.
14. **SUP-72755 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: URBANEATS MARKET, LLC -**
OWNER: G CAPITAL INVESTMENT, LLC - For possible action on a request for a Special Use Permit FOR A PROPOSED 2,753 SQUARE-FOOT BEER/WINE/COOLER OFF-SALE ESTABLISHMENT USE at 200 West Sahara Avenue, Suite #100 (APN 162-04-815-428), C-2 (General Commercial) Zone, Ward 3 (Coffin) [PRJ-72668]. Staff recommends APPROVAL.
15. **SUP-72817 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: SHAKE SHACK NEVADA, LLC -**
OWNER: SIMON CHELSEA LV DEV, LLC - For possible action on a request for a Special Use Permit FOR A PROPOSED 3,200 SQUARE-FOOT BEER/WINE/COOLER ON-SALE ESTABLISHMENT USE WITH A 682

SQUARE-FOOT OUTDOOR SEATING AREA at 905 South Grand Central Parkway, Suite #1700 (APN 139-33-710-005), PD (Planned Development) Zone, Ward 1 (Tarkanian). [PRJ-72683]. Staff recommends APPROVAL.

16. **SDR-72787 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT: CAPROCK EMERGENCY HOLDINGS, LLC - OWNER: R A SOUTHEAST LAND COMPANY, LLC** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 18,389 SQUARE-FOOT CLINIC AND HOSPITAL DEVELOPMENT on a portion of 7.80 acres at the southeast corner of Alta Drive and Rampart Boulevard (APN 138-32-312-013), PD (Planned Development) Zone, Ward 2 (Seroka). [PRJ-72706]. Staff recommends APPROVAL.
17. **SDR-72792 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: TEN15 HUNTRIDGE, LLC** - For possible action on a request for a Site Development Plan Review FOR TWO PROPOSED RESTAURANTS TOTALING 4,020 SQUARE FEET, PARKING LOT MODIFICATIONS AND A WAIVER TO ALLOW 167 PARKING SPACES WHERE 198 PARKING SPACES ARE REQUIRED on 4.30 acres at 1144 East Charleston Boulevard (APN 162-03-513-008), C-2 (General Commercial) Zone, Ward 3 (Coffin). [PRJ-72740]. Staff recommends APPROVAL.

PUBLIC HEARING ITEMS

18. **ABEYANCE - GPA-72182 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: STEWART PLAZA, LLC** - For possible action on a request for a General Plan Amendment FROM: M (MEDIUM DENSITY RESIDENTIAL) TO: SC (SERVICE COMMERCIAL) on 2.83 acres at the northwest corner of Stewart Avenue and Mojave Road (APN 139-36-603-001), Ward 3 (Coffin). [PRJ-72109]. Staff recommends APPROVAL.
19. **ABEYANCE - SUP-72188 - SPECIAL USE PERMIT RELATED TO GPA-72182 - PUBLIC HEARING - APPLICANT/OWNER: STEWART PLAZA, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED 4,110 SQUARE-FOOT BEER/WINE/COOLER OFF-SALE ESTABLISHMENT USE WITHIN A PROPOSED GENERAL RETAIL STORE (CONVENIENCE STORE) WITH A WAIVER TO ALLOW A 150-FOOT DISTANCE SEPARATION FROM A CITY PARK WHERE 400 FEET IS REQUIRED at the northwest corner of Stewart Avenue and Mojave Road (APN 139-36-603-001), C-1 (Limited Commercial) Zone, Ward 3 (Coffin). [PRJ-72109]. Staff recommends DENIAL.
20. **SUP-72667 - SPECIAL USE PERMIT RELATED TO GPA-72182 AND SUP-72188 - PUBLIC HEARING - APPLICANT/OWNER: STEWART PLAZA, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED CAR WASH, FULL SERVICE OR AUTO DETAILING USE at the northwest corner of Stewart Avenue and Mojave Road (APN 139-36-603-001), C-1 (Limited Commercial) Zone, Ward 3 (Coffin). [PRJ-72109]. Staff recommends DENIAL.
21. **ABEYANCE - RENOTIFICATION - SDR-72189 - SITE DEVELOPMENT PLAN REVIEW RELATED TO GPA-72182, SUP-72188 AND SUP-72667 - PUBLIC HEARING - APPLICANT/OWNER: STEWART PLAZA, LLC** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 4,110 SQUARE-FOOT GENERAL RETAIL STORE (CONVENIENCE STORE) WITH FUEL PUMPS [CANOPY] AND A 900 SQUARE-FOOT CAR WASH WITH WAIVERS TO NOT ORIENT THE BUILDING TO THE CORNER WHERE SUCH IS REQUIRED AND TO ALLOW THE CAR WASH BAY TO FACE THE PUBLIC RIGHT-OF-WAY WHERE SUCH IS NOT PERMITTED on a portion of 2.83 acres at the northwest corner of Stewart Avenue and Mojave Road (APN 139-36-603-001), C-1 (Limited Commercial) Zone, Ward 3 (Coffin). [PRJ-72109]. Staff recommends DENIAL.
22. **ABEYANCE - SUP-72419 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: THE KFLT FINANCIAL TRUST** - For possible action on a request for a Special Use Permit FOR A PROPOSED SHORT-TERM RESIDENTIAL RENTAL USE WITH A WAIVER TO ALLOW A 290-FOOT DISTANCE SEPARATION FROM A SIMILAR USE WHERE 660 FEET IS REQUIRED at 2809 Merritt Avenue (APN 162-08-511-059), R-1 (Single Family Residential) Zone, Ward 1 (Tarkanian). [PRJ-72398]. Staff recommends DENIAL.
23. **ABEYANCE - VAR-72561 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: 626 SOUTH 9TH STREET, LLC** - For possible action on a request for a Variance TO ALLOW A TWO-FOOT SIDE YARD SETBACK WHERE FIVE FEET IS REQUIRED on 0.16 acres at 626 South 9th Street (APN 139-34-810-066), P-O (Professional Office) Zone, Ward 3 (Coffin). [PRJ-72527]. Staff recommends DENIAL.
24. **ABEYANCE - VAR-72562 - VARIANCE RELATED TO VAR-72561 - PUBLIC HEARING - APPLICANT/OWNER: 626 SOUTH 9TH STREET, LLC** - For possible action on a request for a Variance TO ALLOW

SIX PARKING SPACES WHERE 22 SPACES ARE REQUIRED on 0.16 acres at 626 South 9th Street (APN 139-34-810-066), P-O (Professional Office) Zone, Ward 3 (Coffin). [PRJ-72527]. Staff recommends DENIAL.

25. **ABEYANCE - RENOTIFICATION - SDR-72563 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: 626 SOUTH 9TH STREET, LLC** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 4,107 SQUARE-FOOT ADDITION TO AN EXISTING 2,274 SQUARE-FOOT OFFICE BUILDING WITH WAIVERS TO ALLOW A TWO-FOOT SIDE YARD SETBACK WHERE FIVE FEET IS REQUIRED, SIX PARKING SPACES WHERE 22 SPACES ARE REQUIRED, A 59 PERCENT LOT COVERAGE WHERE A MAXIMUM LOT COVERAGE OF 50 PERCENT IS ALLOWED AND ZERO-FOOT WIDE PERIMETER LANDSCAPE BUFFERS ON THE NORTH, SOUTH AND WEST PROPERTY LINES WHERE EIGHT FEET IS REQUIRED on 0.16 acres at 626 South 9th Street (APN 139-34-810-066), P-O (Professional Office) Zone, Ward 3 (Coffin). [PRJ-72527]. Staff recommends DENIAL.
26. **ABEYANCE - VAR-72572 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: CHETAK DEVELOPMENT CORPORATION** - For possible action on a request for a Variance TO ALLOW AN 871 SQUARE-FOOT SIGNAGE AREA WHERE 576 SQUARE FEET IS THE MAXIMUM ALLOWED, TO ALLOW A 30-FOOT DISTANCE SEPARATION FROM AN EXISTING FREESTANDING SIGN WHERE 100 FEET IS THE MINIMUM REQUIRED AND TO ALLOW A PROPOSED 55-FOOT TALL FREESTANDING SIGN WHERE 40 FEET IS THE MAXIMUM ALLOWED on 1.89 acres at 2233 South Las Vegas Boulevard (APN 162-03-410-007), C-2 (General Commercial) Zone, Ward 3 (Coffin). [PRJ-72534]. Staff recommends DENIAL.
27. **ABEYANCE - SUP-72576 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: EMERALD INVESTMENTS SERIES 2, LLC** - For possible action on a request for a Special Use Permit FOR AN EXISTING SHORT-TERM RESIDENTIAL RENTAL USE at 8616 Cremona Drive (APN 163-05-513-027), R-1 (Single Family Residential) Zone, Ward 2 (Seroka). [PRJ-72514]. Staff recommends APPROVAL.
28. **GPA-72719 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT: KB HOME NEVADA, INC. - OWNER: MEXICAN GOLD & OIL EXPLORATION TRUST, ET AL** - For possible action on a request for a General Plan Amendment FROM: DR (DESERT RURAL DENSITY RESIDENTIAL) TO: L (LOW DENSITY RESIDENTIAL) on 4.33 acres at the northwest corner of Hickam Avenue and Pioneer Way (APN 138-03-305-006), Ward 4 (Anthony). [PRJ-72639]. Staff recommends APPROVAL.
29. **ZON-72722 - REZONING RELATED TO GPA-72719 - PUBLIC HEARING - APPLICANT: KB HOME NEVADA, INC. - OWNER: MEXICAN GOLD & OIL EXPLORATION TRUST, ET AL** - For possible action on a request for a Rezoning FROM: U (UNDEVELOPED) [DR (DESERT RURAL DENSITY RESIDENTIAL) GENERAL PLAN DESIGNATION] TO: R-1 (SINGLE FAMILY RESIDENTIAL) on 4.33 acres at the northwest corner of Hickam Avenue and Pioneer Way (APN 138-03-305-006), Ward 4 (Anthony). [PRJ-72639]. Staff recommends APPROVAL.
30. **GPA-72727 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: PARAMOUNT FUND II, LLC** - For possible action on a request for a General Plan Amendment FROM: O (OFFICE) TO: SC (SERVICE COMMERCIAL) on 3.21 acres at the northwest corner of Ann Road and Leggett Road (APNs 125-28-801-014, 016 and 018), Ward 6 (Fiore). [PRJ-72629]. Staff recommends DENIAL.
31. **ZON-72728 - REZONING RELATED TO GPA-72727 - PUBLIC HEARING - APPLICANT/OWNER: PARAMOUNT FUND II, LLC** - For possible action on a request for a Rezoning FROM: P-R (PROFESSIONAL OFFICE AND PARKING) TO: C-1 (LIMITED COMMERCIAL) on 3.21 acres at the northwest corner of Ann Road and Leggett Road (APNs 125-28-801-014, 016 and 018), Ward 6 (Fiore). [PRJ-72629]. Staff recommends DENIAL.
32. **VAR-72941 - VARIANCE RELATED TO GPA-72727 AND ZON-72728 - PUBLIC HEARING - APPLICANT/OWNER: PARAMOUNT FUND II, LLC** - For possible action on a request for a Variance TO ALLOW A 20-FOOT REAR AND SIDE YARD SETBACK WHERE RESIDENTIAL ADJACENCY STANDARDS REQUIRE 69 FEET at the northwest corner of Ann Road and Leggett Road (APNs 125-28-801-014, 016, and 018), P-R (Professional Office and Parking) Zone [PROPOSED: C-1 (Limited Commercial)], Ward 6 (Fiore). [PRJ-72629]. Staff recommends DENIAL.
33. **SUP-72730 - SPECIAL USE PERMIT RELATED TO GPA-72727, ZON-72728 AND VAR-72941 - PUBLIC HEARING - APPLICANT/OWNER: PARAMOUNT FUND II, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED CAR WASH, FULL SERVICE OR AUTO DETAILING USE at the northwest corner of Ann Road and Leggett Road (APNs 125-28-801-014, 016 and 018), P-R (Professional Office and Parking) Zone [PROPOSED: C-1 (Limited Commercial)], Ward 6 (Fiore). [PRJ-72629]. Staff recommends DENIAL.

34. **SDR-72731 - SITE DEVELOPMENT PLAN REVIEW RELATED TO GPA-72727, ZON-72728, VAR-72941 AND SUP-72730 - PUBLIC HEARING - APPLICANT/OWNER: PARAMOUNT FUND II, LLC** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 25,350 SQUARE-FOOT SHOPPING CENTER WITH WAIVERS TO ALLOW A SEVEN-FOOT WIDE LANDSCAPE BUFFER ALONG A PORTION OF THE NORTH AND WEST PROPERTY LINES WHERE EIGHT FEET IS REQUIRED, TO ALLOW THE BUILDINGS TO NOT ORIENT TO THE CORNER AND STREET FRONTAGES WHERE SUCH IS REQUIRED, AND TO ALLOW A CAR WASH BAY AND DRIVE THROUGH LANE TO FACE THE PUBLIC RIGHT-OF-WAY WHERE SUCH IS NOT ALLOWED on 3.21 acres at the northwest corner of Ann Road and Leggett Road (APNs 125-28-801-014, 016 and 018), P-R (Professional Office and Parking) Zone [PROPOSED: C-1 (Limited Commercial)], Ward 6 (Fiore) [PRJ-72629]. Staff recommends DENIAL.
35. **GPA-72732 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: C-SWDE348, LLC** - For possible action on a request for a General Plan Amendment FROM: PCD (PLANNED COMMUNITY DEVELOPMENT) TO: ML (MEDIUM LOW DENSITY RESIDENTIAL) on 44.52 acres at the southwest corner of the Moccasin Road and Rainbow Boulevard alignments (APN 125-03-501-001), Ward 6 (Fiore) [PRJ-72720]. Staff recommends DENIAL.
36. **ZON-72733 - REZONING RELATED TO GPA-72732 - PUBLIC HEARING - APPLICANT/OWNER: C-SWDE348, LLC** - For possible action on a request for a Rezoning FROM: R-E (RESIDENCE ESTATES) TO: R-SL (RESIDENTIAL SMALL LOT) on 44.52 acres at the southwest corner of the Moccasin Road and Rainbow Boulevard alignments (APN 125-03-501-001), Ward 6 (Fiore) [PRJ-72720]. Staff recommends DENIAL.
37. **GPA-72771 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: MARIA L. LOEZA** - For possible action on a request for a General Plan Amendment FROM: L (LOW DENSITY RESIDENTIAL) TO: O (OFFICE) on 0.18 acres at 4324 San Bernardino Avenue (APN 162-07-502-001), Ward 1 (Tarkanian) [PRJ-72737]. Staff recommends DENIAL.
38. **ZON-72772 - REZONING RELATED TO GPA-72771 - PUBLIC HEARING - APPLICANT/OWNER: MARIA L. LOEZA** - For possible action on a request for a Rezoning FROM: R-1 (SINGLE FAMILY RESIDENTIAL) TO: P-O (PROFESSIONAL OFFICE) on 0.18 acres at 4324 San Bernardino Avenue (APN 162-07-502-001), Ward 1 (Tarkanian) [PRJ-72737]. Staff recommends DENIAL.
39. **GPA-72773 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT: DR HORTON - OWNER: UNITED STATES OF AMERICA** - For possible action on a request for a General Plan Amendment FROM: L (LOW DENSITY RESIDENTIAL) TO: MLA (MEDIUM LOW ATTACHED DENSITY RESIDENTIAL) on 15.00 acres 612 feet north of the intersection of Westcliff Drive and Rockmoss Street (APNs 138-28-801-002 and 003), Ward 2 (Seroka) [PRJ-72760]. Staff recommends DENIAL.
40. **ZON-72774 - REZONING RELATED TO GPA-72773 - PUBLIC HEARING - APPLICANT: DR HORTON - OWNER: UNITED STATES OF AMERICA** - For possible action on a request for a Rezoning FROM: U (UNDEVELOPED) [L (LOW DENSITY RESIDENTIAL) GENERAL PLAN DESIGNATION] TO: R-TH (SINGLE FAMILY ATTACHED) on 15.00 acres 612 feet north of the intersection of Westcliff Drive and Rockmoss Street (APNs 138-28-801-002 and 003), Ward 2 (Seroka) [PRJ-72760]. Staff recommends DENIAL.
41. **GPA-72783 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT: HARMONY HOMES - OWNER: VERLAINE, LLC, ET AL** - For possible action on a request for a General Plan Amendment FROM: SC (SERVICE COMMERCIAL) AND MLA (MEDIUM LOW ATTACHED DENSITY RESIDENTIAL) TO: M (MEDIUM DENSITY RESIDENTIAL) on 17.05 acres on the east side of Rancho Drive, 265 feet north of Vegas Drive (APN 139-20-411-015), Ward 5 (Vacant) [PRJ-72752]. Staff recommends APPROVAL.
42. **ZON-72784 - REZONING RELATED TO GPA-72783 - PUBLIC HEARING - APPLICANT: HARMONY HOMES - OWNER: VERLAINE, LLC, ET AL** - For possible action on a request for a Rezoning FROM: C-1 (LIMITED COMMERCIAL) AND R-2 (MEDIUM-LOW DENSITY RESIDENTIAL) TO: R-TH (SINGLE FAMILY ATTACHED) on 17.05 acres on the east side of Rancho Drive, 265 feet north of Vegas Drive (APN 139-20-411-015), Ward 5 (Vacant) [PRJ-72752]. Staff recommends APPROVAL.
43. **GPA-72847 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT: DR HORTON - OWNER: UNITED STATES OF AMERICA** - For possible action on a request for a General Plan Amendment FROM: RNP (RURAL NEIGHBORHOOD PRESERVATION) TO: R (RURAL DENSITY RESIDENTIAL) on 10.34 acres at the

northwest corner of La Mancha Avenue and Alpine Ridge Way (portion of APN 126-25-401-021), Ward 6 (Fiore) [PRJ-72846]. Staff recommends DENIAL.

44. **ZON-72848 - REZONING RELATED TO GPA-72847 - PUBLIC HEARING - APPLICANT: DR HORTON - OWNER: UNITED STATES OF AMERICA** - For possible action on a request for a Rezoning FROM: R-E (RESIDENCE ESTATES) TO: R-D (SINGLE FAMILY RESIDENTIAL-RESTRICTED) on 10.34 acres at the northwest corner of La Mancha Avenue and Alpine Ridge Way (portion of APN 126-25-401-021), Ward 6 (Fiore) [PRJ-72846]. Staff recommends DENIAL.
45. **GPA-72837 - GENERAL PLAN AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: CITY OF LAS VEGAS** - For possible action on a request for a General Plan Amendment TO AMEND THE 2020 MASTER PLAN LAND USE AND RURAL NEIGHBORHOODS PRESERVATION ELEMENT, All Wards. Staff recommends APPROVAL.
46. **MDR-72841 - GENERAL DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: HOWARD HUGHES COMPANY, LLC** - For possible action on a request for a Summerlin General Development Plan Review for the undeveloped portions of Summerlin West on 5,054.53 acres at the northwest corner of Far Hills Drive and Clark County 215 (APNs 137-14-401-002, 137-21-000-002, 137-22-000-017, 137-28-000-001 and 137-32-000-003), P-C (Planned Community) Zone, Ward 2 (Seroka) [PRJ-72832]. Staff recommends APPROVAL.
47. **MDR-72778 - MASTER DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: HOWARD HUGHES COMPANY, LLC** - For possible action on a request for a Summerlin Development Plan Review for Village 21 on 321.00 acres at the northwest corner of Far Hills Drive and Clark County 215 (portion of APN 137-22-000-017), P-C (Planned Community) Zone, Ward 2 (Seroka) [PRJ-72462]. Staff recommends APPROVAL.
48. **MDR-72833 - MASTER DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: HOWARD HUGHES COMPANY, LLC** - For possible action on a request for a Summerlin Development Plan Review for Village 24A on 102.56 acres at the northwest corner of Alta Drive and Sky Vista Drive (portions of APNs 137-22-000-017 and 137-28-000-001), P-C (Planned Community) Zone, Ward 2 (Seroka) [PRJ-72831]. Staff recommends APPROVAL.
49. **MOD-72805 - MAJOR MODIFICATION - PUBLIC HEARING - APPLICANT: GREAT AMERICAN CAPITAL - OWNER: ISIAH 55:11 SERIES MICAH 6:8** - For possible action on a request for a Major Modification of the Town Center Land Use Plan FROM: UC-TC (URBAN CENTER MIXED USE - TOWN CENTER) AND MS-TC (MAIN STREET MIXED USE - TOWN CENTER) TO: SC-TC (SERVICE COMMERCIAL - TOWN CENTER) on 5.68 acres at the southwest corner of Rome Boulevard and Riley Street (APN 125-20-802-003), Ward 6 (Fiore) [PRJ-72701]. Staff recommends APPROVAL.
50. **VAR-72806 - VARIANCE RELATED TO MOD-72805 - PUBLIC HEARING - APPLICANT: GREAT AMERICAN CAPITAL - OWNER: ISIAH 55:11 SERIES MICAH 6:8** - For possible action on a request for a Variance TO ALLOW 11 PERCENT OPEN SPACE WHERE TITLE 19 REQUIRES 20 PERCENT on a portion of 5.68 acres at the southwest corner of Rome Boulevard and Riley Street (APN 125-20-802-003), T-C (Town Center) Zone [UC-TC (Urban Center Mixed Use - Town Center) and MS-TC (Main Street Mixed Use - Town Center) Special Land Use Designations] [PROPOSED: SC-TC (Service Commercial - Town Center)], Ward 6 (Fiore) [PRJ-72701]. Staff recommends DENIAL.
51. **SUP-72807 - SPECIAL USE PERMIT RELATED TO MOD-72805 AND VAR-72806 - PUBLIC HEARING - APPLICANT: GREAT AMERICAN CAPITAL - OWNER: ISIAH 55:11 SERIES MICAH 6:8** - For possible action on a request for a Special Use Permit FOR A PROPOSED AUTO REPAIR GARAGE, MINOR USE WITH A WAIVER TO ALLOW A 114-FOOT DISTANCE SEPARATION FROM A SINGLE-FAMILY DETACHED DWELLING WHERE 330 FEET IS REQUIRED at the southwest corner of Rome Boulevard and Riley Street (APN 125-20-802-003), T-C (Town Center) Zone [UC-TC (Urban Center Mixed Use - Town Center) and MS-TC (Main Street Mixed Use - Town Center) Special Land Use Designation] [PROPOSED: SC-TC (Service Commercial - Town Center)], Ward 6 (Fiore) [PRJ-72701]. Staff recommends DENIAL.
52. **SDR-72808 - SITE DEVELOPMENT PLAN REVIEW RELATED TO MOD-72805, VAR-72806 AND SUP-72807 - PUBLIC HEARING - APPLICANT: GREAT AMERICAN CAPITAL - OWNER: ISIAH 55:11 SERIES MICAH 6:8** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 61,142 SQUARE-FOOT SHOPPING CENTER WITH WAIVERS TO ALLOW A THREE-FOOT FRONT YARD SETBACK WHERE 15 FEET IS REQUIRED; A THREE-FOOT REAR YARD SETBACK WHERE 20 FEET IS REQUIRED; A ZERO-FOOT SIDE YARD SETBACK WHERE 10 FEET IS REQUIRED; A THREE-FOOT WIDE LANDSCAPE BUFFER ALONG A PORTION OF THE NORTH PROPERTY LINE WHERE 15 FEET IS REQUIRED; A ZERO-FOOT WIDE LANDSCAPE

BUFFER ALONG A PORTION OF THE EAST, WEST AND SOUTH PROPERTY LINES WHERE EIGHT FEET IS REQUIRED; AND TO ALLOW 11 PERCENT OF OPEN SPACE WHERE 20 PERCENT IS REQUIRED on a portion of 5.68 acres at the southwest corner of Rome Boulevard and Riley Street (APN 125-20-802-003), T-C (Town Center) Zone [UC-TC (Urban Center Mixed Use - Town Center) and MS-TC (Main Street Mixed Use - Town Center) Special Land Use Designation]. [PROPOSED: SC-TC (Service Commercial - Town Center)], Ward 6 (Fiore). [PRJ-72701]. Staff recommends DENIAL.

53. **ZON-72785 - REZONING - PUBLIC HEARING - APPLICANT: NINETY-FIVE/TWO-FIFTEEN CENTER, LLC - OWNER: RIBIT, LLC, ET AL** - For possible action on a request for a Rezoning FROM: C-1 (LIMITED COMMERCIAL) TO: T-C (TOWN CENTER) on 3.14 acres on the west side of Oso Blanca Road, 698 feet south of Deer Springs Way (APN 125-21-301-003), Ward 6 (Fiore). [PRJ-72642]. Staff recommends APPROVAL.
54. **SDR-72786 - SITE DEVELOPMENT PLAN REVIEW RELATED TO ZON-72785 - PUBLIC HEARING - APPLICANT: NINETY-FIVE/TWO-FIFTEEN CENTER, LLC - OWNER: RIBIT, LLC, ET AL** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED THREE-STORY, 68-UNIT MEDIUM RESIDENTIAL DEVELOPMENT WITH WAIVERS OF REQUIRED TOWN CENTER EDGE ZONE, LANDSCAPING AND STREETScape DEVELOPMENT STANDARDS on 3.14 acres on the west side of Oso Blanca Road, 698 feet south of Deer Springs Way (APN 125-21-301-003), C-1 (Limited Commercial) Zone [PROPOSED: T-C (Town Center)], Ward 6 (Fiore). [PRJ-72642]. Staff recommends DENIAL.
55. **ZON-72796 - REZONING - PUBLIC HEARING - APPLICANT: KB HOME - OWNER: HORIZON PARTNERS AND RAINBOW PARTNERS** - For possible action on a request for a Rezoning FROM: U (UNDEVELOPED) [ML (MEDIUM LOW DENSITY RESIDENTIAL) GENERAL PLAN DESIGNATION] TO: R-CL (SINGLE FAMILY COMPACT-LOT) on 4.62 acres on the east side of Rainbow Boulevard, 295 feet north of Vegas Drive (APN 138-23-401-001), Ward 5 (Vacant). [PRJ-72533]. Staff recommends APPROVAL.
56. **WVR-72794 - WAIVER RELATED TO ZON-72796 - PUBLIC HEARING - APPLICANT: KB HOME - OWNER: HORIZON PARTNERS AND RAINBOW PARTNERS** - For possible action on a request for a Waiver TO ALLOW NO INTERIOR STREET LIGHTS on 4.62 acres on the east side of Rainbow Boulevard, 295 feet north of Vegas Drive (APN 138-23-401-001), U (Undeveloped) Zone [ML (Medium Low Density Residential) General Plan Designation] [PROPOSED: R-CL (Single Family Compact-Lot)], Ward 5 (Vacant). [PRJ-72533]. Staff recommends DENIAL.
57. **VAR-72795 - VARIANCE RELATED TO ZON-72796 AND WVR-72794 - PUBLIC HEARING - APPLICANT: KB HOME - OWNER: HORIZON PARTNERS AND RAINBOW PARTNERS** - For possible action on a request for a Variance TO ALLOW A STREET TO TERMINATE IN A NON-STANDARD DESIGN on 4.62 acres on the east side of Rainbow Boulevard, 295 feet north of Vegas Drive (APN 138-23-401-001), U (Undeveloped) Zone [ML (Medium Low Density Residential) General Plan Designation] [PROPOSED: R-CL (Single Family Compact-Lot)], Ward 5 (Vacant). [PRJ-72533]. Staff recommends DENIAL.
58. **TMP-72797 - TENTATIVE MAP RELATED TO ZON-72796, WVR-72794 AND VAR-72795 - RAINBOW AND VEGAS - PUBLIC HEARING - APPLICANT: KB HOME - OWNER: HORIZON PARTNERS AND RAINBOW PARTNERS** - For possible action on a request for a Tentative Map FOR A PROPOSED 40-LOT SINGLE-FAMILY RESIDENTIAL SUBDIVISION on 4.62 acres on the east side of Rainbow Boulevard, 295 feet north of Vegas Drive (APN 138-23-401-001), U (Undeveloped) Zone [ML (Medium Low Density Residential) General Plan Designation] [PROPOSED: R-CL (Single Family Compact-Lot)], Ward 5 (Vacant). [PRJ-72533]. Staff recommends DENIAL.
59. **VAR-72788 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: SCHOOL BOARD OF TRUSTEES** - For possible action on a request for a Variance TO ALLOW A 42-FOOT TALL BUILDING WHERE 35 FEET IS THE MAXIMUM ALLOWED; ALTERNATE BUILDING AND PARKING LOT PLACEMENT; A SIX-FOOT WIDE PERIMETER LANDSCAPE BUFFER ALONG A PORTION OF THE WEST PROPERTY LINE AND A FIVE-FOOT BUFFER ALONG THE EAST PROPERTY LINE WHERE 15 FEET IS REQUIRED; AND TO ALLOW NON-DECIDUOUS TREES IN THE PARKING LOT WHERE SUCH ARE REQUIRED on 8.70 acres at 324 Essex Drive (APN 139-31-203-001), C-V (Civic) Zone, Ward 1 (Tarkanian). [PRJ-72695]. Staff recommends APPROVAL.
60. **SDR-72789 - SITE DEVELOPMENT PLAN REVIEW RELATED TO VAR-72788 - APPLICANT/OWNER: SCHOOL BOARD OF TRUSTEES** - For possible action on a request for a Site Development Plan Review FOR A PROPOSED TWO-STORY, 90,000 SQUARE-FOOT PUBLIC SCHOOL, PRIMARY on 8.70 acres at 324 Essex Drive (APN 139-31-203-001), C-V (Civic) Zone, Ward 1 (Tarkanian). [PRJ-72695]. Staff recommends APPROVAL.
61. **VAR-72813 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: GIACOMO J. AND YOLANDA**

- ZANCHI TRUST** - For possible action on a request for a Variance TO ALLOW 13 PARKING SPACES WHERE 18 ARE REQUIRED on 1.19 acres on the north side of Lake Mead Boulevard, 638 feet west of Jones Boulevard (APN 138-23-601-010), C-1 (Limited Commercial) Zone, Ward 5 (Vacant).[PRJ-72743]. Staff recommends APPROVAL.
62. **VAR-72814 - VARIANCE RELATED TO VAR-72813 - PUBLIC HEARING - APPLICANT/OWNER: GIACOMO J. AND YOLANDA ZANCHI TRUST** - For possible action on a request for a Variance TO ALLOW A 13-FOOT REAR YARD SETBACK WHERE 20 FEET IS REQUIRED AND A SIX-FOOT SIDE YARD SETBACK WHERE 10 FEET IS REQUIRED on 1.19 acres on the north side of Lake Mead Boulevard, 638 feet west of Jones Boulevard (APN 138-23-601-010), C-1 (Limited Commercial) Zone, Ward 5 (Vacant).[PRJ-72743]. Staff recommends APPROVAL.
63. **SDR-72816 - SITE DEVELOPMENT PLAN REVIEW RELATED TO VAR-72813 AND VAR-72814 - PUBLIC HEARING - APPLICANT/OWNER: GIACOMO J. AND YOLANDA ZANCHI TRUST** - For possible action on a request for a Major Amendment to a previously approved Site Development Plan Review [Z-0055-94(1)] FOR A PROPOSED 3,000 SQUARE-FOOT GENERAL RETAIL BUILDING WITH A WAIVER TO ALLOW A ZERO-FOOT WIDE PERIMETER LANDSCAPE BUFFER ALONG A PORTION OF THE EAST PROPERTY LINE WHERE EIGHT FEET IS REQUIRED on 1.19 acres on the north side of Lake Mead Boulevard, 638 feet west of Jones Boulevard (APN 138-23-601-010), C-1 (Limited Commercial) Zone, Ward 5 (Vacant).[PRJ-72743]. Staff recommends APPROVAL.
64. **VAR-72584 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: 216 SPANISH OAKS, LLC** - For possible action on a request for a Variance TO ALLOW 303 PARKING SPACES WHERE 342 ARE REQUIRED FOR AN EXISTING MULTI-FAMILY RESIDENTIAL DEVELOPMENT on 8.45 acres at 2301 South Valley View Boulevard (APN 162-05-401-001), R-3 (Medium Density Residential) Zone, Ward 1 (Tarkanian).[PRJ-72286]. Staff recommends DENIAL.
65. **VAR-72661 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: JUANA CANO** - For possible action on a request for a Variance TO ALLOW A 13-FOOT CORNER SIDE YARD SETBACK WHERE 15 FEET IS REQUIRED AND TO ALLOW A ONE-FOOT SIDE YARD SETBACK WHERE FIVE FEET IS REQUIRED FOR EXISTING ADDITIONS AND PATIO COVER on 0.17 acres at 7015 Oakhurst Avenue (APN 138-34-314-073), R-1 (Single Family Residential) Zone, Ward 1 (Tarkanian).[PRJ-72322]. Staff recommends DENIAL.
66. **VAR-72762 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: GARN C & LAUREN A CROSSMAN** - For possible action on a request for a Variance TO ALLOW A 30-FOOT FRONT YARD SETBACK WHERE 50 FEET IS REQUIRED AND A FIVE-FOOT SIDE YARD SETBACK WHERE 10 FEET IS REQUIRED FOR A PROPOSED ADDITION TO A SINGLE-FAMILY DWELLING on 0.46 acres at 5420 West Rome Boulevard (APN 125-24-304-011), R-E (Residence Estates) Zone, Ward 6 (Fiore).[PRJ-72698]. Staff recommends DENIAL.
67. **VAR-72764 - VARIANCE - PUBLIC HEARING - APPLICANT/OWNER: JAMES L AND DAWN BUCHAN** - For possible action on a request for a Variance TO ALLOW A FIVE-FOOT SIDE YARD SETBACK FOR A PROPOSED ACCESSORY STRUCTURE (CLASS II) [GARAGE] WHERE 10 FEET IS REQUIRED on 0.49 acres at 1601 Golden Oak Drive (APN 163-03-210-006), R-PD2 (Residential Planned Development - 2 Units per Acre) Zone, Ward 1 (Tarkanian).[PRJ-72754]. Staff recommends APPROVAL.
68. **SUP-72756 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: MAD MAN ARMY SURPLUS 3300, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED GUN CLUB, SKEET OR TARGET RANGE, OR ARCHERY CLUB (INDOOR) USE at 3310 North Rancho Drive (APN 138-12-802-001), C-2 (General Commercial) Zone, Ward 5 (Vacant).[PRJ-72699]. Staff recommends APPROVAL.
69. **SUP-72757 - SPECIAL USE PERMIT RELATED TO SUP-72756 - PUBLIC HEARING - APPLICANT/OWNER: MAD MAN ARMY SURPLUS 3300, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED 12,005 SQUARE-FOOT SECONDHAND DEALER USE at 3300 and 3310 North Rancho Drive (APN 138-12-802-001), C-2 (General Commercial) Zone, Ward 5 (Vacant).[PRJ-72699]. Staff recommends APPROVAL.
70. **SUP-72692 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: VEGAS SPRING, INC - OWNER: LOU CHRISTIAN AEGEAN ISLE, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED 1,261 SQUARE-FOOT MASSAGE ESTABLISHMENT USE at 7871 West Charleston Boulevard, Suite #150 (APN 163-04-514-004), C-1 (Limited Commercial) Zone, Ward 1 (Tarkanian).[PRJ-72623]. Staff recommends DENIAL.
71. **SUP-72781 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: UHN1, LLC - OWNER: G&I VIII VILLAGE SQUARE, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED 3,176 SQUARE-FOOT BEER/WINE/COOLER ON-SALE ESTABLISHMENT USE WITH A WAIVER TO ALLOW A ZERO-

FOOT DISTANCE SEPARATION FROM A CHURCH/HOUSE OF WORSHIP WHERE 400 FEET IS REQUIRED at 9410 West Sahara Avenue, Suite #130 (APN 163-06-816-037), C-1 (Limited Commercial) Zone, Ward 2 (Seroka) [PRJ-72655]. Staff recommends APPROVAL.

72. **SUP-72811 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT: N SCOTT DISTILLERY, LLC - OWNER: RANCHO PROPERTIES, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED 880 SQUARE-FOOT PACKAGE LIQUOR (ANCILLARY CRAFT DISTILLERY) USE at 3065 North Rancho Drive, Suite #144 (APN 138-13-512-008), C-M (Commercial/Industrial) Zone, Ward 5 (Vacant) [PRJ-72782]. Staff recommends APPROVAL.
73. **SUP-72134 - REMANDED TO PLANNING COMMISSION - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: ROBIN AND JOHN STEPHAN** - For possible action on a request for a Special Use Permit FOR A PROPOSED SHORT-TERM RESIDENTIAL RENTAL USE WITH A WAIVER TO ALLOW A ZERO-FOOT DISTANCE SEPARATION FROM A SIMILAR USE WHERE 660 FEET IS REQUIRED at 150 North Las Vegas Boulevard, Unit 1202 (APN 139-34-613-084), C-2 (General Commercial) Zone, Ward 3 (Coffin) [PRJ-72080]. Staff recommends DENIAL.
74. **SUP-72705 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: PAULINE BAHAT REVOCABLE TRUST OF 2010** - For possible action on a request for a Special Use Permit FOR AN EXISTING SHORT-TERM RESIDENTIAL RENTAL USE at 2100 Westlund Drive (APN 162-05-814-009), R-1 (Single Family Residential) Zone, Ward 1 (Tarkanian) [PRJ-72680]. Staff recommends APPROVAL.
75. **SUP-72716 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: BIG BLOCK PARTNERS, LLC** - For possible action on a request for a Special Use Permit FOR A PROPOSED SHORT-TERM RESIDENTIAL RENTAL USE at 301 East Charleston Boulevard, Unit 112 (APN 139-34-401-022), C-2 (General Commercial) Zone, Ward 3 (Coffin) [PRJ-72614]. Staff recommends APPROVAL.
76. **SUP-72767 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: ALONA BAHAT** - For possible action on a request for a Special Use Permit FOR AN EXISTING SHORT-TERM RESIDENTIAL RENTAL USE at 1709 Mora Lane (APN 162-05-711-026), R-1 (Single Family Residential) Zone, Ward 1 (Tarkanian) [PRJ-72745]. Staff recommends APPROVAL.
77. **SUP-72798 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: DANIELLE C. DUGAN** - For possible action on a request for a Special Use Permit FOR A PROPOSED SHORT-TERM RESIDENTIAL RENTAL USE WITH A WAIVER TO ALLOW A ZERO-FOOT DISTANCE SEPARATION FROM A SIMILAR USE WHERE 660 FEET IS REQUIRED at 1704 South 9th Street (APN 162-03-712-002), R-1 (Single Family Residential) Zone, Ward 3 (Coffin) [PRJ-72746]. Staff recommends DENIAL.
78. **SUP-72800 - SPECIAL USE PERMIT - PUBLIC HEARING - APPLICANT/OWNER: ROBERT R. KOHLER** - For possible action on a request for a Special Use Permit FOR A PROPOSED SHORT-TERM RESIDENTIAL RENTAL USE at 2812 Alta Drive (APN 139-32-214-025), R-E (Residence Estates) Zone, Ward 1 (Tarkanian) [PRJ-72677]. Staff recommends APPROVAL.
79. **SDR-72689 - SITE DEVELOPMENT PLAN - PUBLIC HEARING - APPLICANT: SUMMIT HOMES OF NEVADA, LLC - OWNER: SUMMIT DORRELL, LLC, ET AL** - For possible action on a request for a Major Amendment to a previously approved Site Development Plan Review (SDR-60074) WITH A WAIVER OF TOWN CENTER STREETSCAPE DEVELOPMENT STANDARDS TO ALLOW AN ALTERNATIVE PLANTING PLAN WHERE TOWN CENTER REQUIRES SPECIFIC PLANTING PATTERNS AND SPECIES on 1.87 acres at the northeast corner of Dorrell Lane and Tee Pee Lane (APNs Multiple), T-C (Town Center) Zone [L-TC (Low Density Residential - Town Center) Special Land Use Designation], Ward 6 (Fiore) [PRJ-72660]. Staff recommends DENIAL.
80. **SDR-72717 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: A BETTER OPTION HEALTHCARE, INC** - For possible action on a request for a Site Development Plan Review FOR A PARKING LOT WITH WAIVERS TO ALLOW A ZERO-FOOT LANDSCAPE BUFFER ON THE SOUTH PERIMETER WHERE EIGHT FEET IS REQUIRED, A SIX-FOOT LANDSCAPE BUFFER ON THE NORTH AND EAST PERIMETERS WHERE EIGHT FEET IS REQUIRED, AN EIGHT-FOOT LANDSCAPE BUFFER ON THE WEST PERIMETER WHERE 15 FEET IS REQUIRED on 0.33 acres at 108 and 112 South Jones Boulevard (APNs 138-36-112-005 and 006), P-R (Professional Office and Parking) Zone, Ward 1 (Tarkanian) [PRJ-72320]. Staff recommends APPROVAL.
81. **SDR-72768 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: GARY**

CREAGH SR AND GARY CREAGH JR - For possible action on a request for a Site Development Plan Review FOR A PROPOSED TWO-STORY, 14,723 SQUARE-FOOT COMMERCIAL DEVELOPMENT, INCLUDING AN 680 SQUARE-FOOT PLAZA AND 4,825 SQUARE FEET OF SECOND LEVEL OUTDOOR PATIO SPACE on 0.32 acres at 1301 South Main Street (APN 162-03-110-084), C-M (Commercial/Industrial) Zone, Ward 3 (Coffin) [PRJ-72686]. Staff recommends APPROVAL.

82. SDR-72803 - SITE DEVELOPMENT PLAN REVIEW - PUBLIC HEARING - APPLICANT/OWNER: DENNYS INC. - For possible action on a request for a Site Development Plan Review FOR A PROPOSED 4,722 SQUARE-FOOT RESTAURANT WITH A WAIVER TO ALLOW ZERO PERCENT BUILDING ALIGNMENT WITH THE FRONT AND CORNER SIDE PROPERTY LINES WHERE 70 PERCENT IS REQUIRED on 0.63 acres at 1810 and 1826 South Las Vegas Boulevard (APNs 162-03-302-004 and 005), C-2 (General Commercial) Zone, Ward 3 (Coffin) [PRJ-72726]. Staff recommends APPROVAL.

DIRECTOR'S BUSINESS:

83. ABEYANCE - TXT-72039 - TEXT AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: CITY OF LAS VEGAS - For possible action on a request to amend LVMC 19.02 related to Subdivision Design and Improvement Requirements, 19.04 related to Complete Streets Standards, 19.16.050 related to Tentative Maps, and 19.16.130 related to Waivers, and to provide for other related matters. Staff recommends APPROVAL.
84. TXT-72839 - TEXT AMENDMENT - PUBLIC HEARING - APPLICANT/OWNER: CITY OF LAS VEGAS - For possible action on a request to amend LVMC Title 19 related to Open Space Repurposing, and to provide for other related matters. Staff has NO RECOMMENDATION.
85. DIR-72765 - DIRECTOR'S BUSINESS - PUBLIC HEARING - APPLICANT/OWNER: CITY OF LAS VEGAS - For discussion and possible action on a request to amend the City of Las Vegas Planning Commission Rules and Regulations. Staff has NO RECOMMENDATION.

CITIZENS PARTICIPATION:

86. CITIZENS PARTICIPATION: PUBLIC COMMENT DURING THIS PORTION OF THE AGENDA MUST BE LIMITED TO MATTERS WITHIN THE JURISDICTION OF THE PLANNING COMMISSION. NO SUBJECT MAY BE ACTED UPON BY THE PLANNING COMMISSION UNLESS THAT SUBJECT IS ON THE AGENDA AND IS SCHEDULED FOR ACTION. IF YOU WISH TO BE HEARD, COME TO THE PODIUM AND GIVE YOUR NAME FOR THE RECORD. THE AMOUNT OF DISCUSSION ON ANY SINGLE SUBJECT, AS WELL AS THE AMOUNT OF TIME ANY SINGLE SPEAKER IS ALLOWED, MAY BE LIMITED

Technical Drainage Study For Huntridge Shopping Center New Commercial Pads

TABLE OF CONTENTS

1.GENERAL LOCATION AND DEVELOPMENT DESCRIPTION	1
1.1 Purpose.....	1
1.2 Location of Property	1
1.3 Description of Property	2
2.DRAINAGE DESCRIPTION	3
2.1 Existing Drainage Condition.....	3
2.2 Interim Drainage Condition	5
2.3 Future Drainage Condition.....	7
2.4 Master Planning Information	7
2.5 Floodplain Information	8
2.6 Previous Drainage Studies	8
2.7 Compliance with CCRFCD Best Management Practices (BMP).....	9
3. PROPOSED DRAINAGE FACILITIES	10
3.1 General Description	10
3.2 Compliance with Regulations and Adopted Plans.....	10
3.3 Hydrologic Criteria	10
3.4 Facility Design Calculations	11
4.CONCLUSIONS AND RECOMMENDATIONS	12
5.REFERENCES	13

APPENDICES

A	Hydrologic Analysis
B	Hydraulic Calculations
C	Figures

1. GENERAL LOCATION AND DEVELOPMENT DESCRIPTION

1.1 Purpose

Lochsa Engineering has been retained by Ten 15 Huntridge, LLC to provide a Technical Drainage Study for the proposed shopping center commercial pads. The project proposes a commercial building approximately 270ft. south of the southwest corner of Charleston Blvd. and Maryland Parkway intersection, replacing the existing dirt pad. In addition, the project proposes a drive thru for the future development.

The purpose of this study is to provide a detailed hydrologic analysis of the site and watershed impacting it, and to substantiate the flood control design for the proposed improvements. The Clark County Regional Flood Control District (CCRFCD) Hydrologic Criteria and Drainage Design Manual (HCDDM) and the 2008 Las Vegas Valley Flood Control Master Plan Update (2008 MPU) have been compiled and utilized to prepare this study. This report presents summary of the hydrologic and hydraulic analyses, methodology, and results of the study.

1.2 Location of Property

The property is located approximately 270ft south of the southwest corner of Charleston Blvd. and Maryland Parkway intersection. The project site is bordered to the north by existing parking lot of the commercial center, to the east by Maryland Parkway, to the south by existing parking lot of the commercial center, and to the west by an existing parking lot of the commercial center. The project proposes a commercial building to replace the existing desert pad within the commercial center.

The project site occupies a small portion (0.93ac) of the parcel identified by Assessor's Parcel Number (APN) 162-03-513-008. The site occupies a portion of the Northern Half (N1/2) of the Northeast Quarter (NE 1/4) of Section 3, Township 21 South, Range 61 East, of the M.D.M., in Clark County, Nevada. Please refer to the copy of the Assessor's Parcel Map provided in the appendix. Figure 1 in Appendix C also provides the location of the subject site in relation to the surrounding major streets.

1.3 Description of Property

The project site occupies approximately 0.93 acres of disturbed area. Of the 0.93 acres, 0.13 acres is a rough-graded dirt pad and the remaining 0.80 acres is an entirely impervious area. The surface parking generally slopes to the northeast at approximately 3.80%. A review of the 2008 MPU's Figure H-32 indicates that the site is located within the hydrologic soil group C, defined as soils with "moderately high runoff potential." Review of the Natural Resources Conservation Service (NRCS) Web Soil Survey 2.0 (Reference 3) indicates that the site is soil type 'C'. Therefore, soil group C is being utilized in this study following the MPU determination.

2. DRAINAGE DESCRIPTION

In the CCRFCD's 2008 MPU (Reference 2), the valley was hydrologically divided into ten watersheds and each watershed was further subdivided into sub-basins. The onsite and offsite basins impacting the subject project area fall within the Central watershed. As shown in Figure H-32 of the 2008 MPU, the project site is all located within sub-basin CH56-C.

2.1 Existing Drainage Condition

The watershed encompassing the project area is entirely developed and generally slopes easterly, north and northeasterly. Thus, these offsite flows from the west and south, will be conveyed northerly within Maryland Parkway. The offsite flow along Maryland Parkway will be conveyed north along our site toward the intersection of Maryland Parkway and Charleston Blvd. Please note that Maryland Parkway, at our site, is a cross fall street, where flow is draining toward the east half of Maryland Parkway away from our site.

The most current hydrologic and hydraulic analysis for the surrounding areas was provided in the "2005 City of Las Vegas *Central Neighborhood Flood Control Master Plan Study*" (Reference 5; will be referred to as 2005 MPU). The 2005 MPU analyzed the existing flows south of our site. As shown in the attached referenced Figure E-10, we have accepted and utilized the total sub-basin flow from CH55 (74/164cfs) at the intersection of Maryland Parkway and Franklin Avenue. This flow has been accepted and utilized.

To delineate the offsite basins impacting Maryland Parkway at the southeast corner of our site, the 2ft-contour aerial from GISMO's website is utilized. The delineation of the offsite basins is depicted on Exhibit OFF1, labeled as the 'Offsite Drainage Map (Existing/Developed Conditions)'. As shown in our Offsite Basin Exhibit OFF1, we have delineated offsite basin FX1 (35.20acres) south of our site. Basin FX1 consists of developed homes, but we have been conservative with our analysis utilizing the commercial/business curve number for 'C' soil. Basin FX1 is fully developed and discharges 47 and 94cfs to Maryland Parkway in the 10 and 100yr storm events respectively. This flow combines with the referenced flow (74/164cfs) from Figure E-10 at the southeast corner of our site within Maryland Parkway.

The HEC-1 Flood Hydrograph Package is utilized in the subject study to determine the relevant runoff flows. Utilizing the 1-ft topographic map for the project site, the site is delineated into two onsite basins labeled as FX2 (2/4cfs) and NX1 (2/3cfs). The delineation of the onsite basin is depicted on Exhibit DR1, labeled as the 'Onsite Drainage Map, Existing Condition'. Please note that we are only considering FX2 as an onsite basin because it is a portion of the entire parcel, even though our disturbed area is only 0.93acres total, which is located east of basin FX2. Onsite basin NX1 represents the existing rough-graded dirt pad and existing surface parking west of the dirt pad. Runoff from onsite basin NX1 travels easterly and northeasterly towards existing pan driveways discharging to Maryland Parkway. Basin NX1 flow is combined with basin FX2 flow. Runoff from basin FX2 (rooftop and paved alley) discharges east into basin NX1 and discharges out the southern driveway to Maryland Parkway. The flows from NX1 and FX2 combine with previously discussed flows within Maryland Parkway at combination point CX1 (124/263cfs). This runoff at CX1

represents the total flows within Maryland Parkway just downstream of our site. See Figure DR1 (Existing conditions Basin Map) for flows and drainage patterns of the basins.

Normal depth calculations are being provided for Maryland Parkway (Section 1). As shown in the attached FlowMaster output, flows within Maryland Parkway are well below the maximum allowable velocity x depth ($v \times d$) values of 6.0 and 8.0 during 10- and 100-year storm events, respectively. Maryland Parkway is 110ft ROW, thus, the 12ft dry lane is applicable during the 10-year storm events. The existing conditions show Maryland Parkway does not meet dry lane criteria. This is a current condition.

2.2 Interim Drainage Condition

For the interim condition, the analysis of the offsite basins will remain the same as in the existing conditions. Basin FX2 determination will also remain the same since this basin is developed. Thus, the offsite runoff flow values and pattern upstream the subject site remains as described in the existing condition. The proposed improvements consist of a commercial building approximately 270ft. south of the southwest corner of Charleston Blvd. and Maryland Parkway intersection, replacing the existing dirt pad. The parking to the west is just being resurfaced, as we are utilizing the existing ground grades and providing some medians throughout the parking. The project also proposes commercial driveways north and south of the proposed building.

The HEC-1 Flood Hydrograph Package is utilized in the subject study to determine the relevant runoff flows. Utilizing the grading plan for the project site, the site is delineated into two onsite basins labeled as ND1 (2/3cfs) and ND2 (<1/<1cfs). The delineation of the onsite basin is depicted on Exhibit DR2, labeled as the 'Onsite Drainage Map, Interim/Developed Condition'. Onsite basin ND1 represents the majority of the proposed site. Runoff from ND1 (2/3cfs) discharges north and then east to Maryland Parkway out the northern driveway entrance. Onsite basin ND2 (<1/<1cfs) represents the southern portion of the drive thru and the area south of the proposed building. The flow from ND2 discharges south and then east out the southern driveway entrance to Maryland Parkway. The total flow at the southern driveway entrance within Maryland Parkway is at combination point CD1 (123/261cfs). This flow is total flow from the offsite flow south of our site and basins FX2 and ND2. As the flow continues north along Maryland Parkway, basin ND1 combines with the flow at combination point CD2 (124/263cfs). This is the same location as CX1 in the Figure DR1. Please note that the total flow at this location did not change from existing to developed conditions. Therefore, we are not negatively impacting downstream properties with the development of our site.

As discussed in the existing condition, normal depth calculations are being provided for Maryland Parkway (Section 1). As shown in the attached FlowMaster output, flows within the perimeter street remain unchanged from the existing conditions. The flows within the perimeter streets are well below the maximum allowable velocity x depth ($v \times d$) values of 6.0 and 8.0 during 10- and 100-year storm events, respectively. Maryland Parkway is a 110ft ROW, thus, the 12ft dry lane is applicable during the 10-year storm events. The existing conditions show Maryland Parkway

does not meet dry lane criteria. This is a current condition. The developed conditions show the same flow in Mary Parkway. Thus, the 12ft dry lane is not met in developed conditions either.

As shown in the attached grading plan and exhibits, the finished floor (FF) elevation for the proposed Building (1987.25ft) is set to elevation that is a minimum twice the 100-year flow depth above Maryland Parkway flowline (measured at the upstream side of our proposed building).

2.3 Future Drainage Condition

For the future condition, both the site and all the local offsite basins are assumed to be fully developed. Since the offsite watershed is already entirely developed, the future drainage pattern and runoff values remain as described for the interim condition.

2.4 Master Planning Information

The “*2008 Las Vegas Valley Flood Control Master Plan Update*” (2008 MPU, Reference 2), dated September 2008, as prepared by Post Buckley Schuh and Jernigan, Inc. (PBS&J), in association with Louis Berger Group and Parsons Brinckerhoff, illustrates the existing and proposed regional master planned facilities. The CCRFCD facility exhibits and inventory tables were updated in 2013. Review of Figure F-32 of the 2013 MPU indicates that proposed improvements are not adjacent to a regional facility. Although, 270ft north of our subject site, a regional facility (FLBN 0281 – 10ft x 7ft RCB) does exist within Charleston Blvd.

2.5 Floodplain Information

The project site is covered by Flood Insurance Rate Map (FIRM) for the Clark County, Nevada, and incorporated areas, Community Panel Number: 32003C2170F, Effective Date: November 16, 2011. The Site is entirely within FEMA Flood Zone “X” (unshaded), defined as: *“Areas determined to be outside the 0.2% annual chance floodplain”*. Please refer to the attached Figure 2 for the location of the site on a portion of the FIRM Map Index.

2.6 Previous Drainage Studies

The overall area is covered within the CCRFCD *“2008 Las Vegas Valley Flood Control Master Plan Update, Volume I and II”* (Reference 2). The site is also covered in the FIRM for the Clark County, Nevada and incorporated areas, Community Panel Number 32003C2170F to reflect Effective date November 16, 2011.

The most current hydrologic and hydraulic analysis for the surrounding areas was provided in the *“2005 City of Las Vegas Central Neighborhood Flood Control Master Plan Study”* (Reference 5; will be referred to as 2005 MPU). The 2005 MPU analyzed the existing flows south of our site. As shown in the attached referenced Figure E-10, we have accepted and utilized the total sub-basin flow from CH55 (74/164cfs) at the intersection of Maryland Parkway and Franklin Avenue. This flow has been accepted and utilized.

Lochsa Engineering generally concurs with all the pertinent analyses and results being utilized from the referenced material provided by CLV.

2.7 Compliance with CCRFCD Best Management Practices (BMP)

The project consists of one building (commercial), with some surface parking and a drive thru being proposed. Roof drains for the building are combined to drain directly to the west into the parking lot. Thus, runoff from the proposed roof discharges to the proposed valley gutter and the runoff ultimately exits the site directly into Maryland Parkway. However, the total site area being disturbed is less than 1-acre. The proposed improvements is categorized as 'Parking Lot' but is categorized as a SMALL Parking lot. Thus, per Section 1500 of the CCRFCD Drainage Design Manual, no additional water quality BMP is required for the proposed improvements.

3. PROPOSED DRAINAGE FACILITIES

3.1 General Description

The proposed improvements consist of a commercial building and drive thru approximately 270ft south of the Charleston Blvd. and Maryland Pkwy. intersection. The site is just west of Maryland Parkway. The site is replacing an existing dirt pad that makes up 0.13 acres of the total 0.76 acres disturbed area. The project also proposes resurfacing the existing surface parking.

3.2 Compliance with Regulations and Adopted Plans

The hydrologic analysis and drainage design of this development is in compliance with local requirements, including the CCRFCD *“Hydrologic Criteria and Drainage Design Manual”* (HCDDM) (Reference 1), and the CCRFCD *“2008 Las Vegas Valley Flood Control Master Plan Update”* (Reference 2). The site design is also in compliance with the Natural Resources Conservation Service (NRCS) Web Soil Survey and the 1995 SCS Soil Survey of Las Vegas Area (Reference 3), as well as FEMA’s FIRM with panel number 23003C2170F (Reference 4).

3.3 Hydrologic Criteria

The onsite basins of the subject project area all fall within the Central watershed. The hydrologic and hydraulic analyses presented in this report are carried out in accordance with the CCRFCD’s HCDDM (Reference 1). The rainfall values used for the hydrologic analysis of the site represent the 10-year and 100-year storm recurrence events, each with six-hour duration. The site is within the boundary for using the McCarran Airport Rainfall Data. Therefore, the rainfall values for

the 6-hour, 10-year and 100-year storm events are determined from Table 505 as 1.58 and 2.77 inches, respectively.

The rainfall losses due to infiltration, interception, etc. are represented using the SCS curve number (CN) method recommended in the CCRFCD HCDDM (Reference 1). The SCS method divides the soils into four hydrologic groups as A, B, C and D. Review of the 2008 MPU's Figure H-32 indicates that the site is located within the hydrologic soil group 'C', defined as soils with moderately high runoff potential. Review of the Natural Resources Conservation Service (NRCS) Web Soil Survey 2.0 (Reference 3) indicates that the site soil type is 'C'. Thus, the soil type 'C' is being utilized in this study, following the 2008 MPU determination. The CN values for the different land use were determined from Table 602 (page 1) of the CCRFCD HCDDM. The runoff hydrograph is determined from the design precipitation for each sub-basin using the Soil Conservation Service (SCS) unit hydrograph method. Calculations used in the hydrologic analysis for the onsite basins for existing and proposed conditions are attached in Appendix A.

3.4 Facility Design Calculations

All drainage facilities within this project have been designed in accordance with the CCRFCD "*Hydrologic Criteria and Drainage Design Manual*" (Reference 1). The onsite drainage plan has been developed to closely resemble existing drainage patterns, and to minimize any impact to the adjacent properties.

4. CONCLUSIONS AND RECOMMENDATIONS

1. This project is in compliance with the applicable drainage laws as recognized by the State of Nevada.
2. This project is in compliance with the CCRFCD “2008 Las Vegas Valley Flood Control Master Plan”, as well as the CCRFCD “*Hydrologic Criteria and Drainage Design Manual*”.
3. The site is located entirely within areas designated by FEMA as Zone “X” (unshaded), described by FEMA “*Areas determined to be outside the 0.2% annual chance floodplain.*”
4. The drainage facilities for this project have been designed to convey runoff from the 100-year storm safely through the site. In addition, they have been designed based on generally accepted engineering practices.
5. The proposed improvements do not introduce any increase in runoff flows or change in drainage pattern from the existing condition.
6. The proposed finished floor elevation for the proposed building is either raised (or flood protected) to elevations more than twice the 100-year flow depths within perimeter streets.

5. REFERENCES

1. Clark County Regional Flood Control District, "*Hydrologic Criteria and Drainage Design Manual*", August 1999.
2. Post Buckley, Schuh & Jernigan (PBS&J), Inc., in association with, G. C. Wallace Inc, and Louis Berger Group, "*2008 Las Vegas Valley Flood Control Master Plan Update, Volume I and II*", September 2008.
3. Natural Resources Conservation Service (NRCS), "*1985 Soil Survey of the Las Vegas Valley*", Issued July 1985, in conjunction with the Web Soil Survey.
4. Federal Emergency Management Agency, "*Flood Insurance Rate Maps; Community Panel Numbers 32003C2170F; Clark County, Nevada and Incorporated Areas*," Dated November 16, 2011.
5. City of Las Vegas "2005 Master Plan Central Neighborhood Study"

EMAIL CORRESPONDENCE

(Per Albert Sung and Hani Noshi phone conversation about the Future
54-inch RCP adjacent to our Site)

Chris Blake

From: Julia Izzolo
Sent: Wednesday, May 02, 2018 9:05 AM
To: Hani Noshi; Chris Blake
Subject: FW: Huntridge 181010

Chris,

Looks like it was a phone conversation.

Julia L. Izzolo, P.E.
Lochsa Engineering

Per A phone
conversation w/
Albert Sung

From: Hani Noshi
Sent: Monday, April 09, 2018 2:55 PM
To: Julia Izzolo <Julia@lochsa.com>; Chris Blake <Chris.Blake@lochsa.com>
Cc: Jim Shumaker <Jim.Shumaker@lochsa.com>; Ted Egerton <ted@lochsa.com>
Subject: RE: Huntridge 181010

Just got off the phone with Albert Sung from CLV. He will confirm to staff that no storm drain facilities should be required along Maryland. But a TDS will be required, as the entire parcel (encompassing the project site) is more than 2acres.

Hani M. Noshi, Ph.D., P.E., CFM
Principal,
Lochsa Engineering
6345 South Jones Blvd., Suite 100
Las Vegas, NV 89118
Ph: (702) 365-9312
Fax: (702) 365-9317
Cell: (702) 219-4850
Email: hani@lochsa.com



From: Hani Noshi
Sent: Monday, April 09, 2018 11:29 AM
To: Julia Izzolo <Julia@lochsa.com>; Chris Blake <Chris.Blake@lochsa.com>
Cc: Jim Shumaker <Jim.Shumaker@lochsa.com>
Subject: RE: Huntridge 181010

Will do. Typically, we can't get out of it, but will request and see.

Hani M. Noshi, Ph.D., P.E., CFM

**Peak Flow Summary
Existing Condition**

HEC-1 I.D.	Area (acres)	10-year Flow (cfs)	100-year Flow (cfs)
FX1	35.20	47	94
NX1	0.93	2	3
FX2	1.12	2	4
*REF. FLOW	-	*74	*164
CX1	-	124	263

(SUB-BASIN CH55)
(FX1+NX1+FX2+REF.FLOW (74/164))

*CITY OF LAS VEGAS "NEIGHBORHOOD FLOOD CONTROL MASTER PLAN"

**Peak Flow Summary
Interim / Developed Condition**

HEC-1 I.D.	Area (acres)	10-year Flow (cfs)	100-year Flow (cfs)
FX1	35.20	47	94
FX2	1.12	2	4
ND2	0.09	<1	<1
*REF. FLOW	-	*74	*164
CD1	-	123	261
ND1	0.84	2	3
CD2	-	124	263

(SUB-BASIN CH55)
(FX1+FX2+ND2+REF.FLOW (74/164))

(CD1+ND1)

*CITY OF LAS VEGAS "NEIGHBORHOOD FLOOD CONTROL MASTER PLAN"

Street Flow Summary
(Existing Condition)

10-year, 6-hour Storm

Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	10-Year Flow [Q10] (cfs)	10-year Velocity [v] (fps)	10-year Flow Depth [d] (ft)	10-year Velocity x Depth Product (v x d)	Dry Lane Width (Within 1/2 ROW) (ft)
Maryland Parkway	110	1	124	5.09	0.86	4.38	45.19

Street Flow Summary
(Existing Condition)

100-year, 6-hour Storm

Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	100-Year Flow [Q100] (cfs)	100-year Velocity [v] (fps)	100-year Flow Depth [d] (ft)	100-year Velocity x Depth Product (v x d)
Maryland Parkway	110	1	263	6.51	1.03	6.71

Street Flow Summary
(Interim/Developed Condition)

10-year, 6-hour Storm

Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	10-Year Flow [Q10] (cfs)	10-year Velocity [v] (fps)	10-year Flow Depth [d] (ft)	10-year Velocity x Depth Product (v x d)	Dry Lane Width (Within 1/2 ROW) (ft)
Maryland Parkway	110	1	123	5.08	0.86	4.37	0.00

Street Flow Summary
(Interim/Developed Condition)

100-year, 6-hour Storm

Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	100-Year Flow [Q100] (cfs)	100-year Velocity [v] (fps)	100-year Flow Depth [d] (ft)	100-year Velocity x Depth Product (v x d)
Maryland Parkway	110	1	261	6.50	1.03	6.70

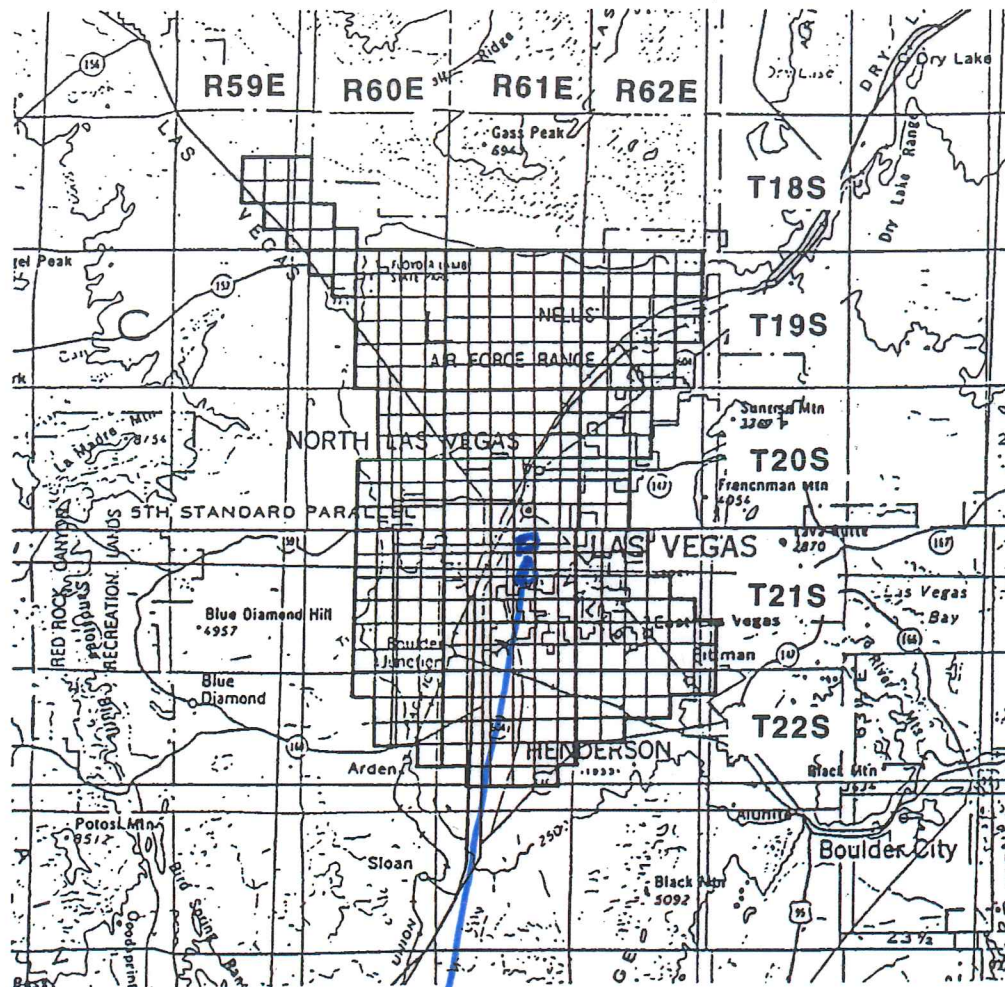
APPENDIX A

HYDROLOGIC ANALYSIS

HYDROLOGIC CHARTS

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

McCARRAN AIRPORT RAINFALL AREA



SITE

TOWNSHIP	RANGE	SECTIONS	TOWNSHIP	RANGE	SECTIONS
18 South	59 East	13-15,22-26,36	20 South	62 East	4-9,16-20,29-32
18 South	60 East	30-32	21 South	60 East	1-4,9-16,21-28,33-36
19 South	60 East	1-6,8-16,21-28,33-36	21 South	61 East	ALL SECTIONS
19 South	61 East	ALL SECTIONS	21 South	62 East	4-9,15-23, 25-36
19 South	62 East	2-11,14-23,27-34	22 South	60 East	1-4,10-15,24
20 South	60 East	1-3,10-15,21-28,33-36	22 South	61 East	1-24,26-29
20 South	61 East	ALL SECTIONS	22 South	62 East	1-10,17-18

Notes:

1. Refer to Table 505 and Figure 516 Depth-Duration-Frequency values in the McCarran Airport Rainfall Area.
2. Refer to Table 506 and Figure 517 for Time-Intensity-Frequency values on the McCarran Airport Rainfall Area.

Revision	Date

WRC
ENGINEERING

REFERENCE:

USACE, Los Angeles District, 1988

FIGURE 513

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

SIX-HOUR STORM DISTRIBUTIONS

Percent of Total Storm Depth				Percent of Total Storm Depth			
Storm Time (In Minutes)	SDN3	SDN4	SDN5	Storm Time (In Minutes)	SDN3	SDN4	SDN5
0	0.0	0.0	0.0	185	32.2	37.6	43.0
5	2.0	2.0	2.0	190	35.2	41.5	47.7
10	5.7	5.8	5.9	195	40.9	46.2	51.4
15	7.0	7.5	8.0	200	49.9	53.0	56.1
20	8.7	9.9	11.0	205	59.0	61.0	63.0
25	10.8	12.6	14.4	210	71.0	71.0	71.0
30	12.4	13.7	15.0	215	74.4	73.2	72.0
35	13.0	14.5	16.0	220	78.1	75.6	73.1
40	13.0	14.9	16.8	225	81.2	78.2	75.2
45	13.0	15.1	17.1	230	81.9	79.9	77.9
50	13.0	15.5	18.0	235	83.5	81.3	79.0
55	13.0	15.6	18.2	240	85.1	82.3	79.5
60	13.0	15.9	18.7	245	85.6	83.0	80.4
65	13.3	16.2	19.0	250	86.0	83.5	81.0
70	14.0	16.9	19.7	255	86.8	84.4	82.0
75	14.2	17.2	20.2	260	87.6	85.1	82.6
80	14.8	17.9	21.0	265	88.8	86.4	84.0
85	15.8	18.9	22.0	270	91.0	88.5	85.9
90	17.2	20.1	23.0	275	92.6	90.8	88.9
95	18.1	21.1	24.1	280	93.7	92.4	91.0
100	19.0	22.0	25.0	285	95.0	94.4	93.8
105	19.7	22.8	25.9	290	97.0	96.8	96.6
110	19.9	23.2	26.5	295	97.6	97.3	97.0
115	20.0	24.0	28.0	300	98.2	97.8	97.4
120	20.1	24.6	29.0	305	98.5	98.2	97.9
125	20.4	25.2	30.0	310	98.7	98.4	98.1
130	21.4	26.0	30.5	315	98.9	98.6	98.3
135	22.9	26.9	30.9	320	99.0	98.8	98.5
140	24.1	27.6	31.0	325	99.3	99.1	98.9
145	24.9	28.3	31.7	330	99.3	99.2	99.0
150	25.1	28.6	32.1	335	99.4	99.3	99.2
155	25.6	29.2	32.7	340	99.5	99.4	99.3
160	27.0	30.2	33.3	345	99.8	99.7	99.6
165	27.8	31.2	34.6	350	99.8	99.8	99.7
170	28.1	32.1	36.1	355	99.9	99.9	99.9
175	28.3	33.2	38.1	360	100.0	100.0	100.0
180	29.5	35.2	40.8				

- Notes:
1. For drainage areas less than 8 square miles in size, use SDN 3.
 2. For drainage areas greater than or equal to 8 square miles and less than 12 square miles in size, use SDN 4.
 3. For drainage areas greater than or equal to 12 square miles, use SDN 5.
 4. A graphical representation of these values is presented on **Figure 515**.

Revision	Date

REFERENCE:

TABLE 503

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DEPTH-DURATION-FREQUENCY VALUES FOR McCARRAN AIRPORT RAINFALL AREA (IN INCHES)

TIME	RECURRENCE INTERVAL					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
5 min.	0.15	0.27	0.35	0.46	0.54	0.63
10 min.	0.25	0.44	0.57	0.74	0.89	1.02
15 min.	0.33	0.57	0.74	0.97	1.15	1.32
30 min.	0.44	0.78	1.01	1.31	1.55	1.79
1 hour	0.52	0.89	1.15	1.50	1.78	2.06
2 hour	0.59	1.01	1.30	1.70	2.01	2.30
3 hour	0.64	1.08	1.39	1.82	2.15	2.48
6 hour	0.72	1.22	1.58	2.05	2.41	2.77
24 hour (TR-55)	1.20	1.60	1.80	2.40	2.70	2.96

- NOTE: 1. Refer to Figure 513 for a description and drawing of the area included in the McCarran Airport Rainfall Area.
2. The 24 hour values presented above are for use with TR-55 only.
3. Table 501 adjustments not required.

Revision	Date

WRC
ENGINEERING

REFERENCE:

USACE, Los Angeles District, 1988

TABLE 505

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS (URBAN AREAS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.): ³					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved: curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved: open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
See Table 602A					
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94

1 Average runoff condition, and $I_p = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system. Impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 603.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using Figure 603 based on the impervious area percentage (CN #98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using Figure 603 based on the degree of development impervious area percentage) and the CN's for the newly graded pervious areas.

Revision	Date

**WRC
ENGINEERING**

REFERENCE:
SCS TR-55, USDA, June 1986.

**TABLE 602
1 of 4**

HYDROLOGY

Huntridge Shopping Center New Commercial Pads

CB

181010

PROJECT NUMBER:

DATE: May 2, 2018

[illegible]

$$t_i = 1.8 (1.1 - K) L^{0.5} / S^{1/3}$$

$$K = 0.0132 \text{ CN} - 0.39$$

$$t_t = L / (60 \text{ V})$$

$$t_C = t_i + t_t$$

$$t_L = t_{LAG} = 0.6 \text{ tc}$$

LOCATION: Onsite and Offsite

HYDROLOGIC CONDITION: Existing and Developed

TRIAL: Final Iteration

Curve Number Calculations

Huntridge Shopping Center New Commercial Pads

Sub-Basin: FX1
Total Area: 35.20 Acres

Land Use/Cover type	Area [A] (acres)	Soil Type	Percentage, P [P]	Crue Number [CN]	Product {CN x P}
Commercial and buisness	35.20	C	100%	94	94.0

Total: 35.20 - 100% - 94.0

Curve Number Calculations

Huntridge Shopping Center New Commercial Pads

Sub-Basin: FX2
Total Area: 1.12 Acres

Land Use/Cover type	Area [A] (acres)	Soil Type	Percentage, P [P]	Crue Number [CN]	Product {CN x P}
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	1.12	C	100%	98	98.0

Total: 1.12 - 100% - 98.0

Huntridge Shopping Center New Commercial Pads

Sub-Basin: NX1
Total Area: 0.93 Acres

Land Use/Cover type	Area [A] (acres)	Soil Type	Percentage, P [P]	Crue Number [CN]	Product {CN x P}
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	0.79	C	85%	98	83.3
Newly graded area (pervious area only, no vegetation)	0.14	C	15%	91	13.7
Total:	0.93	-	100%	-	97.0

Curve Number Calculations

Huntridge Shopping Center New Commercial Pads

Sub-Basin: ND1
Total Area: 0.84 Acres

Land Use/Cover type	Area [A] (acres)	Soil Type	Percentage, P [P]	Crue Number [CN]	Product {CN x P}
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	0.84	C	100%	98	98.0

Total: 0.84 - 100% - 98.0

Curve Number Calculations

Huntridge Shopping Center New Commercial Pads

Sub-Basin: ND2
Total Area: 0.09 Acres

Land Use/Cover type	Area [A] (acres)	Soil Type	Percentage, P [P]	Crue Number [CN]	Product {CN x P}
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	0.09	C	100%	98	98.0

Total: 0.09 - 100% - 98.0

[illegible]

* NOTE : HALF OF THE 100-YEAR STORM RUNOFF FLOWS IS USED TO DETERMINE THE BASIN TRAVEL VELOCITY REQUIRED FOR THE LAG TIME CALCULATIONS

WEB SOIL SURVEY



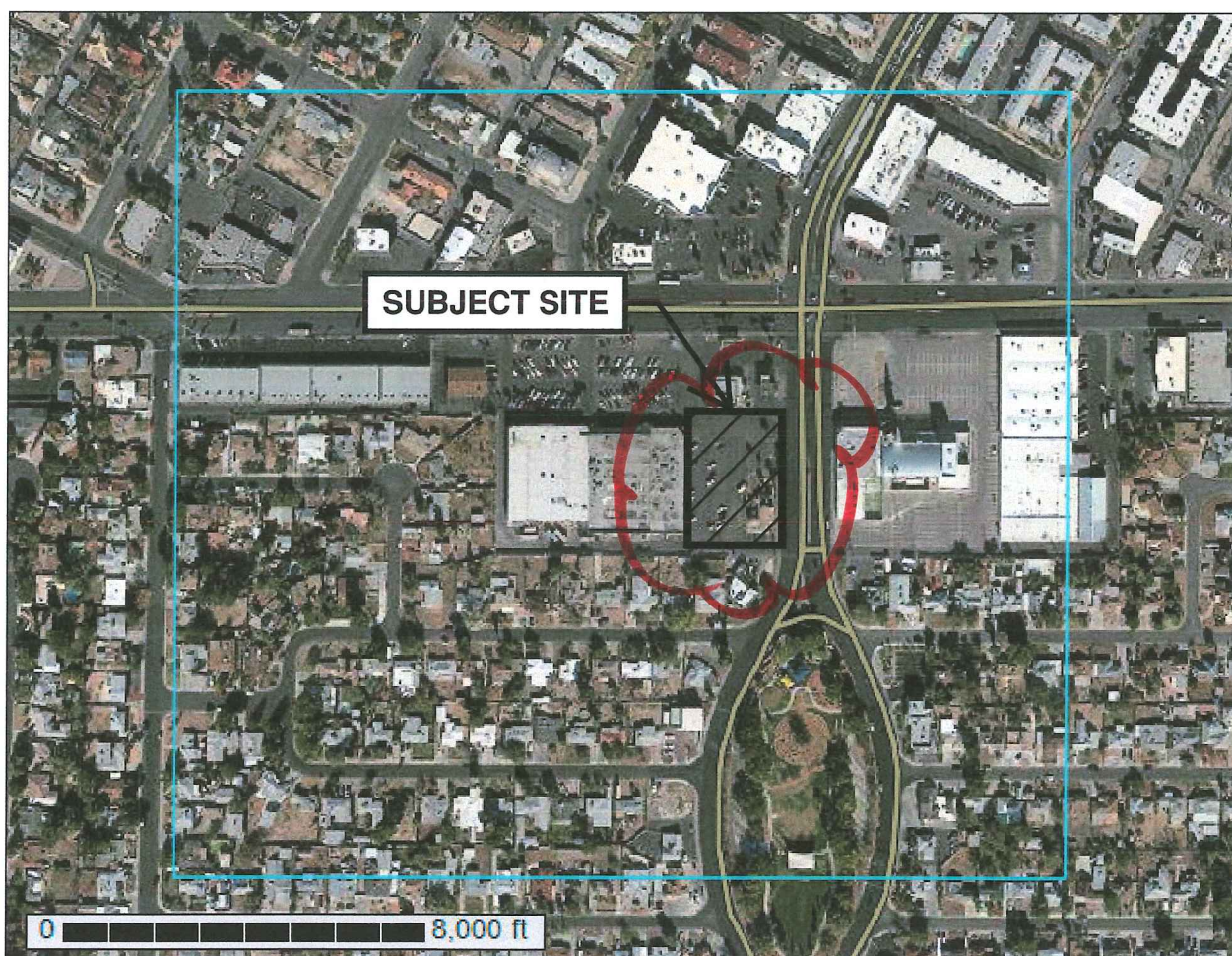
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

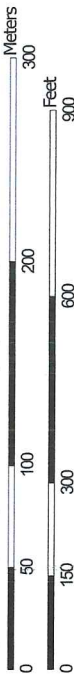
Custom Soil Resource Report for Las Vegas Valley Area, Nevada, Part of Clark County



Custom Soil Resource Report Soil Map



Map Scale: 1:3,710 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



Soil Map may not be valid at this scale.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
390	Spring clay loam	54.0	100.0%
Totals for Area of Interest		54.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Las Vegas Valley Area, Nevada, Part of Clark County

390—Spring clay loam

Map Unit Setting

National map unit symbol: hrc0
Elevation: 1,600 to 2,000 feet
Mean annual precipitation: 4 to 6 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 240 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Spring and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Spring

Setting

Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Lacustrine deposits derived from gypsum

Typical profile

H1 - 0 to 11 inches: clay loam
H2 - 11 to 43 inches: gypsiferous material
H3 - 43 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 30 percent
Salinity, maximum in profile: Strongly saline (16.0 to 32.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 30.0
Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 6s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C 'C' SOIL
Ecological site: SALINE BOTTOM (R030XY024NV)
Hydric soil rating: No

Custom Soil Resource Report Map—Drainage Class



Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
390	Spring clay loam	C	54.0	100.0%
Totals for Area of Interest			54.0	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

HEC-1 MODEL OUTPUT

(EXISTING CONDITION)


```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 01MAY18 TIME 15:12:29
*
*****

```

X

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

```

```

      X   X XXXXXXX XXXXX   X
      X   X X   X   X   XX
      X   X X   X   X   X
      XXXXXX XXXX X   XXXXX X
      X   X X   X   X   X
      X   X X   X   X   X
      X   X XXXXXXX XXXXX   XXX

```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1

HEC-1 INPUT

PAGE 1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1          ID
2          ID *****--TECHNICAL DRAINAGE STUDY--*****
3          ID HUNTRIDGE PLAZA
4          ID EXISTING CONDITION - ONSITE AND OFFSITE
5          ID USING SCS METHODS AND KINEMATIC WAVE ROUTING
6          ID MASTER PLAN ADJUSTED 6-HOUR RAINFALL AND STORM DISTRIBUTION
7          ID
8          ID LOCHSA JOB # 181010
9          ID
10         ID
11         ID INPUT FILE NAME: X.DAT
12         ID
13         ID MAY 2018
14         ID
15         ID *****
16         ID *****
17         ID MCCARRAN AIRPORT RAINFALL AREA
18         ID 10 & 100 YEAR - 6 HOUR STORM EVENT
19         ID PRECIPITATION:
20         ID 10-YEAR : 1.58 INCHES
21         ID 100-YEAR : 2.77 INCHES
22         ID 10-YEAR/100-YEAR : 1.58/2.77= 0.5704
23         ID *****
24         ID *****
25         ID
26         ID *****
27         ID * SDN 3 VALUES *
28         ID *****
29         ID
30         ID *DIAGRAM
31         JR PREC .57 1.00
32         IT 5 0 0 200
33         IO 5 0 0
34         IN 5 0 0
35         *
36         KK FX1
37         KM OFFSITE BASIN DRAINING ONTO MARYLAND, NORTH OF FRANKLIN
38         PB 2.77
39         BA .05500
40         PC .000 .020 .057 .070 .087 .108 .124 .130 .130 .130
41         PC .130 .130 .130 .133 .140 .142 .148 .158 .172 .181
42         PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
43         PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
44         PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .856
45         PC .860 .868 .876 .888 .910 .926 .937 .950 .970 .976
46         PC .982 .985 .987 .989 .990 .993 .993 .994 .995 .998
47         PC .998 .999 1.00
48         LS 0 94
49         UD .124
50         *

```

1

HEC-1 INPUT

PAGE 2

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
48         KK FX2
49         KM OFFSITE BASIN FX2, DRAINING EAST TOWARD MARYLAND PARKWAY AT OUR SOUTH ENTRANC
50         BA .00175
51         LS 0 98
52         UD .071
53         *
54         KK NX1
55         KM ONSITE BASIN NX1, DRAINING ONTO MARYLAND
56         BA .00145
57         LS 0 97
58         UD .063

```

```

          *
          X
58      KK      CX1
59      KM      COMBINE FX1, FX2 AND NX1
60      KM
61      KM      + RUNOFF FROM REFERENCED BASIN CH55(71/164CFS) FROM
62      KM      CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN
63      KM
64      KM      = TOTAL FLOWS CONVEYED WITHIN MARYLAND ALONG THE PROJECT SITE
65      KM
66      HC      3
67      *
        ZZ

```

```

1      SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
NO.        (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW
34      FX1
      .
48      .      FX2
      .
53      .      .      NX1
      .
58      CX1.....

```

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 01MAY18 TIME 15:12:29
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*****

```

```

*****--TECHNICAL DRAINAGE STUDY--*****
HUNTRIDGE PLAZA
EXISTING CONDITION - ONSITE AND OFFSITE
USING SCS METHODS AND KINEMATIC WAVE ROUTING
MASTER PLAN ADJUSTED 6-HOUR RAINFALL AND STORM DISTRIBUTION
LOCHSA JOB # 181010

```

```

INPUT FILE NAME: X.DAT
MAY 2018

```

```

*****
*****
McCARRAN AIRPORT RAINFALL AREA
10 & 100 YEAR - 6 HOUR STORM EVENT
PRECIPITATION:
10-YEAR : 1.58 INCHES
100-YEAR : 2.77 INCHES
10-YEAR/100-YEAR : 1.58/2.77= 0.5704
*****
*****

```

```

*****
* SDN 3 VALUES *
*****

```

```

32 IO      OUTPUT CONTROL VARIABLES
          IPRNT      5 PRINT CONTROL
          IPLOT      0 PLOT CONTROL
          QSCAL      0. HYDROGRAPH PLOT SCALE

IT      HYDROGRAPH TIME DATA
          NMIN      5 MINUTES IN COMPUTATION INTERVAL
          IDATE      1 0 STARTING DATE
          ITIME      0000 STARTING TIME
          NQ      200 NUMBER OF HYDROGRAPH ORDINATES
          NDDATE      1 0 ENDING DATE
          NDTIME      1635 ENDING TIME
          ICENT      19 CENTURY MARK

          COMPUTATION INTERVAL .08 HOURS
          TOTAL TIME BASE 16.58 HOURS

```

```

ENGLISH UNITS
DRAINAGE AREA      SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW      CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

```

```

JP      MULTI-PLAN OPTION
          NPLAN      1 NUMBER OF PLANS

```

```

JR      MULTI-RATIO OPTION

```

RATIOS OF PRECIPITATION
.57 1.00

X

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION	
					RATIO 1 .57	RATIO 2 1.00
HYDROGRAPH AT						
+ HYDROGRAPH AT	FX1	.05	1	FLOW TIME	47. 3.58	94. 3.58
+ HYDROGRAPH AT	FX2	.00	1	FLOW TIME	2. 3.50	4. 3.50
+ HYDROGRAPH AT	NX1	.00	1	FLOW TIME	2. 3.50	3. 3.50
+ 3 COMBINED AT	CX1	.06	1	FLOW TIME	50. 3.58	99. 3.58

+ Ref. Flow (74/164) = $\frac{Q_{10}}{124}$ $\frac{Q_{100}}{263}$

*** NORMAL END OF HEC-1 ***

HEC-1 MODEL OUTPUT

(INTERIM / DEVELOPED CONDITION)

```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 01MAY18 TIME 08:45:18
*
*****

```

D

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

```

```

      X   X XXXXXXX XXXXX      X
      X   X X      X      XX
      X   X X      X      X
      XXXXXX XXXX X      XXXX X
      X   X X      X      X
      X   X X      X      X
      X   X XXXXXXX XXXXX      XXX

```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1          ID
2          ID *****--TECHNICAL DRAINAGE STUDY--*****
3          ID HUNTRIDGE PLAZA
4          ID EXISTING CONDITION - ONSITE AND OFFSITE
5          ID USING SCS METHODS AND KINEMATIC WAVE ROUTING
6          ID MASTER PLAN ADJUSTED 6-HOUR RAINFALL AND STORM DISTRIBUTION
7          ID
8          ID LOCHSA JOB # 181010
9          ID
10         ID
11         ID INPUT FILE NAME: X.DAT
12         ID
13         ID MAY 2018
14         ID
15         ID *****
16         ID *****
17         ID MCCARRAN AIRPORT RAINFALL AREA
18         ID 10 & 100 YEAR - 6 HOUR STORM EVENT
19         ID PRECIPITATION:
20         ID 10-YEAR : 1.58 INCHES
21         ID 100-YEAR : 2.77 INCHES
22         ID 10-YEAR/100-YEAR : 1.58/2.77= 0.5704
23         ID *****
24         ID *****
25         ID
26         ID *****
27         ID * SDN 3 VALUES *
28         ID *****
29         ID
30         ID *DIAGRAM
31         JR PREC .57 1.00
32         IT 5 0 0 200
33         IO 5 0 0
34         IN 5 0 0
35         *
36         KK FX1
37         KM OFFSITE BASIN DRAINING ONTO MARYLAND, NORTH OF FRANKLIN
38         PB 2.77
39         BA .05500
40         PC .000 .020 .057 .070 .087 .108 .124 .130 .130 .130
41         PC .130 .130 .130 .133 .140 .142 .148 .158 .172 .181
42         PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
43         PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
44         PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .856
45         PC .860 .868 .876 .888 .910 .926 .937 .950 .970 .976
46         PC .982 .985 .987 .989 .990 .993 .993 .994 .995 .998
47         PC .998 .999 1.00
48         LS 0 94
49         UD .123
50         *

```

1 HEC-1 INPUT PAGE 2

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
48         KK FX2
49         KM OFFSITE BASIN FX2, DRAINING EAST TOWARD MARYLAND PARKWAY AT OUR SOUTH ENTRANC
50         BA .00175
51         LS 0 98
52         UD .071
53         *
54         KK ND2
55         KM ONSITE BASIN ND2, DRAINING EAST TO MARYLAND PARKWAY AT OUR SOUTH ENTRANCE
56         BA .00014
57         LS 0 98
58         UD .050

```

D

```

      *
58      KK      CD1
59      KM      COMBINE FX1, FX2 AND ND2
60      KM
61      KM      + RUNOFF FROM REFERECED BASIN CH55(71/164CFS) FROM
62      KM      CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN
63      KM
64      KM      = TOTAL FLOWS CONVEYED WITHIN MARYLAND ALONG THE SOUTH END OF OUR PROJECT SIT
65      KM
66      HC      3
      *

67      KK      ND1
68      KM      ONSITE BASIN ND1, DRAINING NORTHEAST TO MARYLAND PARKWAY AT OUR NORTH ENTRANC
69      BA      .00131
70      LS      0      98
71      UD      .050
      *

72      KK      CD2
73      KM      COMBINE CD1 AND ND1
74      KM
75      KM      + RUNOFF FROM REFERECED BASIN CH55(71/164CFS) FROM
76      KM      CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN
77      KM
78      KM      = TOTAL FLOWS CONVEYED WITHIN MARYLAND ALONG THE NORTH END OF OUR PROJECT SIT
79      KM
80      HC      2
81      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW
NO.      (.) CONNECTOR      (<---) RETURN OF DIVERTED OR PUMPED FLOW

34      FX1
      .
48      .      FX2
      .
53      .      .      ND2
      .
58      CD1.....
      .
67      .      ND1
      .
72      CD2.....

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 01MAY18 TIME 08:45:18
*
*****

```

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

```

```

*****--TECHNICAL DRAINAGE STUDY--*****
HUNTRIDGE PLAZA
EXISTING CONDITION - ONSITE AND OFFSITE
USING SCS METHODS AND KINEMATIC WAVE ROUTING
MASTER PLAN ADJUSTED 6-HOUR RAINFALL AND STORM DISTRIBUTION

LOCHSA JOB # 181010

```

INPUT FILE NAME: X.DAT

MAY 2018

```

McCARRAN AIRPORT RAINFALL AREA
10 & 100 YEAR - 6 HOUR STORM EVENT
PRECIPITATION:
10-YEAR      : 1.58 INCHES
100-YEAR     : 2.77 INCHES
10-YEAR/100-YEAR : 1.58/2.77= 0.5704

```

```

*****
* SDN 3 VALUES *
*****

```

32 IO

```

OUTPUT CONTROL VARIABLES
IPRNT      5 PRINT CONTROL
IPLOT      0 PLOT CONTROL
QSCAL      0. HYDROGRAPH PLOT SCALE

```

IT

```

HYDROGRAPH TIME DATA
NMIN      5 MINUTES IN COMPUTATION INTERVAL

```


IDATE 1 0 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 200 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 1 0 ENDING DATE
 NDTIME 1635 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
 TOTAL TIME BASE 16.58 HOURS

ENGLISH UNITS
 DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
 NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
 RATIOS OF PRECIPITATION
 .57 1.00

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
 TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION			
					RATIO 1 .57	RATIO 2 1.00		
HYDROGRAPH AT +	FX1	.05	1	FLOW TIME	47. 3.58	94. 3.58		
HYDROGRAPH AT +	FX2	.00	1	FLOW TIME	2. 3.50	4. 3.50		
HYDROGRAPH AT +	ND2	.00	1	FLOW TIME	0. 3.50	0. 3.50		
3 COMBINED AT +	CD1	.06	1	FLOW TIME	49. 3.58	97. 3.58	+ Ref. Flow (74/164) =	$\frac{Q_{10}}{123}$ $\frac{Q_{100}}{261}$
HYDROGRAPH AT +	ND1	.00	1	FLOW TIME	2. 3.50	3. 3.50		
2 COMBINED AT +	CD2	.06	1	FLOW TIME	50. 3.58	99. 3.50	+ Ref. Flow (74/164) =	$\frac{Q_{10}}{124}$ $\frac{Q_{100}}{263}$

*** NORMAL END OF HEC-1 ***

APPENDIX B

HYDRAULIC ANALYSIS

Normal Depth Calculations for Maryland Parkway

(Existing and Interim / Developed Conditions)

Street Section 1 - Maryland Parkway - 10year - Existing Conditions

Worksheet for Irregular Channel

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 10year - Existing Conditions
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	014000 ft/ft
Discharge	124.00 cfs

Options	
Current Roughness Method	oved Lotter's Method
Open Channel Weighting Method	oved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.014
Water Surface Elev	84.94 ft
Elevation Range	84.08 to 85.41
Flow Area	24.3 ft²
Wetted Perimeter	97.21 ft
Top Width	95.87 ft
Actual Depth	0.86 ft
Critical Elevation	85.06 ft
Critical Slope	0.003922 ft/ft
Velocity	5.09 ft/s
Velocity Head	0.40 ft
Specific Energy	85.35 ft
Froude Number	1.78
Flow Type	Supercritical

$$dxv = .86 \times 5.09 = 4.38 < 6 \text{ ok } \checkmark$$

Calculation Messages:
 Water elevation exceeds lowest end station by 0.26313667 ft.
 Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	0+07.00	0.013
0+07.00	0+55.20	0.016
0+55.20	0+59.20	0.013
0+59.20	0+98.37	0.016
0+98.37	1+05.37	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	85.13
0+05.00	85.03
0+05.50	85.03
0+05.50	84.53
0+07.00	84.66

Street Section 1 - Maryland Parkway - 10year - Existing Conditions
Worksheet for Irregular Channel

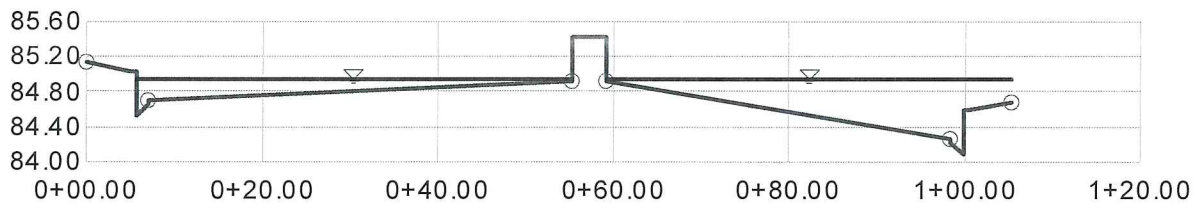
Natural Channel Points	
Station (ft)	Elevation (ft)
0+07.00	84.70
0+55.20	84.91
0+55.20	85.41
0+59.20	85.41
0+59.20	84.91
0+98.37	84.25
0+98.37	84.21
0+99.87	84.08
0+99.87	84.58
1+00.37	84.58
1+05.37	84.68

Street Section 1 - Maryland Parkway - 10year - Existing Conditions **Cross Section for Irregular Channel**

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 10year - Existir
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.014
Slope	0.014000 ft/ft
Water Surface Elev	84.94 ft
Elevation Range	1.08 to 85.41
Discharge	124.00 cfs

DOES NOT MEET DRY LANE — **EXISTING CONDITION**



V:10.0
H:1
NTS

Street Section 1 - Maryland Parkway - 100year - Existing Conditions

Worksheet for Irregular Channel

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 100year - Existing Conditions
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.014000 ft/ft
Discharge	263.00 cfs

Options	
Current Roughness Method	oved Lotter's Method
Open Channel Weighting	oved Lotter's Method
Closed Channel Weighting	Horton's Method

Results	
Mannings Coefficient	0.015
Water Surface Elev	85.11 ft
Elevation Range	85.08 to 85.41
Flow Area	40.4 ft ²
Wetted Perimeter	102.21 ft
Top Width	100.29 ft
Actual Depth	1.03 ft
Critical Elevation	85.30 ft
Critical Slope	0.003793 ft/ft
Velocity	6.51 ft/s
Velocity Head	0.66 ft
Specific Energy	85.77 ft
Froude Number	1.81
Flow Type	Supercritical

$$dx \cdot v = 1.03 \times 6.51 = 6.71 < 8 \text{ OK} \checkmark$$

Calculation Messages:

Water elevation exceeds lowest end station by 0.42838449 ft.
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	0+07.00	0.013
0+07.00	0+55.20	0.016
0+55.20	0+59.20	0.013
0+59.20	0+98.37	0.016
0+98.37	1+05.37	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	85.13
0+05.00	85.03
0+05.50	85.03
0+05.50	84.53
0+07.00	84.66

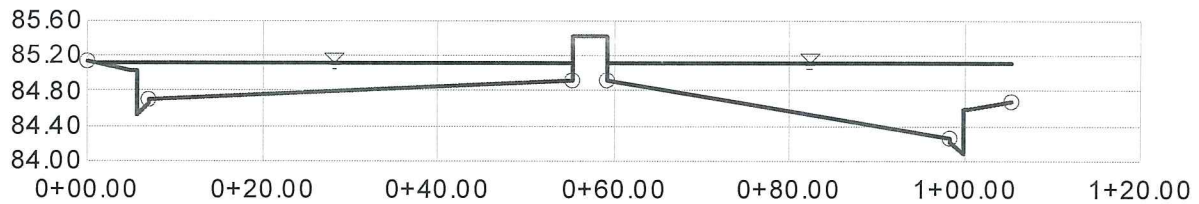
Street Section 1 - Maryland Parkway - 100year - Existing Conditions
Worksheet for Irregular Channel

Natural Channel Points	
Station (ft)	Elevation (ft)
0+07.00	84.70
0+55.20	84.91
0+55.20	85.41
0+59.20	85.41
0+59.20	84.91
0+98.37	84.25
0+98.37	84.21
0+99.87	84.08
0+99.87	84.58
1+00.37	84.58
1+05.37	84.68

Street Section 1 - Maryland Parkway - 100year - Existing Conditions **Cross Section for Irregular Channel**

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 100year - Existi
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.015
Slope	0.014000 ft/ft
Water Surface Elev	85.11 ft
Elevation Range	1.08 to 85.41
Discharge	263.00 cfs



V:10.0
H:1
NTS

Street Section 1 - Maryland Parkway - 10year - Interim/Developed Conditions

Worksheet for Irregular Channel

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 10year - Interim/Developed Conditions
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	014000 ft/ft
Discharge	123.00 cfs

Options	
Current Roughness Method	Modified Lotter's Method
Open Channel Weighting	Modified Lotter's Method
Closed Channel Weighting	Horton's Method

Results	
Mannings Coefficient	0.014
Water Surface Elev	84.94 ft
Elevation Range	84.08 to 85.41
Flow Area	24.2 ft ²
Wetted Perimeter	97.21 ft
Top Width	95.87 ft
Actual Depth	0.86 ft
Critical Elevation	85.06 ft
Critical Slope	0.003917 ft/ft
Velocity	5.08 ft/s
Velocity Head	0.40 ft
Specific Energy	85.34 ft
Froude Number	1.78
Flow Type	Supercritical

CD1 Flow (At upstream side of Proposed Building)

$$dxv = .86 \times 5.08 = 4.37 \text{ ft} \checkmark$$

Calculation Messages:

Water elevation exceeds lowest end station by 0.26168578 ft.
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	0+07.00	0.013
0+07.00	0+55.20	0.016
0+55.20	0+59.20	0.013
0+59.20	0+98.37	0.016
0+98.37	1+05.37	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	85.13
0+05.00	85.03
0+05.50	85.03
0+05.50	84.53
0+07.00	84.66

Street Section 1 - Maryland Parkway - 10year - Interim/Developed Conditions
Worksheet for Irregular Channel

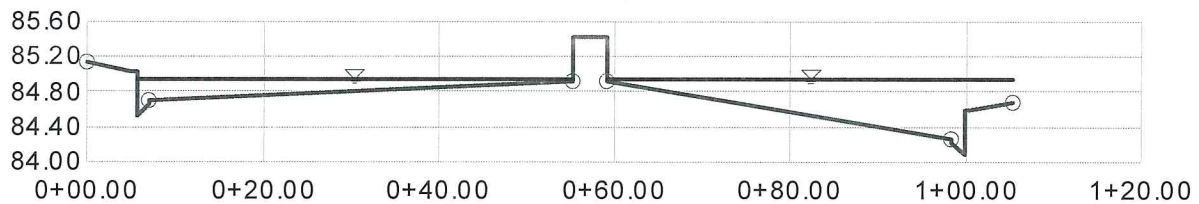
Natural Channel Points	
Station (ft)	Elevation (ft)
0+07.00	84.70
0+55.20	84.91
0+55.20	85.41
0+59.20	85.41
0+59.20	84.91
0+98.37	84.25
0+98.37	84.21
0+99.87	84.08
0+99.87	84.58
1+00.37	84.58
1+05.37	84.68

Street Section 1 - Maryland Parkway - 10year - Interim/Developed Conditions **Cross Section for Irregular Channel**

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 10year - Interim/Devel
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.014
Slope	0.014000 ft/ft
Water Surface Elev	84.94 ft
Elevation Range	1.08 to 85.41
Discharge	123.00 cfs

DOES NOT MEET DRY LANE — This is an existing condition



V:10.0
H:1
NTS

Street Section 1 - Maryland Parkway - 100year - Interim/Developed Conditions Worksheet for Irregular Channel

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 100year - Interim/Developed Conditions
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.14000 ft/ft
Discharge	261.00 cfs

Options	
Current Roughness Method	Developed Lotter's Method
Open Channel Weighting Method	Developed Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.015
Water Surface Elev	85.11 ft
Elevation Range	84.08 to 85.41
Flow Area	40.2 ft²
Wetted Perimeter	102.11 ft
Top Width	100.19 ft
Actual Depth	1.03 ft
Critical Elevation	85.30 ft
Critical Slope	0.003799 ft/ft
Velocity	6.50 ft/s
Velocity Head	0.66 ft
Specific Energy	85.76 ft
Froude Number	1.81
Flow Type	Supercritical

$$d \times v = 1.03 \times 6.50 = 6.70 < 8 \text{ OK } \checkmark$$

Calculation Messages:
Water elevation exceeds lowest end station by 0.42635621 ft.
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00.00	0+07.00	0.013
0+07.00	0+55.20	0.016
0+55.20	0+59.20	0.013
0+59.20	0+98.37	0.016
0+98.37	1+05.37	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00.00	85.13
0+05.00	85.03
0+05.50	85.03
0+05.50	84.53
0+07.00	84.66

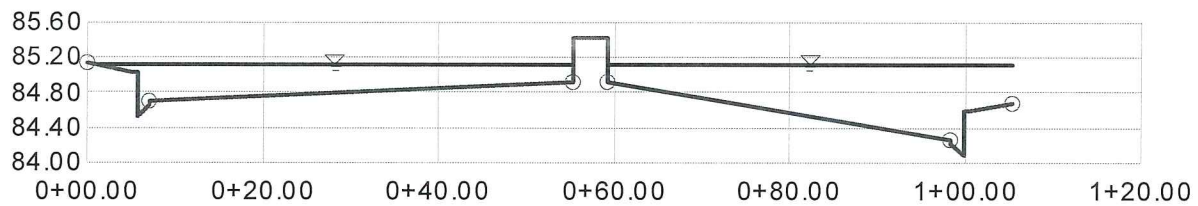
Street Section 1 - Maryland Parkway - 100year - Interim/Developed Conditions
Worksheet for Irregular Channel

Natural Channel Points	
Station (ft)	Elevation (ft)
0+07.00	84.70
0+55.20	84.91
0+55.20	85.41
0+59.20	85.41
0+59.20	84.91
0+98.37	84.25
0+98.37	84.21
0+99.87	84.08
0+99.87	84.58
1+00.37	84.58
1+05.37	84.68

Street Section 1 - Maryland Parkway - 100year - Interim/Developed Conditions **Cross Section for Irregular Channel**

Project Description	
Worksheet	Street Section 1 - Maryland Parkway - 100year - Interim/Devel
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.015
Slope	0.014000 ft/ft
Water Surface Elev	85.11 ft
Elevation Range	84.08 to 85.41
Discharge	261.00 cfs



V:10.0
H:1
NTS

SECTION 1500 – BMP Practices

Section 1500

Structural Best Management Practices

1501 INTRODUCTION

Presented in this section are design criteria for structural Best Management Practices (BMPs) for the control of surface water quality in Las Vegas Valley. These BMPs have been identified as having potential effectiveness in Las Vegas Valley based on the types of water quality conditions expected in this area, and on documented BMP performance in other areas. Criteria for the following BMPs are presented:

Parking Lot Low Impact Development (LID)
General Low Impact Development (LID)
 Disconnected Impervious Areas
 Landscape Swale
 Depressed Medians
 Depressed Landscaping
 Buffer Strip
 Pervious Overflow Parking
 Sand / Media Filters
 Oil / Water Separators
 Oil / Grit Separators
 On-Site Water Quality Basin
 Infiltration Trench

*Our site
disturbed is
less than 1 ac*

There are currently no federal, state or local stormwater regulations which require the installation of specific water quality features in most new or existing developments in the Las Vegas Valley. The exception is new and redeveloped non-residential sites larger than 1.0 acre, for which low impact development (LID) measures are required by the Storm Water Management Plan. LID measures for sites smaller than 1 acre are encouraged for developers desiring to mitigate the impacts of urban development on surface water resources in the Las Vegas Valley.

There are three general categories of conditions for which urban stormwater quality management practices may be applied: (1) existing urban development; (2) new urban development and substantial redevelopment; and (3) construction activity. The BMPs in this section are primarily applicable to areas of new urban development, where land is available to devote to installations of this type and where design flexibility exists. In certain cases, these structural BMPs may be effective in retrofitting existing developed areas to control water quality problems. However, it is generally more cost-effective to rely on nonstructural BMPs (e.g., source controls, housekeeping practices, public education, and employee training) in these applications. BMPs related to construction activity are primarily directed toward erosion control. This issue

1502 Parking Lot LID Measures

1502.1 Description

Low impact development (LID) measures can be used for managing runoff from areas of new development and significant redevelopment (NDSR). LID measures must be applied to parking lots for all new non-residential sites of 1 acre and larger in the Las Vegas Valley. For the purpose of LID measures, a parking lot is defined as all of the impervious area outside the building footprint. Parking lot LID policies and design criteria are discussed in more detail in *Proposed Parking Lot Low Impact Development Program for Las Vegas Valley*, Las Vegas Valley Stormwater Quality Management Committee, February 2013.

1502.2 Design Criteria

Parking lot designs must be submitted to local entities with the technical drainage study required by Municipal code. A list of accepted parking lot BMPs that can be used in the Las Vegas Valley is provided in **Table 1501**.

BMP requirements shall adhere to this manual. A stepped approach to determine whether a parking lot is categorized as small, medium or large for the purpose of determining required BMPs is shown below. Any project site that is less than 1 acre in size is categorized as small; parking lot size is not a factor in determining required BMPs for small sites. For project sites that are greater than or equal to 1 acre, the parking lot size is used to determine if the category is medium or large. Sites having parking lots that are less than or equal to 1 acre are categorized as medium. Sites with parking lots greater than 1 acre are categorized as large.

Total Site Size	Parking Lot Size	Parking Lot Category
< 1 acre	Not Applicable	Small
≥ 1 acre	≤ 1 acre	Medium
≥ 1 acre	> 1 acre	Large

Once the parking lot category is determined, the BMP requirements for the parking lot design can be determined as shown in **Table 1502**. BMP requirements are more stringent as the parking lot size increases.

The designer may choose how to meet the parking lot BMP design requirements depending on specific site characteristics. In order to maximize the water quality benefit of the parking lot BMPs, the designer is encouraged to locate BMPs to capture runoff from portions of the site with the highest potential to generate pollutants.

There are no specific BMP requirements for small parking lots; however, the designer is encouraged to install any of the BMPs that are listed for parking lots in the medium or large categories.

For the Medium parking lot category, the design requirements consist of disconnecting impervious areas for at least 75 percent of the parking lot area from the onsite drainage network. This may be accomplished by directing runoff to pervious areas such as landscaping, depressed medians, parking strips, or stormwater retention basins. The design criteria are based on meeting the accepted minimum standards for the BMPs selected. The designer may choose to install a treatment BMP listed in the Large parking lot category.

For the Large parking lot category, treatment BMPs are required to treat stormwater runoff from at least 75 percent of the parking lot. Because typical site drainage layouts must account for application of flood control criteria, treatment BMPs may need to be sized to accommodate runoff from the contributing building area as well. BMPs are to be sized for the 85th percentile storm, and hydrologic and hydraulic calculations are required to be submitted for the BMP design.

The requirement to treat 75 percent of the parking lot area, either through disconnecting impervious areas or installing treatment devices, recognizes that grading and other site conditions will prevent directing all site runoff to some type of BMP. However, designers are encouraged to exceed the minimum standard when this can be done cost effectively in order to maximize the potential water quality benefits of the BMP system.

LID measures that are incorporated in the parking lot design should be planned during the site design process. Certain LID measures, including depressed medians, islands, and rock-lined swales, help to disconnect impervious areas and remove suspended particles in the stormwater runoff, prior to connection to the MS4. Parking Lot BMPs can be integrated into perimeter landscaped areas (e.g., buffers) and interior landscaped areas (e.g., medians) required by local development standards whenever possible. When incorporated into landscaping features, tributary areas to individual BMPs should be kept to less than 0.5 acres whenever possible, and should never exceed 1.0 acre.

Figure 1501 through Figure 1503, provide ideas on how parking lots can be designed to comply with the water quality regulations. The designer is required to comply with the planning code for the municipality in which the site is located. The conceptual layouts incorporate general planning requirements, however, specific planning requirements such as those for landscape buffers are determined based in part on the adjacent property. The conceptual layouts are designed to represent a commercial property that is approximately 5 acres in size, with the total parking lot area of approximately 3.3 acres.

PARKING LOT BMP DESIGN REQUIREMENTS BY PARKING LOT CATEGORY

<i>Revision</i>	<i>Date</i>
-----------------	-------------

APPENDIX C

FIGURES

NOTES

This map is for assessment use only and does NOT represent a survey. No liability is assumed for the accuracy of the data delineated herein. Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.

This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.

USE THIS SCALEFEET WHEN MAP REDUCED FROM 1:1117 ORIGINAL

0 100 200 400 600 800

MAP LEGEND

- PARCEL BOUNDARY
- SUB BOUNDARY
- PMLD BOUNDARY
- ROAD EASEMENT
- MATCH / LEADER LINE
- HISTORIC LOT LINE
- HISTORIC SUB BOUNDARY
- HISTORIC PMLD BOUNDARY
- SECTION LINE

125-124-123
138 139 140
163 162 161
176 177 178

001 ROAD PARCEL NUMBER
001 PARCEL NUMBER
1.00 ACRES
202 PARCEL SUBSEQ NUMBER
PB 24-48 PLAT RECORDING NUMBER
5 BLOCK NUMBER
45 LOT NUMBER

Scale: 1" = 200'

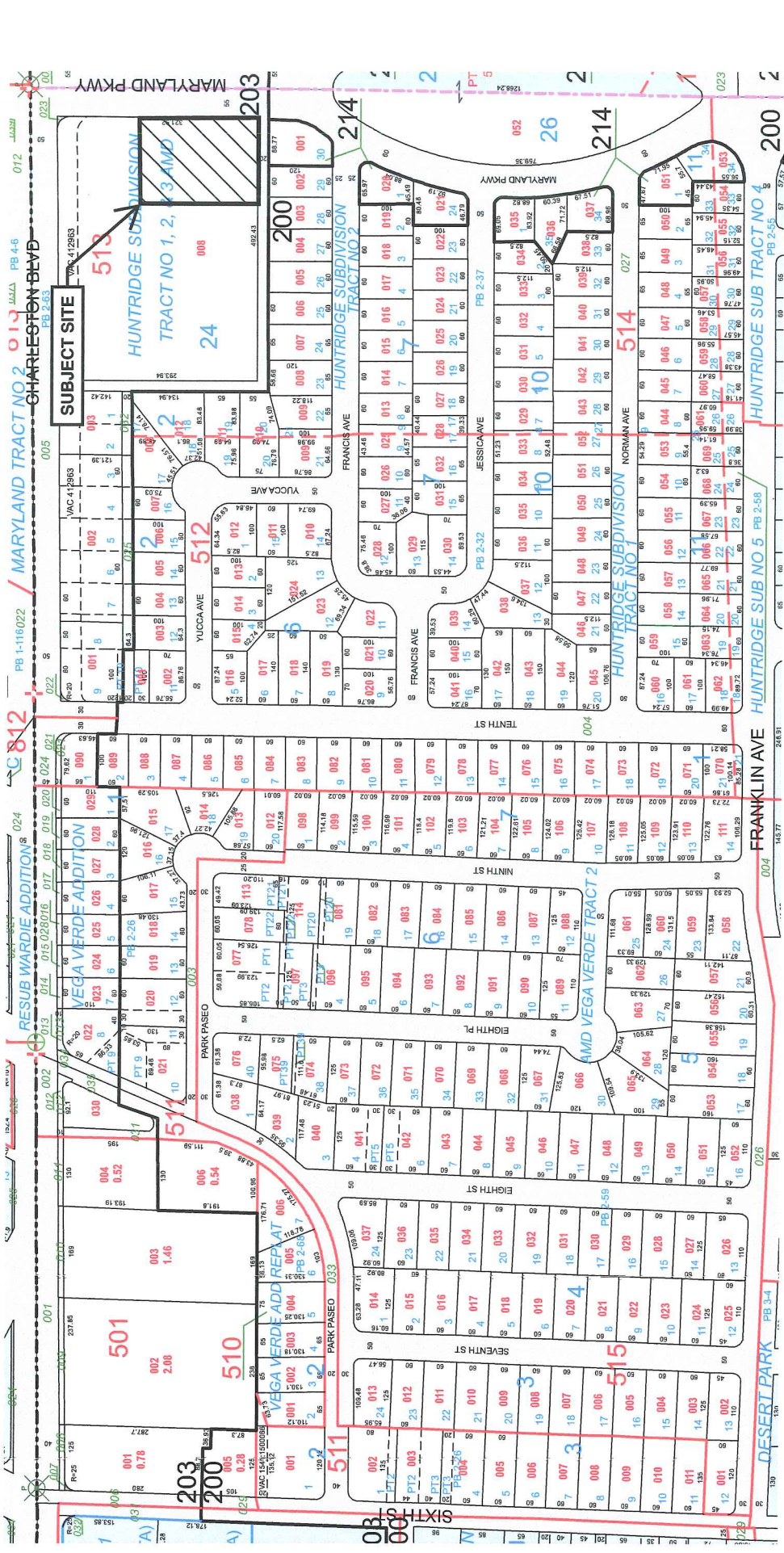
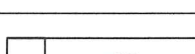
Rev: 5/3/2016

162-03-5

N 2 NE 4

3

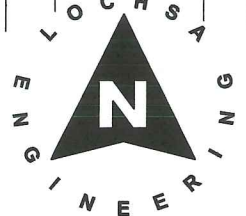
MAP





VICINITY MAP

NOT TO SCALE



DRAWN BY: JMD SCALE: N.T.S.

CHECKED BY: CB DATE: 5/1/18



6345 South Jones Blvd. Suite 100

Las Vegas, NV 89118

Phone (702) 365-9312 - Fax (702) 365-9317

VICINITY MAP (FIGURE 1)

HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS

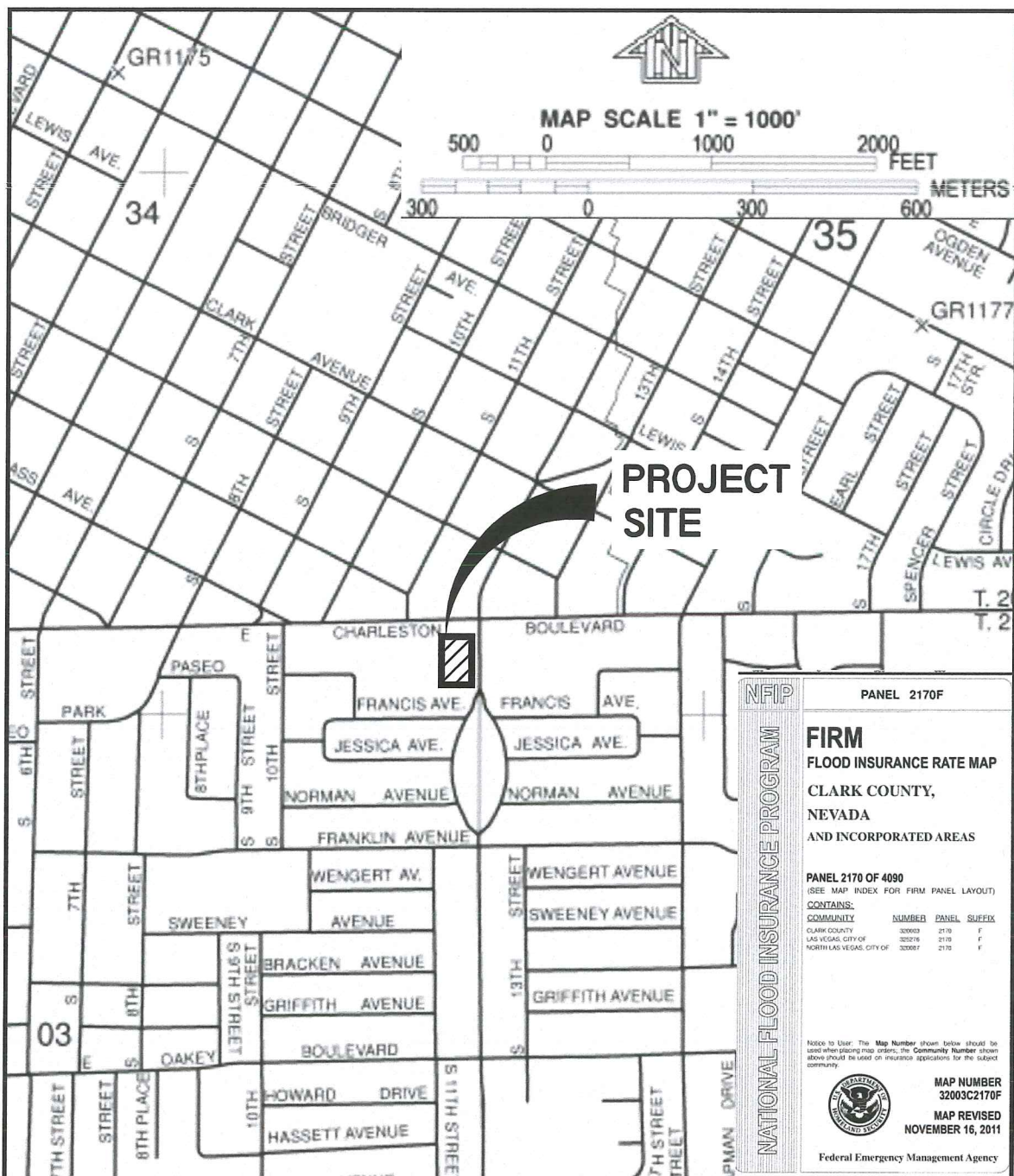
PROJECT No.:

181010

SHEET No.

1

SHEET 1 OF 1



DRAWN BY: JMD SCALE: 1"=1000'

CHECKED BY: CB DATE: 5/1/18

Lochsa
engineering

6345 South Jones Blvd. Suite 100
Las Vegas, NV 89118
Phone (702) 365-9312 - Fax (702) 365-9317

FLOOD INSURANCE RATE MAP (FIGURE 2)

**HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS**

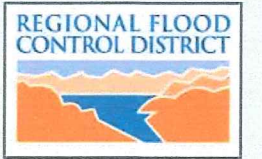
PROJECT No.:

181010

SHEET No.

2

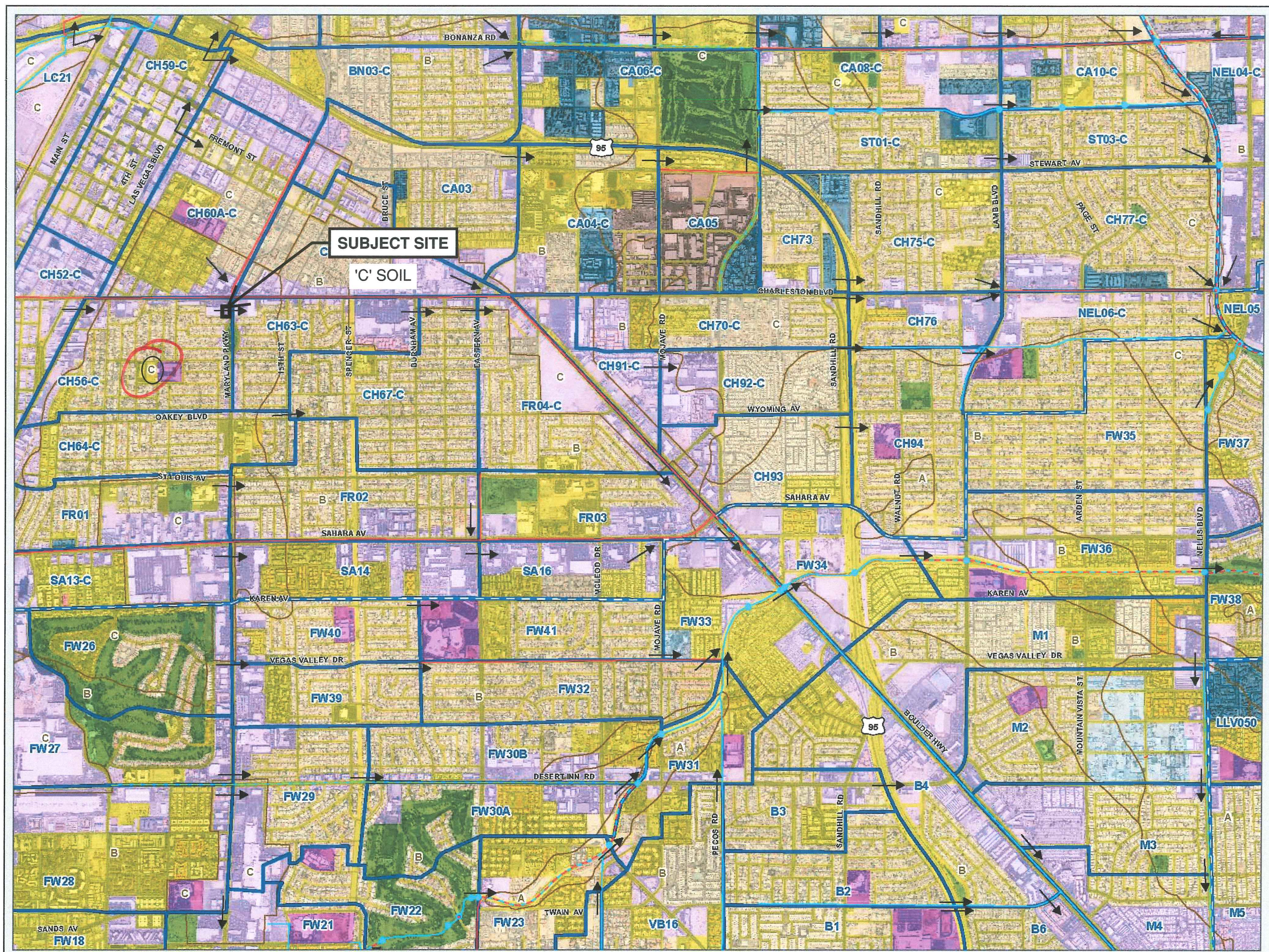
SHEET 1 OF 1



2008
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

**FIGURE H-32
HYDROLOGIC SUMMARY**

- LEGEND**
- Ultimate Development Boundary
 - Watershed Boundary
 - Subbasin Boundary
 - Drought Ordinance Boundary
 - Flow Arrows
- Flood Control Facilities**
- Existing Facilities
 - Category A Proposed Facilities
 - Category B Proposed Facilities
 - Category A Remove & Replace/Parallel Facilities
 - Category B Remove & Replace/Parallel Facilities
- Type Hydrologic Soil Groups**
- A Low Runoff Potential
 - B Moderately Low Runoff Potential
 - C Moderately High Runoff Potential
 - D High Runoff Potential/Rock Outcrops
- Typical Land Use**
- 1 Undeveloped Land, Open Desert
 - 2 Parks, Golf Courses
 - 3 Rural
 - 4 / 14* Low Density Residential
 - 5 / 15* Medium Density Residential
 - 6 / 16* High Density Residential
 - 7 / 17* Public Facility, Residential
 - 8 / 18* Very High Density Residential
 - 9 / 19* Commercial, Retail, Casino, High Rise Condominiums
 - 10 / 20* Light Industrial
 - 11 / 21* Heavy Industrial
 - 12 / 22* Schools
 - 13 Lakes
- * Drought Ordinance Applied

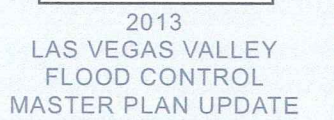


US95

2	3	
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	

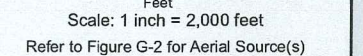
1-15
1-215





LEGEND

- | Remove & Replace/Parallel Facilities | |
|--|--|
| Category A | Category B |
|  Channel |  Channel |
|  Stormdrain |  Stormdrain |



US95

I-15

-215

1 2 3 4 5 6 7 8 9 10 A1 A2 A3 A4 A5 A6 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **	ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **	ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **	ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **		
BHSA		BOULDER HIGHWAY SAHARA AVENUE							FLMP		FLAMINGO WASH-MARYLAND PARKWAY SYSTEM							LVCA		LAS VEGAS WASH - CHARLESTON							VAVD		VEGAS VALLEY DRIVE								
0000	P2	14' X 10' RCB	1350	3837	CSA13*	SW3	7.93	0.50	0000	P1	8' X 6' RCB	3800	492	CCH60A-C	SW3	0.75	0.49	0000	P1	12' X 9' RCB	4600	1104	CCH77-C	SW3	1.34	0.30	0000	P1	8' X 6' RCB	1300	606	CFW32WW	FLAM3A	0.84	2.10		
0026	P1	14' X 11' RCB	4000	3837	CSA13*	SW3	7.93	1.30	FLSP		FLAMINGO WASH - SPENCER						LVCO		COLORADO AVENUE SYSTEM							0025	P1	84" RCP	5300	606	CFW32WW	FLAM3A	0.84	1.60			
0075	P1	12' X 11' RCB	5280	3837	CSA13*	SW3	7.93	2.11	0000	E	48" RCP	420	513	FW21	FLAM3A	0.47	1.10	0000	E	18' X 8' RCB	610	1015	CNEL06	SW3	1.30	0.24	VBCH	E	VAN BUSKIRK CHANNEL								
0175	P1	14' X 14' RCB	6000	3837	CSA13	SW3	7.93	0.67	FLWA		FLAMINGO WASH						0012	E	14' X 8' RCB	2560	1015	CNEL06	SW3	1.30	0.24	0000	E	12' X 3' RCB	500	888	CVB16	FLAM3A	1.16	1.00			
CABZ		CEDAR AVENUE - BONANZA							0001	P1	Grass Chnl 107'W 5'D 2:1 SS (Replace w/ FLWA0001)	4570	10952	CFW36*	FLAM5B	36.14	0.40	0064	E	10' X 8' RCB	2165	827	CCCH94	SW3	0.98	0.24	0008	E	8' X 5' RCB	5490	888	CVB16	FLAM3A	1.16	1.00		
0000	E	72" RCP						0.30	0078	E	3 Span Bridge 108,25'W 5.5'D @ Nellis	120	10952	CFW36	FLAM5B	36.14	0.70	0109	E	10' X 8' RCB	590	394	CCH92-C	SW3	0.35	0.24	VBEA		VAN BUSKIRK - EASTERN AVE								
0010	E	60" RCP	1460					0.30	0080	E	Conc Chnl 50'W 8.5'D 1:1 SS	5080	10952	CFW36	FLAM5B	36.14	1.20	LVMD		LAS VEGAS WASH - MIDDLE						0000	P1	14' X 6' RCB	3020	1561	CVB11	FLAM3A	3.35	1.30			
CACH		CEDAR AVENUE CHANNEL							0174	E	9' 10" X 6' RCBC @ Lamb	110	10622	CFW34	FLAM5B	35.66	1.40	1032	E	Earth Chnl 75'W 10'-12'D 1:1 SS (Replace w/ LVMD1033)	715	15156	CNLWY	CLVWASH5	118.28	0.30	VBMC	E	VAN BUSKIRK - McLEOD DRIVE								
0000	E	Conc Chnl 10'W 6'D 1.5:1 SS	1661	1544	CCA10-C	SW3	1.81	0.26	0176	E	Conc Chnl 60'W 9'D 1:1 SS	1180	10822	CFW34	FLAM5B	35.66	0.70	1033	P1	Conc Chnl 75'W 11'D 1:1 SS (Replaces LVMD1032)	739	15156	CNLWY	CLVWASH5	118.28	0.30	VBTV		VAN BUSKIRK - TWAIN								
0027	E	2: 15'X5' RCBC @ Marion	82	1544	CCA10-C	SW3	1.81	0.35	0200	E	Conc Chnl 70'W 8'D to 12'D w/ Pier 0:1 SS	1245	10822	CFW34	FLAM5B	35.66	0.50	1045	E	5 Span Bridge 75'W 10'D 1:1 SS (Replace w/ LVMD1046)	120	15156	CNLWY	CLVWASH5	118.28	0.52	0000	E	18" RCP	6640	541	CB2	FLAM3A	0.74	0.70		
0029	E	Conc Chnl 10'W 6'D 1.5:1 SS	1284	1544	CCA10-C	SW3	1.81	0.37	0226	E	Free Span Bridge 100'W 10'D @ I-515	170	10822	CFW34	FLAM5B	35.66	0.80	1046	P1	Bridge 75'W 9.5'D 1:1 SS @ Nellis (Replaces LVMD1045)	120	15156	CNLWY	CLVWASH5	118.28	0.52	WAGC		WASHINGTON AVENUE CHANNEL - GRAND CENTRAL								
0051	E	2: 15'X5' RCBC @ Page	64	1544	CCA10-C	SW3	1.81	0.38	0228	E	Conc Chnl 70'W 8'D to 12'D 0:1 SS	1500	10788	CFW33	FLAM5B	35.36	0.80	1047	E	Earth Chnl 80'W 8'D 2:1 SS (Replace w/ LVMD1048)	340	15083	CNEL06	CLVWASH5	117.81	0.50	0000	E	2: 12' X 4' RCB	700	557	LC21	SW3	0.60	0.20		
0053	E	Conc Chnl 10'W 6'D 1.5:1 SS	1275	1544	CCA10-C	SW3	1.81	0.38	0255	E	2 Span Bridge 150'W 9'D @ Boulder Hwy	65	10788	CFW33	FLAM5B	35.36	1.00	1048	P1	Conc Chnl 120'W 8'D 0:1 SS (Replaces LVMD1047)	340	15083	CNEL06	CLVWASH5	117.81	0.50	0014	E	1: 12' X 4' RCB and 1: 11' X 4' RCB	2440	557	LC21	SW3	0.60	0.20		
0079	E	2: 12' X 6' RCBC @ Lamb	100	1387	CCA08-C	SW3	1.61	0.38	0256	E	Conc Chnl 60'W 7.5'D 0:1 SS	40	8146	CFW33W	FLAM5B	24.23	1.00	1053	E	Earth Chnl 80'W 8'D 2:1 SS (Replace w/ LVMD1054)	860	14811	CNEL04-2	CLVWASH5	116.51	0.50	WAPR		WASHINGTON AVENUE CHANNEL PARALLEL								
0081	E	Conc Chnl 12'W 6'D 1.5:1 SS	2562	1387	CCA08-C	SW3	1.61	0.20	0257	E	2 Span Bridge 150'W 9'D @ Boulder Hwy	60	8146	CFW33W	FLAM5B	24.23	1.00	1054	P1	Conc Chnl 120'W 8'D 0:1 SS (Replaces LVMD1053)	860	14811	CNEL04-2	CLVWASH5	116.51	0.50	0132	E	2: 9' X 8' RCB	387	1607	(1/2) CV1-C	SW5SC	15.16	1.67		
0127	E	3: 12'X4' RCBC @ Sandhill	80	1387	CCA08-C	SW3	1.61	0.20	0258	E	Conc Chnl 60'W 7.5'D 0:1 SS	750	8146	CFW33W	FLAM5B	24.23	0.44	1068	E	5 Span Bridge 90'W 6'D 2:1 SS (Replace w/ LVMD1069)	120	14438	CCST03-C	CLVWASH5	114.87	0.50											
0129	E	Conc Chnl 10'W 8'D 1.5:1 SS	971	1387	CCA08-C	SW3	1.61	0.26	0273	E	Free Span Bridge 60'W 9'D @ MMMHP	20	8146	CFW33W	FLAM5B	24.23	0.40	1069	P1	5 Span Bridge 110'W 8'D 2:1 SS (Replaces LVMD1068)	120	14438	CCST03-C	CLVWASH5	114.87	0.50											
0146	E	2: 12' X 5.5' RCBC @ Honolulu	62	1387	CCA08-C	SW3	1.61	0.53	0274	E	Conc Chnl 60'W 8.1'D 0:1 SS	1370	8146	CFW33W	FLAM5B	24.23	1.00	1070	E	Earth Chnl 90'W 10'-12'D 1.5:1 SS (Replace w/ LVMD1071)	2587	14438	CCST03-C	CLVWASH5	114.87	0.43											
0148	E	Conc Chnl 10'W 8'D 1.5:1 SS	959	1387	CCA08-C	SW3	1.61	0.53	0295	E	Conc Chnl 60'W 8.1'D 0:1 SS	430	7669	CFW31	FLAM5B	22.62	0.80	1071	P1	Conc Chnl 90'W 9'D 1.5:1 SS (Replaces LVMD1070)	2587	14438	CCST03-C	CLVWASH5	114.87	0.43											
CACN		CEDAR AVENUE - CHARLESTON							0307	E	Conc Chnl 60'W 8.1'D 2:1 SS	410	7669	CFW31	FLAM5B	22.62	0.70	1119	E	5 Span Bridge 90'W 12'D 2:1 SS @ Stewart	120	14354	CCCA10-C	CLVWASH5	114.40	0.20											
0000	E	72" RCP (Replace w/ CACN0001)	1867	933	CCA05	SW3	0.96	0.41	0314	E	Conc Chnl 60'W 8.1'D 2:1 SS	1500	7195	CFW30B	FLAM5B	21.25	0.90	1120	E	Earth Chnl 90'W 12'D 1:1 SS (Replace w/ LVMD1121)	1400	14354	CCCA10-C	CLVWASH5	114.40	0.20											
0001	P1	10' X 9' RCB (Replaces CACN0000)	1867	933	CCA05	SW3	0.96	0.41	0347	E	5: 10' X 8' RCBC @ Mojave	80	7195	CFW30B	FLAM5B	21.25	0.94	1121	P1	Conc Chnl 90'W 10.5'D 1:1 SS (Replaces LVMD1120)	1400	14354	CCCA10-C	CLVWASH5	114.40	0.20											
0034	E	2: 48" RCP (Replace w/ CACN0035)	685	254	CA05	SW3	0.24	0.30	0348	E	Conc Chnl 30'W 12'D 1:1 SS	1160	7195	CFW30B	FLAM5B	21.25	0.70	1148	E	Earth Chnl 70'W 18'-20'D 1.5:1 SS (Replace w/ LVMD1149)	1675	13944	CCBN15-C	CLVWASH5	112.59	0.41											
0035	P0	6' X 6' RCB (Replaces CACN0034)	685	254	CA05	SW3	0.24	0.30	0375	E	5: 10' X 8' RCBC @ Desert Inn	140	7102	CFW30A	FLAM5B	20.96	2.70	1149	P1	Conc Chnl 70'W 10'D 1.5:1 SS (Replaces LVMD1148)	1675	13944	CCBN15-C	CLVWASH5	112.59	0.41											
0049	E	66" RCP (Replace w/ CACN0050)	2146	254	CA05	SW3	0.24	0.60	0377	E	Conc Chnl 50'W 9.5'D 0:1 SS	1372	6964	CFW23	FLAM5B	19.36	1.04	1176	E	5 Span Bridge 110'W 20'D 2:1 SS @ Bonanza	120	12690	CLW04-C	CLVWASH5	106.80	0.57											
0050	P0	6' X 5' RCB (Replaces CACN0049)	2146	254	CA05	SW3	0.24	0.60	0399	E	Free Span Bridge 60'W 16'D @ McLeod	120	6964	CFW23	FLAM5B	19.36	0.50	1178	E	Earth Chnl 30'W 18'-20'D 2:1 SS (Replace w/ LVMD1179)	1500	12690	CLW04-C	CLVWASH5	106.80	0.57											
CNST		CEDAR AVENUE CHANNEL - STEWART							0401	E	Conc Chnl 50'W 11.5'D 0:1 SS	123	6964	CFW23	FLAM5B	19.36	0.50	1179	P1	Conc Chnl 60'W 9.5'D 2:1 SS (Replaces LVMD1178)	1500	12690	CLW04-C	CLVWASH5	106.80	0.57											
0000	P1	8' X 7' RCB	2120	690	CCA04	SW3	0.72	0.90	0406	E	Conc Chnl 33'W 11.5'D 0:1 SS	690	6964	CFW23	FLAM5B	19.36	1.01	LVNE		LAS VEGAS WASH - NELLIS						0000	P1	2: 13' X 10' RCB	4675	2303	CNEL02-C	WEST3	3.39	0.20			
COLM		COLORADO / LAMB							0419	E	Conc Chnl 33'-50'W 9.8'D 0:1 SS	200	6964	CFW23	FLAM5B	19.36	2.00	LVOE		OWENS AVENUE - EAST						0345	P1	13' X 11' RCB	1685	2369	DLVOE	SW5	22.79	0.60			
0000	E	72" RCP	1500	470	CCH94	SW3	0.63	0.87	0423	E	Conc Chnl 50'W 9.8'D 0:1 SS	1686	6964	CFW23	FLAM5B	19.36	0.76	LVWH		WASHINGTON AVENUE CHANNEL						0389	E	12' X 8' RCB	2110	1607	(1/2) CV1-C	SW5SC	15.16	0.90			
FLAG		FLAMINGO WASH - ALGONQUIN							0456	E	Conc Chnl 50'-75'W 9.8'D 0:1 SS	169	6964	CFW23	FLAM5B	19.36	1.83	0426	E	16' X 8' RCB	150	1607	(1/2) CV1-C	SW5SC	15.16	1.08											
0000	E	72" RCP	1080	513	FW21	FLAM3A	0.47	0.50	0458	E	Conc Chnl 75'-80'W 9.8'D 0:1 SS	347	6964	CFW23	FLAM5B	19.36	1.50	0429	E	Splitter Structure (2: 12' X 8' RCB)	190	2870	DCLC21	SW5	22.79	1.90											
0020	E	66" RCP	460	513	FW21	FLAM3A	0.47	1.00	0471	E	5: 10' X 8' RCBC @ Eastern	110	5781	CFW22W	FLAM5B	14.95	1.30	0431	E	3: 14.33' X 10' RCB	665	2870	DCLC21	SW5	22.79	0.15											
FLBN		FLAMINGO - BOULDER HIGHWAY NORTH							0472	P1	Add 1: 22' X 8' RCBC @ Eastern	110	5781	CFW22W	FLAM5B	14.95	0.50	0446	E	Junction Structure	69	2870	DCLC21	SW5	22.79	0.15											
0001	E	5: 10' X 6' RCB	350	4784	CCFR03	BOULDER4	11.13	0.58	0473	E	Grass Chnl 60'W 15'D 2:1 SS	100	5781	CFW22W	FLAM5B	14.95	0.47	0447	E	3: 14.33' X 10' RCB	1955	4978	CCAL93	SW5	22.19	0.15											
0008	E	3: 14' X 12' RCB	1055	4784	CCFR03	BOULDER4	11.13	0.20	0478	E	Grass Chnl 60'W 15'D 2:1 SS	520	5781	CFW22W	FLAM5B	14.95	0.47	NLFL		NELLIS FLAMINGO STORM DRAIN						0028	P0	Add 1: 7' X 6' RCB	1530	338 ^A	CM3 ^A	FLAM3A	1.27	0.39			
0028	E	3: 14' X 12' RCB	275	4784	CCFR03	BOULDER4	11.13	0.20	0481	E	3: 90" CMAP @ Tioga (Replace w/ FLWA0482)	60	5781	CFW22W	FLAM5B	14.95	0.87	0029	E	76" & 48" RCP	1530	391 ^A	CM3 ^A	FLAM3A	1.27	0.39											
0033	E	3: 14' X 12' RCB	500	4784	CCFR03	BOULDER4	11.13	0.20	0482	P1	4: 20' X 8' RCBC @ Tioga (Replaces FLWA0481)	60	5781	CFW22W	FLAM5B	14.95																					

ND1

2

3

[2]

[3]

*

DRAINAGE BASIN LABEL

OFFSITE BASIN BOUNDARY LINE

ONSITE BASIN BOUNDARY

Q10 FLOW IN CFS (10 YR.)

Q100 FLOW IN CFS (100 YR.)

[Q10] FUTURE FLOW (10 YR.)

[Q100] FUTURE FLOW (100 YR.)

FLOW DIRECTION

As Referenced from the "Central Neighborhood Flood Control Master Plan"

LOCHSA

ENGINEERING

N

Peak Flow Summary Existing Condition			
HEC-1 I.D.	Area (acres)	10-year Flow (cfs)	100-year Flow (cfs)
FX1	35.20	47	94
NX1	0.93	2	3
FX2	1.12	2	4
*REF. FLOW CX1	-	*74	*164

(SUB-BASIN CH55)

(FX1+NX1+FX2+REF.FLOW (74/164))

*CITY OF LAS VEGAS "NEIGHBORHOOD FLOOD CONTROL MASTER PLAN"

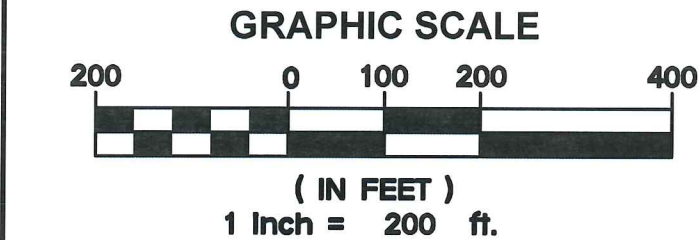
Peak Flow Summary Interim / Developed Condition			
HEC-1 I.D.	Area (acres)	10-year Flow (cfs)	100-year Flow (cfs)
FX1	35.20	47	94
FX2	1.12	2	4
ND2	0.09	<1	<1
*REF. FLOW	-	*74	*164
CD1	-	123	261
ND1	0.84	2	3
CD2	-	124	263

(SUB-BASIN CH55)

(FX1+FX2+ND2+REF.FLOW (74/164))

(CD1+ND1)

*CITY OF LAS VEGAS "NEIGHBORHOOD FLOOD CONTROL MASTER PLAN"



DRAWN BY: CB

CHECKED BY: HN

SCALE: 1"=200'

DATE: 04/30/18

FILE NAME:

LEGEND

FOUND MONUMENTATION

CENTER LINE

ROW LINE

EASEMENT LINE

SECTION LINE

PROPERTY LINE

ADJACENT PROPERTY LINE

LOCHSA

ENGINEERING

6345 SOUTH JONES BLVD., SUITE 100

LAS VEGAS, NV 89118

P: 702 365-9312, F: 702 365-9317

PROJECT No.: 181010

SHEET No. OFF1

SHEET 1 OF 1

OFFSITE DRAINAGE MAP
(EXISTING AND DEVELOPED CONDITIONS)

HUNTRIDGE SHOPPING CENTER NEW COMMERCIAL PADS



City of Las Vegas

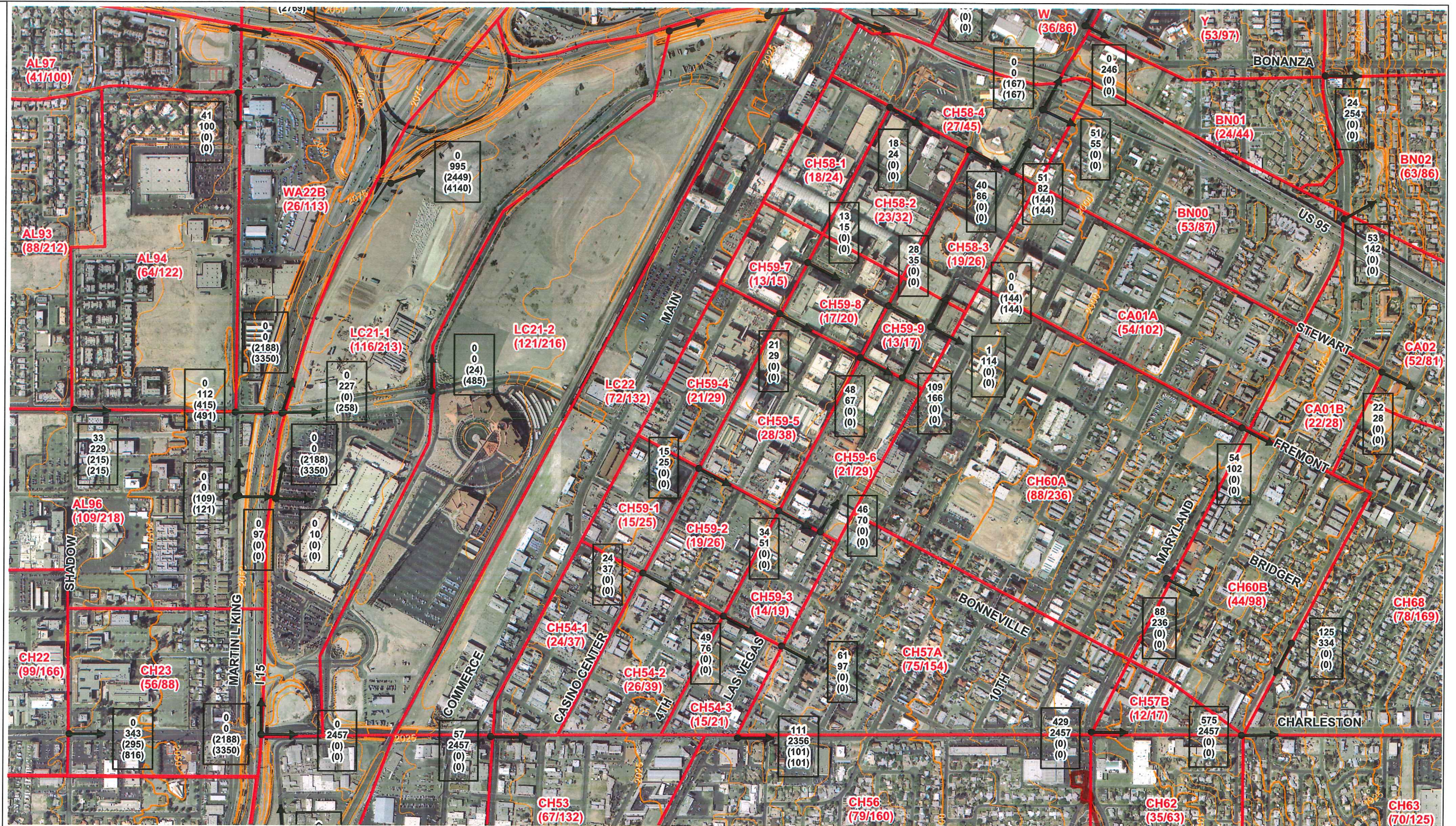
CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN

LEGEND

- Sub-basin Boundary
- LV12 Basin ID
- (10yr./100yr.) Contributing flow from the basin (cfs)
- Flow Arrow
- 250 10-Year Street Flow
500 100-Year Street Flow
(300) 10-Year Facility Flow
(800) 100-Year Facility Flow
(Flows in CFS)
- Study Area Limit

PHOTO DATE: SPRING 2004

FIGURE E- 10



EXISTING DRAINAGE CONDITIONS



2270 Corporate Circle, Suite 100
Henderson, NV 89074
(702) 263-7275
Fax: (702) 263-7200

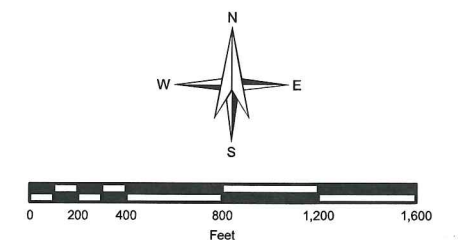
	Durango	Rainbow	Decatur	Tonopah	5th	Pecos	Nellis
Lake Mead				1	2		
Washington				3	4	5	6
Charleston	7	8	9	10	11		12
Sahara	13	14	15	16	17		
Desert Inn		18	19				

NOTE:

Existing conditions are based on future Curve Number values with only existing local and CCRFCD facilities in place.

100-Year flows at locations where a 100-Year subbasin concentration point does not exist in the hydrology model were based on an area-weighted ratio of the 100-Year flows from concentration points upstream and downstream of the location. See Volume I for a more detailed explanation.

SITE



SCALE: 1 inch = 800 feet



City of Las Vegas

CENTRAL
NEIGHBORHOOD
FLOOD CONTROL
MASTER PLAN

LEGEND

- Sub-basin Boundary
- LV12 Basin ID
- (10yr./100yr.) Contributing flow from the basin (cfs)
- Flow Arrow
- 250 10-Year Street Flow
500 100-Year Street Flow
(300) 10-Year Facility Flow
(800) 100-Year Facility Flow
(Flows in CFS)
- Study Area Limit

PHOTO DATE: SPRING 2004

FIGURE E- 16



EXISTING DRAINAGE CONDITIONS

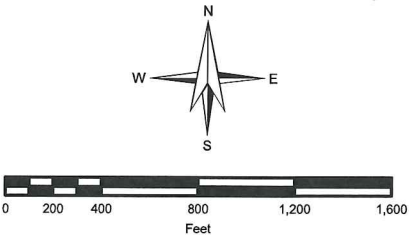


2270 Corporate Circle, Suite 100
Henderson, NV 89074
(702) 263-7275
Fax: (702) 263-7200

	Durango	Rainbow	Decatur	Tonopah	5th	Pecos	Nellis
Lake Mead				1	2		
Washington				3	4	5	6
Charleston	7	8	9	10	11	12	
Sahara	13	14	15	16	17		
Desert Inn		18	19				

NOTE:
Existing conditions are based on future
Curve Number values with only existing local and
CCRFC facilities in place.

100-Year flows at locations where a 100-Year
subbasin concentration point does not exist in the
hydrology model were based on an area-weighted
ratio of the 100-Year flows from concentration points
upstream and downstream of the location. See
Volume I for a more detailed explanation.



SCALE: 1 inch = 800 feet



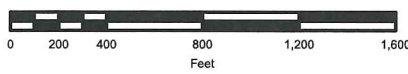
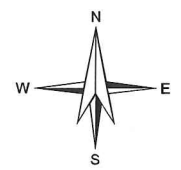
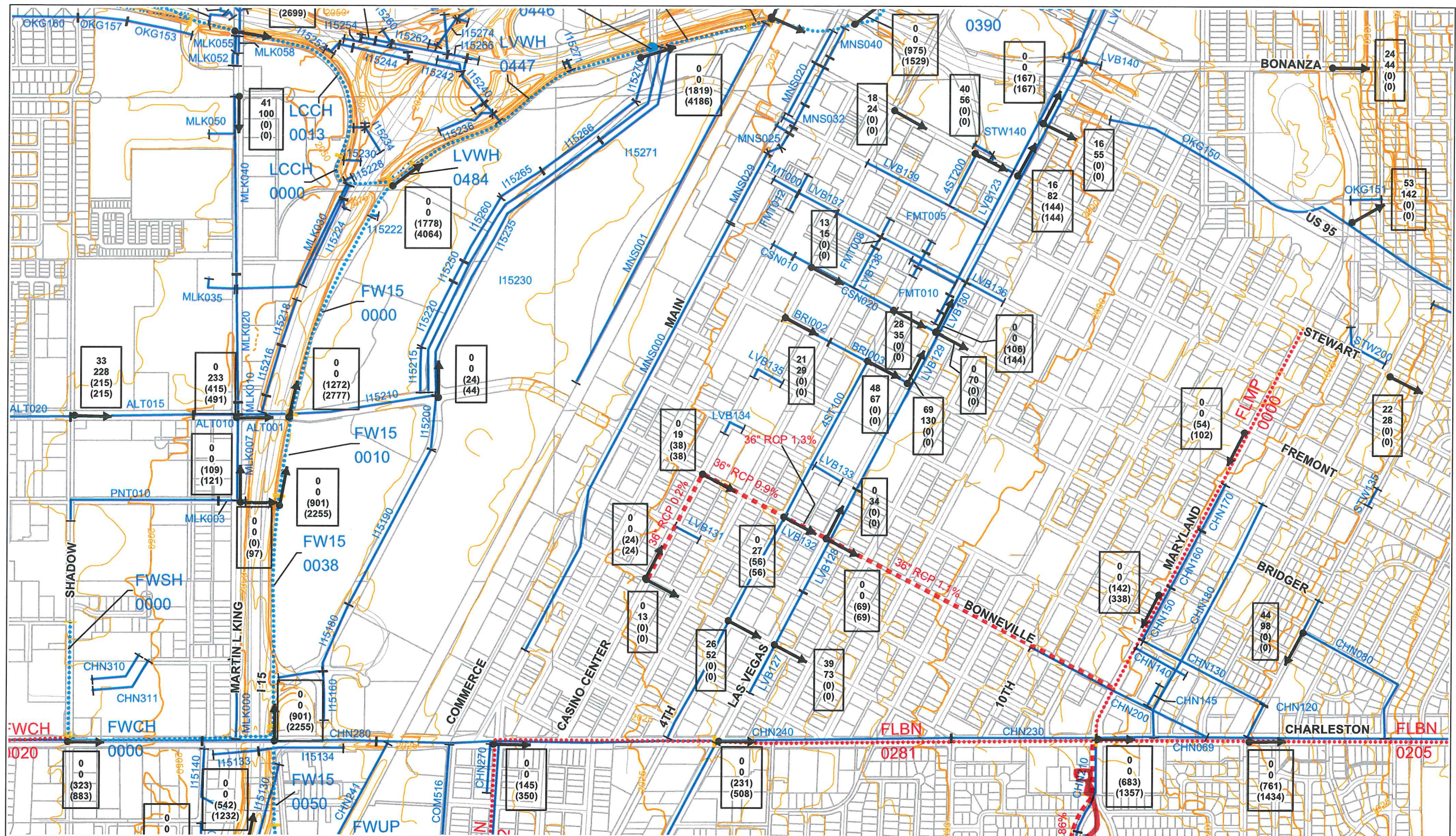
City of Las Vegas

CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN

LEGEND

- Existing Regional Facility
- Category A Proposed Regional Facility (2002 MPU)
- Category B Proposed Regional Facility (2002 MPU)
- Category A Proposed Regional Facility (2004 CNFCMP)
- Existing Local Facility
- Proposed Local Facility
- Regional Culvert
- Regional Bridge
- Regional Pipeline
- Regional Channel
- Regional Levee
- Regional Detention Basin
- Local Storm Drain
- Local Culvert
- Proposed Local Storm Drain
- Regional ID-Mile Separator
- Local Facility Separator

FIGURE F-10



SCALE: 1 inch = 800 feet

- Flow Arrow
- 250 10-Year Street Flow
- 500 100-Year Street Flow
- (300) 10-Year Facility Flow
- (800) 100-Year Facility Flow
- (Flows in CFS)

NOTE:
Ultimate drainage conditions are based on future Curve Number values with all flood control facilities in place.

100-Year flows at locations where a 100-Year subbasin concentration point does not exist in the hydrology model were based on an area-weighted ratio of the 100-Year flows from concentration points upstream and downstream of the location. See Volume I for a more detailed explanation.

SITE

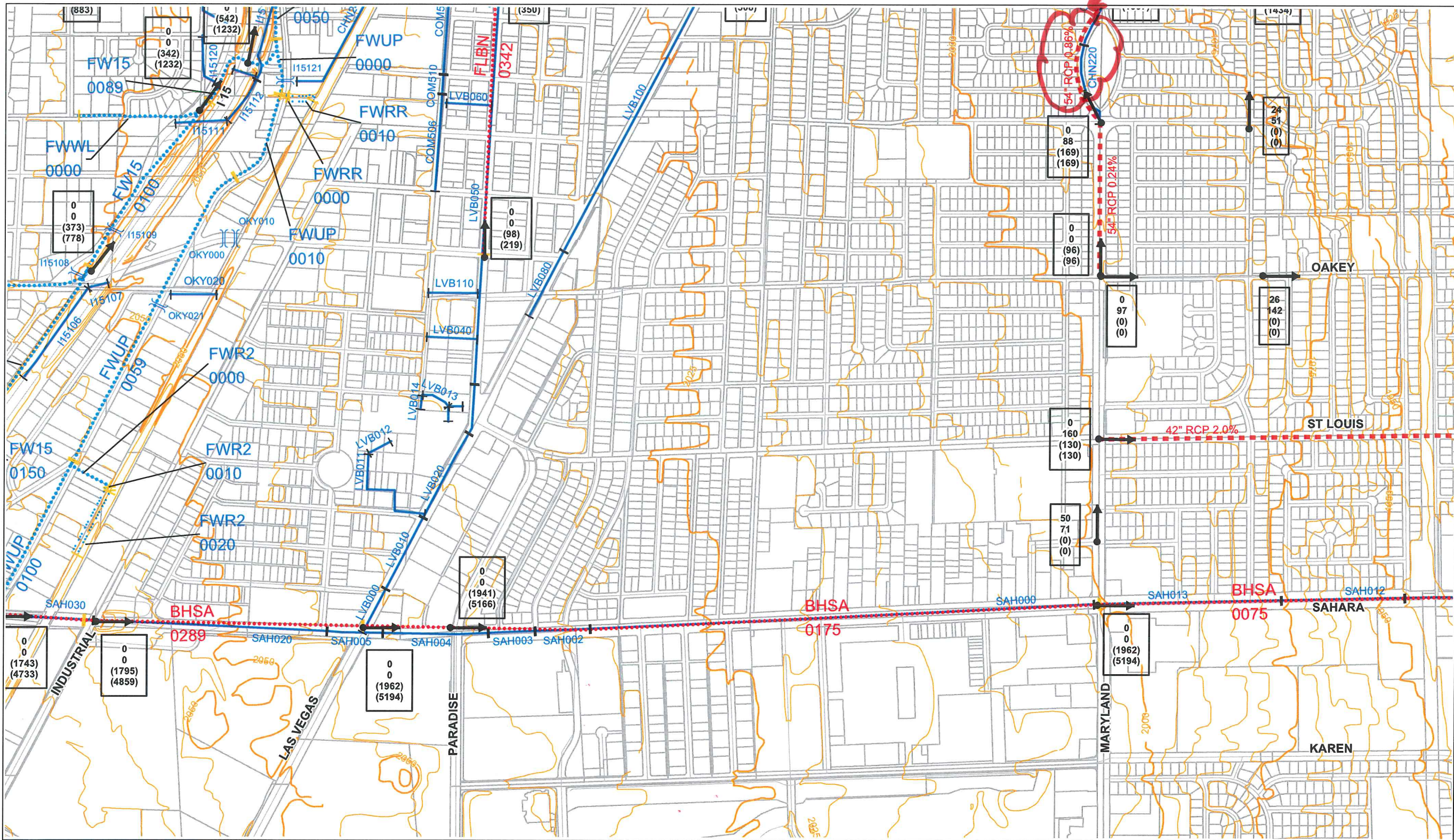
(54" RCP at 0.86% adjacent to site) - (WE AREN'T REQUIRED TO PUT IN PIPE - SEE EMAIL CORRESPONDENCE)

Durango	Rainbow	Decatur	Tonopah	5th	Pecos	Nellis
Lake Mead			1	2		
Washington			3	4	5	6
Charleston	7	8	9	10	11	12
Sahara	13	14	15	16	17	
Desert Inn		18	19			

FUTURE DRAINAGE CONDITIONS



2270 Corporate Circle, Suite 100
Henderson, NV 89074
(702) 263-7275
Fax: (702) 263-7200



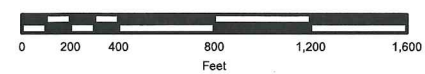
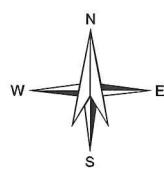
City of Las Vegas

CENTRAL NEIGHBORHOOD FLOOD CONTROL MASTER PLAN

LEGEND

- Existing Regional Facility
- Category A Proposed Regional Facility (2002 MPU)
- Category B Proposed Regional Facility (2002 MPU)
- Category A Proposed Regional Facility (2004 CNFCMP)
- Existing Local Facility
- Proposed Local Facility
- Regional Culvert
- Regional Bridge
- Regional Pipeline
- Regional Channel
- Regional Levee
- Regional Detention Basin
- Local Storm Drain
- Local Culvert
- Proposed Local Storm Drain
- Regional ID-Mile Separator
- Local Facility Separator

FIGURE F-16



SCALE: 1 inch = 800 feet

- Flow Arrow
- 250 10-Year Street Flow
- 500 100-Year Street Flow
- (300) 10-Year Facility Flow
- (800) 100-Year Facility Flow
- (Flows in CFS)

NOTE:
Ultimate drainage conditions are based on future Curve Number values with all flood control facilities in place.

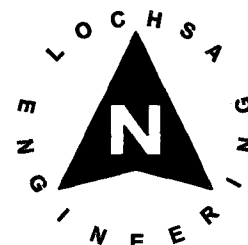
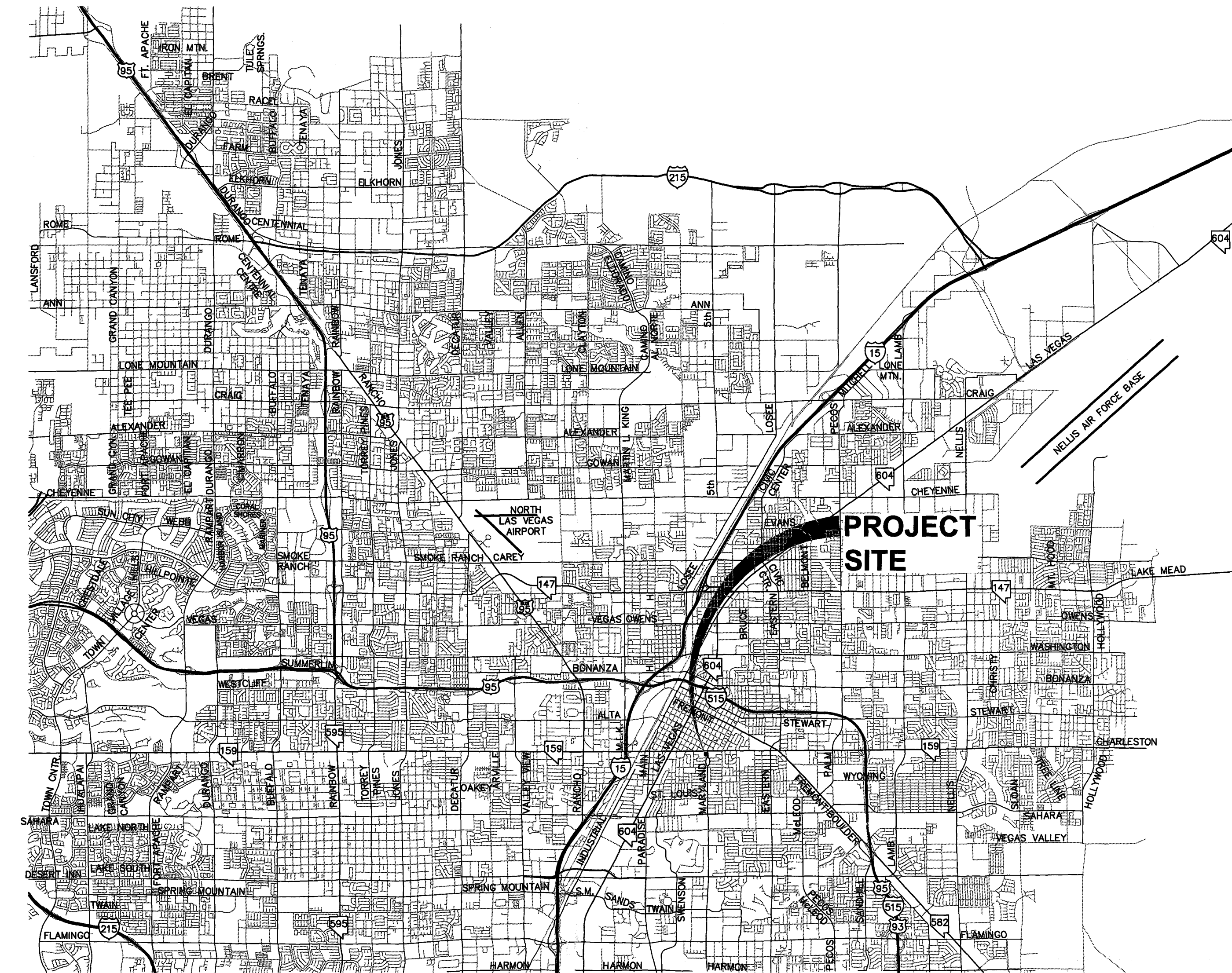
100-Year flows at locations where a 100-Year subbasin concentration point does not exist in the hydrology model were based on an area-weighted ratio of the 100-Year flows from concentration points upstream and downstream of the location. See Volume I for a more detailed explanation.

Durango	Rainbow	Decatur	Tonopah	5th	Pecos	Nellis
Lake Mead			1	2		
Washington			3	4	5	6
Charleston	7	8	9	10	11	12
Sahara	13	14	15	16	17	
Desert Inn		18	19			

FUTURE DRAINAGE CONDITIONS



2270 Corporate Circle, Suite 100
Henderson, NV 89074
(702) 263-7275
Fax: (702) 263-7200



IMPROVEMENT PLANS FOR HUNTRIDGE SHOPPING CENTER NEW COMMERCIAL PADS 1122 S MARYLAND PARKWAY LAS VEGAS, NV 89104

A PORTION OF A PORTION THE NORTHEAST QUARTER (NE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 03, TOWNSHIP 21 SOUTH, RANGE 61 EAST, M.D.M.

A.P.N.: 162-03-513-008

Issues and Revisions	

Consultant:
Lochsa
engineering
6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-6912
Fax (702) 365-6917
www.lochsa.com
4-30-2018

Project: **HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS**
1122 S MARYLAND PKWY, LAS VEGAS, NV 89104
Drawing: **COVER SHEET**

ABBREVIATIONS			
ABAN	ABANDON	INV	INVERT
AIP	ABANDON IN PLACE	ISL	ISLAND
AGG	AGGREGATE	JUN	JUNCTION BOX
ALT	ALTERNATE	LOC	LENGTH OF CURB
ACP	ANODE, GAS	LT	LEFT
ACD	ASBESTOS CEMENT PIPE	LVWD	LAS VEGAS VALLEY WATER DISTRICT
ACF	ASPHALTIC CONCRETE	MH	MANHOLE
AVE	AVENUE	MAX	MAXIMUM
BC	BACK OF CURB	MIN	MINIMUM
BCR	BACK OF CURB RADIUS	MON	MONOLITHIC
BVC	BEGINNING OF VERTICAL CURVE	N/O	NOT TO SCALE
BM	BENCHMARK	NIS	ON CENTER
BDRY LINE	BOUNDARY LINE	OG	OPEN-GRADED PAVEMENT, ORIGINAL
CATV	CABLE TELEVISION	OG	GROUND
C-C	CENTER TO CENTER	PMT	POINT OF INTERSECTION
CL	CENTERLINE	PRC	POINT OF REVERSE CURVE
CLV	CITY OF LAS VEGAS	PC	POINT OF CURVE
COH	CITY OF HENDERSON	PT	POINT OF TANGENCY
CH	CITY OF CHURCH	PCC	POINT OF COMPOUND CURVE
CNIV	CITY OF NORTH LAS VEGAS	PCC, CONC	PORTLAND CEMENT CONCRETE
CC	CLARK COUNTY	P	POWER
CCWRD	CLARK COUNTY WATER RECLAMATION DISTRICT	PL	PROPERTY LINE
CO	CLEAN OUT, SEWER	PROP	PROPOSED
COMM	COMMERCIAL	RP	RADIUS POINT
CONC, PCC	CONCRETE	R	RADIUS
CONST	CONSTRUCTED	RR	RAILROAD
COR	CORNER	REIN	REINFORCED
CMP	CORRUGATED METAL PIPE	RC	REINFORCED CONCRETE
CSAP	CORRUGATED STEEL ARCH PIPE	RCB	REINFORCED CONCRETE BOX
CSP	CORRUGATED STEEL PIPE	ROP	REINFORCED CONCRETE PIPE
C&G	CURB & GUTTER	RELOC	RELOCATE
OIP	CAST IRON PIPE	RT	RIGHT
COL	COLUMN	R/W	RIGHT-OF-WAY
CU YD, CY	CUBIC YARD	RD	ROAD
CU FT, CF	CUBIC FOOT	SS	SANITARY SEWER
CULV	CULVERT	SHT	SHEET
CF	CURB FACE	S/O	SOUTH OF
DEPT	DEPARTMENT	SW	SIDEWALK
DIA	DIAMETER	SO FT, SF	SQUARE FOOT
DIWY	DRIVEWAY	SO W, SY	SQUARE YARD
DI	DROP INLET	STA	STATION
ESMT	EASEMENT	SHD	STEEL HIGH-PRESSURE PIPE
E/O	EAST OF	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	STD	STANDARD
EO	EDGE OF OIL	STRCT	STRUCTURAL OR STRUCTURE
EM	ELECTRIC	SURV	SURVEY
ELEV	ELECTRIC METER	STL	STREETLIGHT
EMBK	EMBANKMENT	TL	TELEPHONE
ECR	END OF CURB RETURN	TEMP	TEMPORARY
EBS	END OF CURVE	TBA	TO BE ADJUSTED
ETS	CATHODE PROTECTION BOND STATION	TBR	TO BE REMOVED
EVC	CATHODE PROTECTION TEST STATION	TC	TOP OF CURB
EXIST	EXISTING	TP	TOP OF PIPE
FT	FEET/FOOT	TS	TRAFFIC SIGNAL INTERCONNECT
FG	FINISH GRADE	TRANS	TRANSITION
FA	FIRE ALARM	TYP	TYPICAL
FH	FIRE HYDRANT	UG	UNDERGROUND
FL	FLOW LINE	VAR	VARIABLE
GALV	GALVANIZED	VERT	VERTICAL
GM	GAS METER	VC	VERTICAL CURVE
GR	GAS PRESSURE REGULATOR	VG	VALLEY GUTTER
PL-G	PLASTIC GAS	VCP	VITRIFIED CLAY PIPE
SG	STEEL GAS	W	WATER
GB	GRADE BREAK	WM	WATER METER
GUT	GUTTER	W/O	WEST OF
HDWL	HEADWALL	YD	YARD
IN	INCH		
INT	INTERSECTION		

SHEET INDEX		
SHEET NAME	SHEET NUMBER	
1 COVER SHEET	C1.00	
2 GENERAL NOTE SHEET	C1.01	
3 DEMOLITION PLAN	C2.00	
4 UTILITY PLAN	C3.00	
5 GRADING PLAN	C4.00	
6 HORIZONTAL & TRAFFIC CONTROL PLAN	C5.00	
7 DETAIL SHEET - 1	C6.00	
8 DETAIL SHEET - 2	C6.01	

UTILITY PROVIDERS	
WATER:	LAS VEGAS VALLEY WATER DISTRICT
SEWER:	CITY OF LAS VEGAS
GAS:	SOUTHWEST GAS CORPORATION
ELECTRIC:	NV ENERGY
TELEPHONE:	CENTURYLINK
CABLE TV:	COX COMMUNICATIONS LAS VEGAS, INC.
TRASH:	REPUBLIC SILVER STATE DISPOSAL SERVICE

OWNER	DEVELOPER
TEN 15 HUNTRIDGE, LLC 985 WHITE DR LAS VEGAS, NV 89119	DAPPER COMPANIES 985 WHITE DR. SUITE #100 LAS VEGAS, NV 89119
CONTACT: - PHONE: - FAX: -	CONTACT: RYAN WILKERSON PHONE: 702-733-3622 FAX: 702-733-8653

GENERAL SITE INFORMATION

A.P.N.: 162-03-513-008

BASIS OF BEARINGS:
THE BASIS OF BEARING FOR THE SURVEY IS THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 61 EAST M.D.M., AS SHOWN IN FILE 07 OF SURVEYS PAGE 79, IN THE OFFICE OF THE RECORDER, CLARK COUNTY, NEVADA.

SAID LINE BEARS NORTH 89°36'01" EAST.

BENCHMARK:
BENCHMARK NO. 21V0134558
RIVET & PLATE IN TOP OF CURB NE CORNER OF CHARLESTON & MARYLAND PARKWAY.
ELEVATION: 1,977.61 FEET / 602.777 METERS (NAVD '88)

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

FAST
Call before you Dig
Underground
1-800-227-2600

1-702-432-5300
FIREARM & MATERIAL SYSTEM
1-702-227-2929

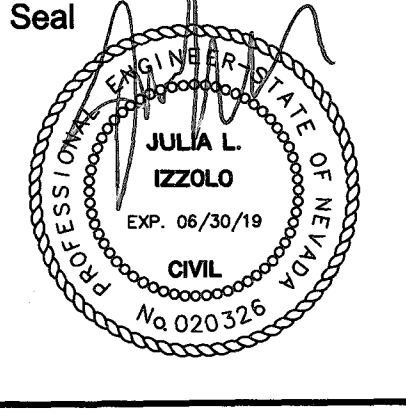
Avoid hitting overhead power lines. It's costly.

CALL BEFORE YOU DIG
OVERHEAD

APPROVALS	
ALLEN PAVELKA, P.E., #9029 CITY ENGINEER	DATE
APPROVAL OF THESE PLANS IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHT-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS, EXCEPT THOSE SPECIFICALLY LISTED UNDER DEVIATIONS FROM STANDARD. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARDS DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA, NEVADA.	
CITY OF LAS VEGAS PLANNING DEPARTMENT	DATE
NOTE: THIS PLAN CONFORMS TO THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.	
LAS VEGAS FIRE AND RESCUE	DATE
LAS VEGAS VALLEY WATER DISTRICT APPROVED FOR CONSTRUCTION	
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER PROJECT NO. XXXX SHEETS: XXXXX LVWD APPROVED FIRE FLOW = XXXX GPM AT 20 PSI RESIDUAL	DATE
SOUTHWEST GAS CORPORATION	DATE
NV ENERGY	DATE
NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.	
COX COMMUNICATIONS LAS VEGAS, INC.	DATE
CENTRAL TELEPHONE COMPANY D.B.A. CENTURY LINK	DATE
THE AFFIXED CENTURYLINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.	
OFFSITE HTE No.	
CL OR SURVEY LINE	
PROPERTY LINE	
ROW LINE	
EASEMENT LINE	
SAWCUT LINE	
SCARP LINE	
DESCRIPTION:	
EXISTING:	
PROPOSED:	
BUILDING OUTLINE	
EDGE OF PAVEMENT	
"A" TYPE CURBS	
"L" TYPE CURBS	
WALLS	
CONTOUR LINES	
AC PAVEMENT	
CONCRETE	
SPOT ELEVATIONS	
SIGNS	
MANHOLE W/ MANHOLE DESCRIPTIONS	
DESCRIPTION	
① = SANITARY SEWER	
② = STORM DRAIN	
③ = ELECTRICAL	
④ = TELEPHONE	
FIRE HYDRANTS	
GATE VALVES	
REDUCERS	
CLEAN OUTS	
UTILITY BOX OR VAULT	
100w HPS STREETLIGHTS	
150w HPS STREETLIGHTS	
200w HPS STREETLIGHTS	
250w HPS STREETLIGHTS	

BUNNYFISH
studio
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as Instruments of Service, are and shall remain the Property of the Design Professional. Do Not Scale These Drawings.



Project No.: 16-0907
Sheet No.: 1 OF 8
C1.00

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

TRAFFIC AREA	ASPHALT (inches)	TYPE II BASE COURSE (inches)
AUTOMOBILE PARKING	2	8
MAIN CORRIDORS AND TRUCK ACCESS	3	8

[illegible]

Consultant:

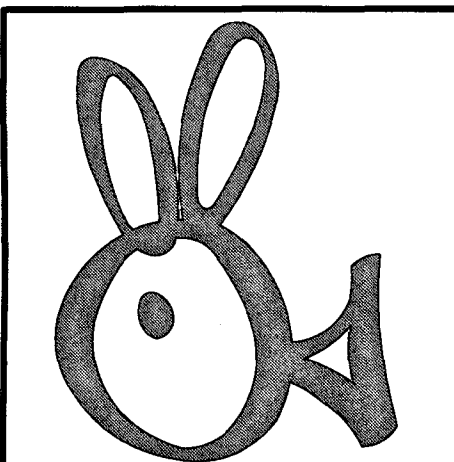
 **Lochsa**
engineering

6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-9312
Fax (702) 365-9317
www.lochsa.com

4-30-2018

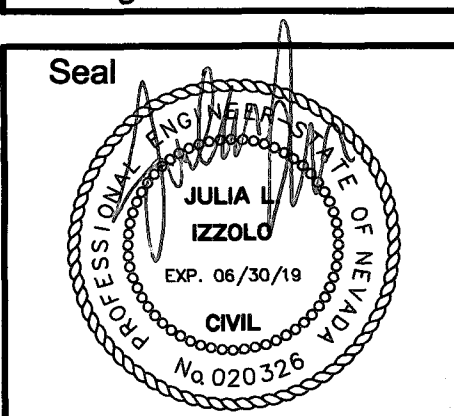
Project: **HUNTRIDGE SHOPPING CENTER**
NEW COMMERCIAL PADS
1122 S MARYLAND PKWY., LAS VEGAS, NV 89104

Drawing: **DETAIL SHEET**



BUNNYFISH
studio
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as Instruments of Service, are and shall remain the Property of the Design Professional. Do Not Scale These Drawings.



Project No.:	16-0907
Sheet No.:	7 OF 8

C6.00

Issues and Revisions		

Consultant:



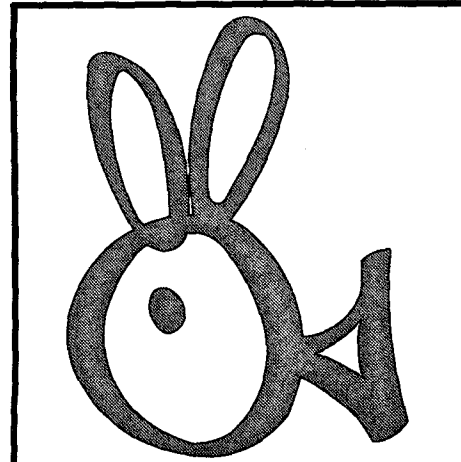
8345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-8312
Fax (702) 365-8317
www.lochsa.com

4-30-2018

Project:
Drawing:

HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS
1122 S MARYLAND PKWY, LAS VEGAS, NV 89104

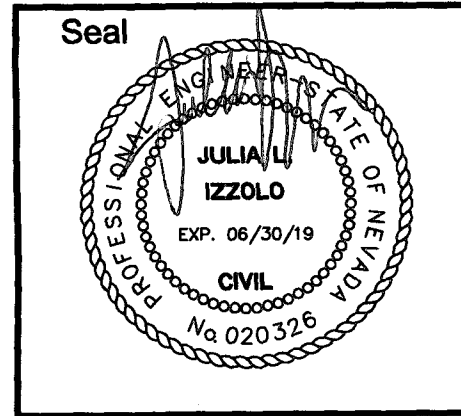
DETAIL SHEET



BUNNYFISH
studio
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as
Instruments of Service, are
and shall remain the Property
of the Design Professional.
Do Not Scale These
Drawings.

Seal



Project No.: 16-0907
Sheet No.: 8 OF 8
C6.01

8

NOT USED

NOT TO SCALE

5

NOT USED

NOT TO SCALE

4

NOT USED

NOT TO SCALE

3

NOT USED

NOT TO SCALE

7

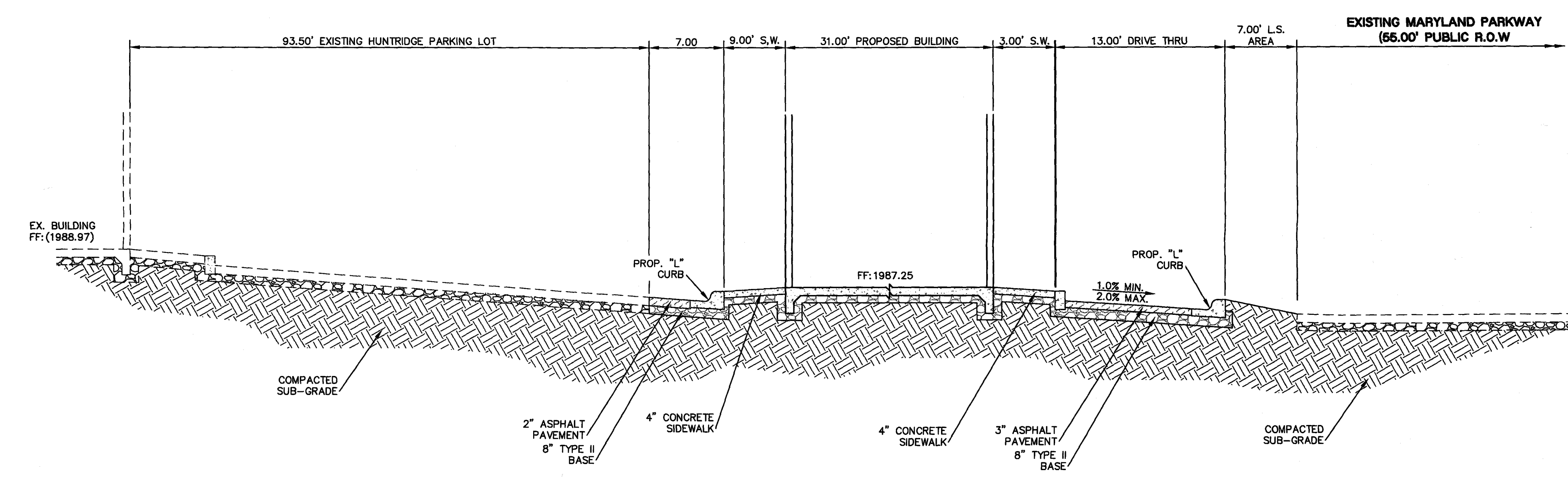
NOT USED

NOT TO SCALE

6

EAST WEST SECTION

NOT TO SCALE



6

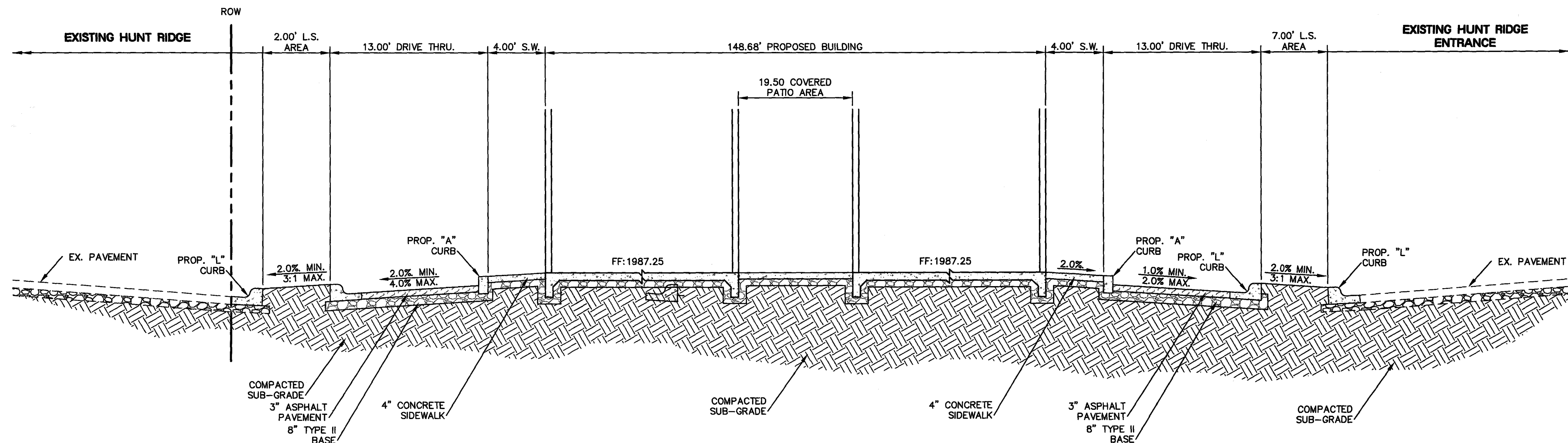
NOT USED

NOT TO SCALE

1

NORTH SOUTH SECTION

NOT TO SCALE



8 NOT USED

NOT TO SCALE

5 NOT USED

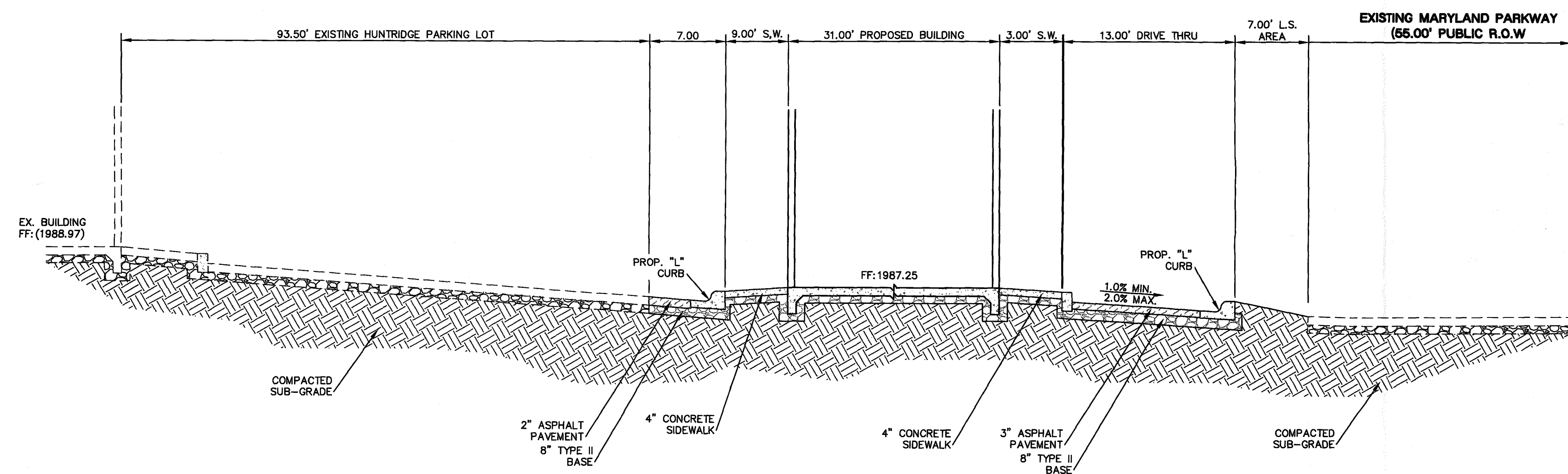
NOT TO SCALE

4 NOT USED

NOT TO SCALE

3 NOT USED

NOT TO SCALE



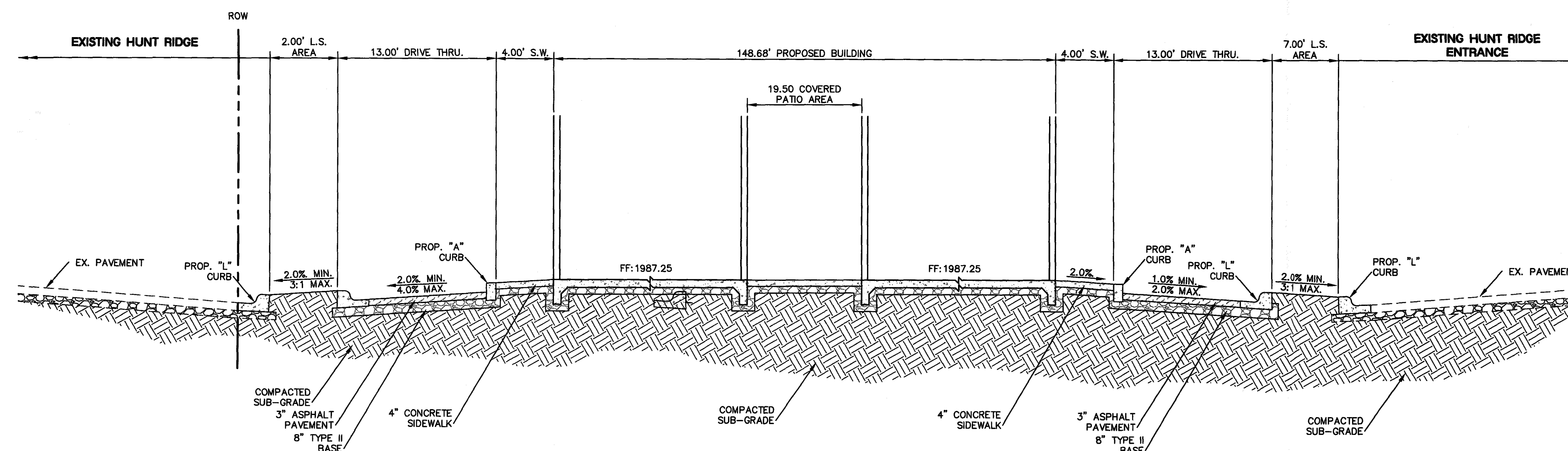
SOILS REPORT
NOVA GEOTECHNICAL
DATED: FEBRUARY 23, 2017
PROJECT NO.: G-17-020

7 NOT USED

NOT TO SCALE

6 EAST WEST SECTION

NOT TO SCALE



SOILS REPORT
NOVA GEOTECHNICAL
DATED: FEBRUARY 23, 2017
PROJECT NO.: G-17-020

OFFSITE HTE No.

6 NOT USED

NOT TO SCALE

1 NORTH SOUTH SECTION

NOT TO SCALE

Issues and Revisions	

Consultant:

Lochsa
engineering

6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 385-8312
Fax (702) 385-8317
www.lochsa.com

4-30-2018

Project: **HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS**
1122 S MARYLAND PKWY, LAS VEGAS, NV 89104

Drawing: **DETAIL SHEET**

BUNNYFISH
studio
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as Instruments of Service, are and shall remain the Property of the Design Professional. Do Not Scale These Drawings.

Seal

JULIA IZZOLO
EXP. 06/30/19
CIVIL
No. 020325

Project No.: 16-0907
Sheet No.: 8 OF 8
C6.01

CITY OF LAS VEGAS STREETLIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION 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. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS, ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
4. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
6. 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.
7. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICEPOINTS SHALL BE SHOWN ON THE PLANS.
8. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING 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.
9. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED JUNE 28, 2016 (LD VERSION)

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 LOOSELY OR DUSTY 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. 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.

REVISED 04/15/10

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

REVISED 04/15/10

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE & RESCUE ADOPTED FIRE CODE ORDINANCE #6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE & RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR'S MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.7.12]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF 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, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 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 | COMMERCIAL |
|---|-------------|------------|
| 500 FEET UNSPRINKLERED; 600 FEET SPRINKLERED. | | |
| 500 FEET UNSPRINKLERED; 400 FEET SPRINKLERED. | | |
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF 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 § C102.6]
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 § C102.12]
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. 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. [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 ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC § 503.2.7, § 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC § 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. [IFC § 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE PARKING IS PERMITTED ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD, NOT LESS THAN 24 FT WIDE, FLOW-LINE TO FLOW-LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LINES THROUGH PARKING LOTS SHALL NOT BE LESS THAN 24 FT. [IFC § 503.2.1.1]
24. 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 § 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FT IN HEIGHT, OR EXCEEDING 62,000 SQ FT IN AREA. [IFC § 503.1.2]
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [IFC § 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 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACES 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 RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]
28. ELECTRONICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.

EFFECTIVE DATE 03-01-2016

DEVIATIONS FROM STANDARDS

NONE.

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 REVISION 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 LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION, THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (COMPANY , - REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:
16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NOTOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITIONS STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXITS THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED COORDINATES WHICH SHALL BE BASED ON THE HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF +/- 0.09 METER (+/- 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO COMPAKE THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 02/03/15

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION GENERAL NOTES:

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020.
2. THERE SHALL BE A MINIMUM HORIZONTAL AND VERTICAL CLEARANCE OF 12-INCHES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND FACILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC.
3. FOR VALVE ADJUSTMENT CONTACT 702-668-6107 48 HOURS PRIOR TO CONSTRUCTION.
4. IN THE EVENT OF A NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND/OR STRUCTURES CONTACT 702-365-2099.
- ALL CIVIL IMPROVEMENT PLANS MUST INCLUDE SOUTHWEST GAS CORPORATION HIGH PRESSURE NOTES ON THE NOTES SHEET AND ALL SHEETS DEPICTING HIGH PRESSURE NATURAL GAS MAINS AS INDICATED BELOW:

CAUTION: HIGH PRESSURE GAS!!
CALL SOUTHWEST GAS AT 702-400-1789 FOR STAND-BY
WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS
LINES 48 HOURS PRIOR TO CONSTRUCTION.

CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, 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 THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SUGGESTED 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 EXISTING TRAFFIC PAVEMENT MARKINGS, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL UTILIZE TYPE XI RETROREFLECTIVE SHEETING IN ACCORDANCE WITH CALSS 827 AND 716 AND SHALL HAVE AN ANTI-GRAFFITI PROTECTIVE OVERLAY FILM THAT IS A MATCHING COMPONENT TO, AND OF THE SAME MANUFACTURER AS THE RETROREFLECTIVE SHEETING TO WHICH IT IS APPLIED. STREET NAME SIGNS SHALL CONFORM IN THEIR DIRECTION 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 FIELD 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. 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 ALTA TRAFFIC CONTROL TECHNICIAN OR ISEA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
10. 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.
11. 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.
12. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-4440) 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.
13. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
14. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY 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 DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

REVISED 7/3/13

LAS VEGAS VALLEY WATER DISTRICT NOTES

LVVWD PROJECT #

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

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

15. NO LEAD COMPLIANCE NOTE:
TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PRODUCED BEFORE 1991, OR INSTALLED BEFORE 1991, MUST BE REPLACED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE REUSED.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT No. _____ DATE: _____

LEGEND	CL OR SURVEY LINE	EASEMENT LINE	DESCRIPTION:	BUILDING OUTLINE	EDGE OF PAVEMENT	"A" TYPE CURBS	"L" TYPE CURBS	WALLS	CONTOUR LINES	AC PAVEMENT	CONCRETE	SPOT ELEVATIONS	SIGNS	MANHOLE W/ DESCRIPTION	MANHOLE DESCRIPTIONS	FIRE HYDRANTS	GATE VALVES	REDUCERS	CLEAN OUTS	UTILITY BOX OR VAULT	100w HPS STREETLIGHTS	150w HPS STREETLIGHTS	200w HPS STREETLIGHTS	250w HPS STREETLIGHTS
	PROPERTY LINE ROW LINE	SAWCUT LINE SCARP LINE	EXISTING: PROPOSED:									(12.34) BC (12.34) BC		⑤ ⑥	① = SANITARY SEWER ② = STORM DRAIN ③ = ELECTRICAL ④ = TELEPHONE	☑ ●	●	▶	●	□	○	○	○	○

Issues and Revisions		

Consultant:

Lochsa
engineering

6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-6912
Fax (702) 365-6917
www.lochsa.com

4-30-2018

Project: **HUNTRIDGE SHOPPING CENTER**
NEW COMMERCIAL PADS
1122 S MARYLAND PKWY, LAS VEGAS, NV 89104

Drawing: **GENERAL NOTE SHEET**

BUNNYFISH
studio
702.241.9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as Instruments of Service, are and shall remain the Property of the Design Professional. Do Not Scale These Drawings.

Seal
Professional Engineer
JULIA IZZO
Exp. 06/30/19
CIVIL
No. 020326

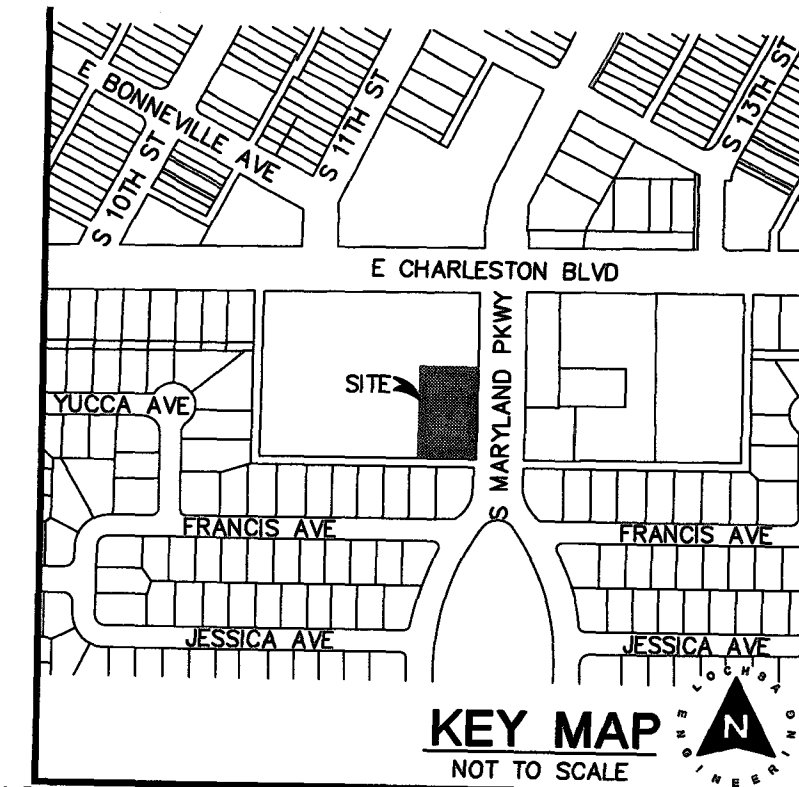
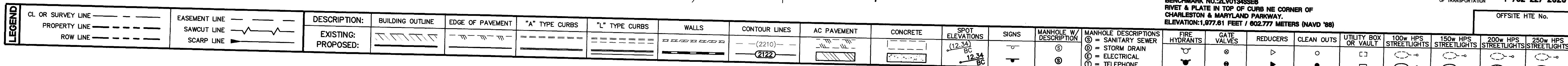
Call before you Dig
Avoid cutting underground utility lines. It's costly.

FAST
Call before you Underground

1-800-227-2800
1-702-432-6300
FIREMAY & NATURAL SYSTEM OF TRANSPORTATION

1-702-227-2929

Project No.: 16-0907
Sheet No.: 2 OF 8
C1.01

[illegible]

CONSTRUCTION NOTES:

— ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH "CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS" (C.A.U.S.D.'S) LATEST EDITION AND/OR REGULATING ENTITY HAVING JURISDICTION.

NOTES TO BE USED ON THIS SHEET —

1. CONSTRUCT AC PAVEMENT PER DETAIL 1 SHEET C6.00
2. CONSTRUCT "A" TYPE CURB PER DETAIL 2 SHEET C6.00
3. CONSTRUCT "L" TYPE CURB PER CCAUSD No. 216.
4. CONSTRUCT CONC. SIDEWALK PER CCAUSD No. 234.
5. CONSTRUCT SIDEWALK RAMP DETAIL 10 SHEET C6.00
- 6.
7. CONSTRUCT 2' VALLEY GUTTER PER DETAIL 3 SHEET C6.00
8. CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL DETAIL.
9. CONSTRUCT COMMERCIAL DRIVEWAY PER CCAUSD No. 224.
10. CONSTRUCT RAISED PLASTER PER ARCHITECTURAL PLANS.
11. CONSTRUCT ELECTRICAL TRANSFORMER PAD BY OTHERS.

NOTE:
ALL ONSITE STORM DRAIN FACILITIES ARE PRIVATELY OWNED
AND TO BE PRIVATELY MAINTAINED BY THE PROPERTY OWNER

EARTHWORK QUANTITIES

CUT.....	41 CU. YD.
FILL.....	684 CU. YD.
NET.....	643 CU. YD. FILL

GRADING NOTES:

1. SLOPES 4:1 OR STEEPER AND FINE-GRAINED MATERIALS THAT HAVE BEEN DISTURBED (SANDY AND SILTY) SHALL BE PROTECTED AND NOT ROTATED WITH BURLAP OR OTHER EROSION CONTROL FABRICATED MATERIALS. EROSION CONTROL SHALL BE SPECIFIED BY LANDSCAPE DRAWINGS AND NOTIFICATION OF THE SLOPE SHALL BE REQUIRED.
2. CONTRACTOR SHALL SECURE HIS OWN FOOTING OR BASEMENT EXCAVATION QUANTITIES, EVEN THOUGH SHOWN BACKFILL GRADES ARE. ADDITIONALLY, STRUCTURE BACKFILL STRUCTURES SHOULD BE SPECIFIED IN THE LANDSCAPE STRUCTURE UNLESS OTHERWISE SPECIFIED IN THE LANDSCAPE UNITS.
3. CONTRACTOR SHALL NOTIFY LOICSHA ENGINEERING WITHIN 24 HOURS OF OMISSIONS AND ERRORS DISCOVERED ON PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CORRECTIVE WORK DONE BY OTHERS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE, NO PONDING ALLOWED. CONTRACTOR TO FOLLOW RECOMMENDATIONS OF LOICSHA ENGINEERING IN ALL AREAS OF DRAINAGE INCLUDING BUT NOT LIMITED TO EXCAVATION, DRAINAGE AND DRAINAGE DITCHES. PROJECT PREPARED BY: GEOTECH, INC., PROJECT NO. 129217-L DATED: JUNE 2, 2016.
5. ARCHITECTURAL/LANDSCAPE PLANS FOR TRASH ENCLOSURE DELETED

FLOOD ZONE NOTE:
THE PROJECT SITE IS COVERED BY THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE CLARK COUNTY AND INCORPORATED AREAS, NEVADA, COMMUNITY PANEL NUMBER 3003C2160F, EFFECTIVE DATE: NOVEMBER 16, 2002. REUSED TO REFLECT LOWR EFFECTIVE: AUGUST 10, 2012. THE SITE FALLS WITHIN ZONE "X" DESCRIBED BY FEMA AS: "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

EXISTING UTILITY NOTE:
CONTRACTOR TO ADJUST ALL EXISTING UTILITIES TO MATCH
PROPOSED FINISH GRADE ELEVATIONS.

GRADING PLAN CERTIFICATION

NAME: JULIA L. IZZOLO PE #020326 DATE

CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH
APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE
CITY OF LAS VEGAS FOR THIS PROJECT. DS#

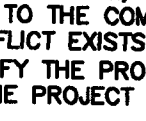
NOTE:
ADD 1900' TO ALL GRADE TAGS.

<u>APPROVAL</u>
SOUTHWEST GAS CORPORATION DATE

UTILITY NOTE:

LOCHSA ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS PLAN 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 AND SEWER, STORM SEWER, TELEPHONE, POWER, GAS, AND IRRIGATION LINES PRIOR TO THE COMMENCEMENT OF THE CONSTRUCTION. IF CONFLICT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE PROJECT ARCHITECT, OWNER'S REPRESENTATIVE AND THE PROJECT ENGINEER IMMEDIATELY.

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

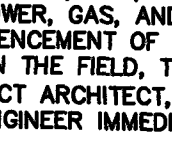


Call before you Underground

CALL BEFORE YOU DIG
LINE, GAS, WATER, RANGE, SEWER, ADA.

OR

1-800-227-2820



CALL BEFORE YOU DO OVERHEAD

1-702-422-6300
FREEDAY & ARTISAL SYSTEM OF TRANSPORTATION

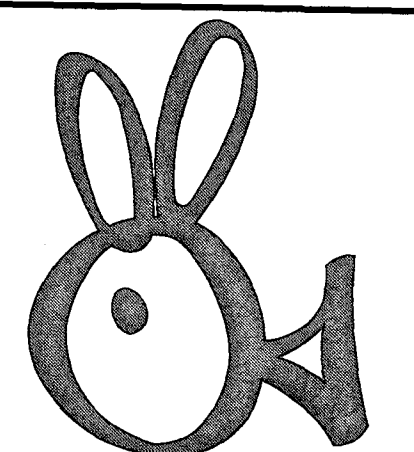
1-800-227-2820

1-702-422-6300

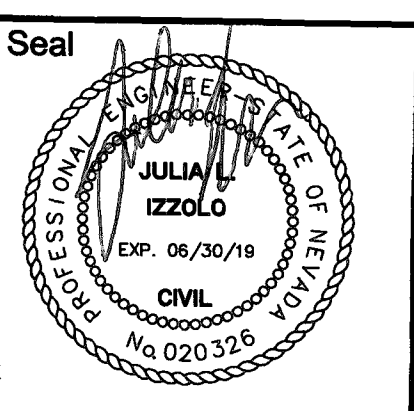
1-702-227-2829

Project: **HUNTRIDGE SHOPPING CENTER**
NEW COMMERCIAL PADS
1122 S MARYLAND PKWY., LAS VEGAS, NV 89104

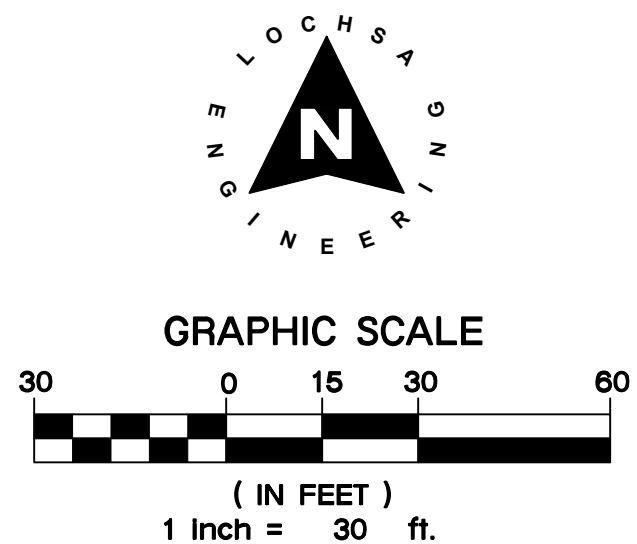
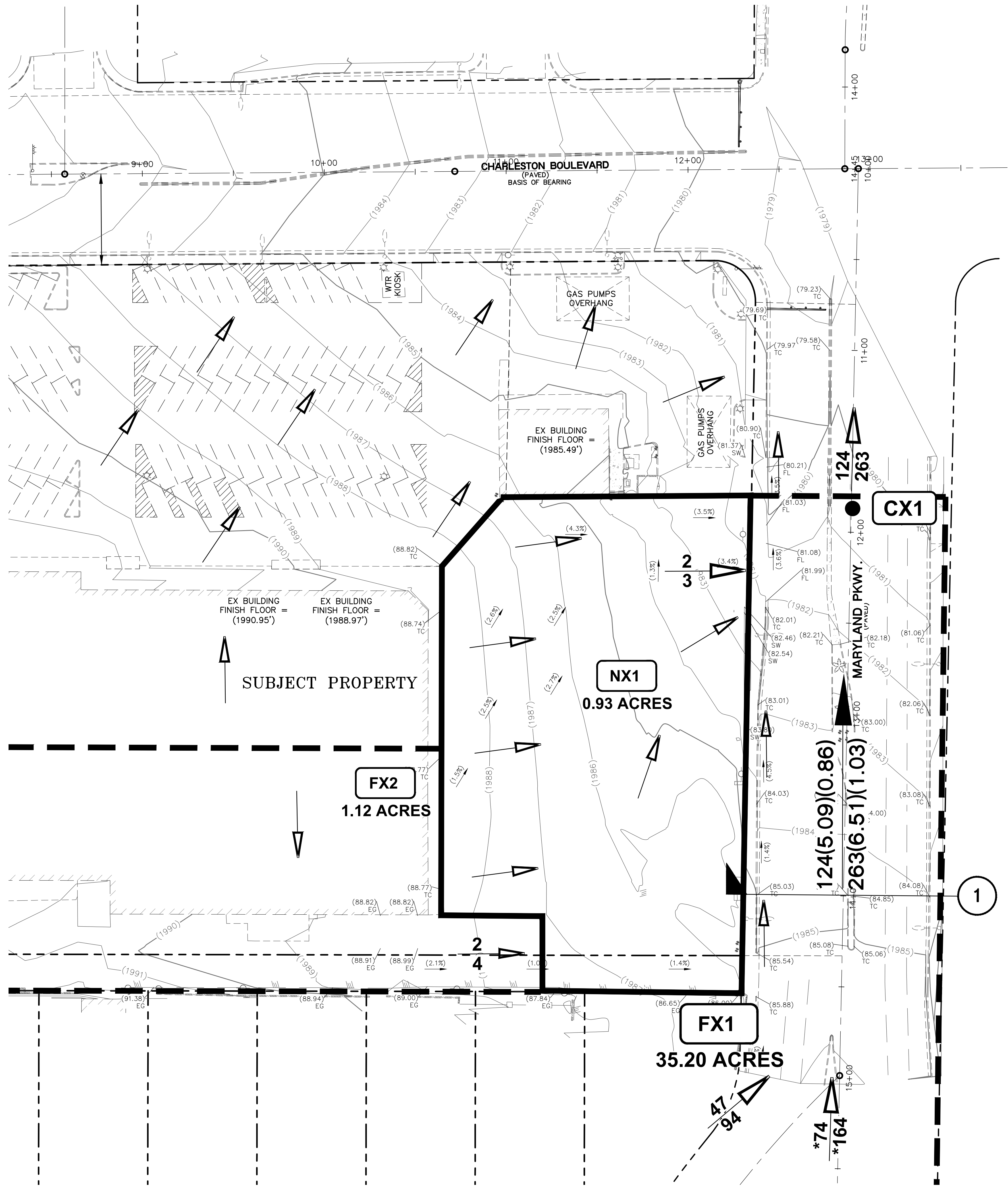
Drawing: **GRADING PLAN**



BUNNYFISH
s t u d i o
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101
These Documents, as
Instruments of Service, are
and shall remain the Property
of the Design Professional.
No Not Scale These
Drawings.



Project No.: 16-0907
Sheet No.: 5 OF 8
C4.00



DRAINAGE LEGEND

ND1

CMD1

2

3

1 (1.0)(1.2)

1 (1.0)(1.2)

1

DRAINAGE BASIN LABEL

CONCENTRATION POINT

COMBINATION POINT

OFFSITE BASIN BOUNDARY LINE

ONSITE BASIN BOUNDARY

Q10 FLOW IN CFS (10 YR.)

Q100 FLOW IN CFS (100 YR.)

Q10 (V10)(D10)

Q100 (V100)(D100)

BASIN FLOW DIRECTION

HYDRAULIC CROSS-SECTION

Peak Flow Summary			
Existing Condition			
HEC-1 I.D.	Area (acres)	10-year Flow (cfs)	100-year Flow (cfs)
FX1	35.20	47	94
NX1	0.93	2	3
FX2	1.12	2	4
*REF. FLOW	-	*74	*164
CX1	-	124	263

(SUB-BASIN CH55)

FX1+NX1+FX2+REF.FLOW (74/164)

*CITY OF LAS VEGAS *NEIGHBORHOOD FLOOD CONTROL MASTER PLAN

Street Flow Summary							
(Existing Condition)							
10-year, 6-hour Storm							
Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	10-Year Flow [Q10] (cfs)	10-year Velocity [v] (fps)	10-year Flow Depth [d] (ft)	10-year Velocity x Depth Product (v x d)	Dry Lane Width (Within 1/2 ROW) (ft)
Maryland Parkway	110	1	124	5.09	0.86	4.38	45.19
100-year, 6-hour Storm							
Street	Right of Way Width (ft)	Hydraulic Cross-Section Identifier	100-Year Flow [Q100] (cfs)	100-year Velocity [v] (fps)	100-year Flow Depth [d] (ft)	100-year Velocity x Depth Product (v x d)	
Maryland Parkway	110	1	263	6.51	1.03	6.71	

LEGEND

CL OR SURVEY LINE

PROPERTY LINE

ROW LINE

EASEMENT LINE

SAWCUT LINE

SCARP LINE

DESCRIPTION:

EXISTING:

PROPOSED:

BUILDING OUTLINE

EDGE OF PAVEMENT

"A" TYPE CURBS

"L" TYPE CURBS

WALLS

CONTOUR LINES

AC PAVEMENT

CONCRETE

SPOT ELEVATIONS

SIGNS

MANHOLE, W/ DESCRIPTION

MANHOLE DESCRIPTIONS

FIRE HYDRANTS

GATE VALVES

REDUCERS

CLEAN OUTS

UTILITY BOX OR VAULT

100w HPS STREETLIGHTS

150w HPS STREETLIGHTS

200w HPS STREETLIGHTS

250w HPS STREETLIGHTS

Issues and Revisions		

Consultant:

6345 South Jones Blvd.
Suite 100
Las Vegas, NV 89118
Phone (702) 365-9312
Fax (702) 365-9317
www.lochsa.com

4-30-2018

Project

HUNTRIDGE SHOPPING CENTER
NEW COMMERCIAL PADS
1122 S MARYLAND PKWY, LAS VEGAS, NV 89104

Drawing:

EXISTING DRAINAGE PLAN

BUNNYFISH
studio
702 241 9751
208 S. Maryland Pkwy
Suite A, Las Vegas
Nevada, 89101

These Documents, as Instruments of Service, are and shall remain the Property of the Design Professional. Do Not Scale These Drawings.

Seal

Project No.: 16-0907

Sheet No.: DR1

