DS #: 4214-1

APN: 125-27-410-004

PROJECT: Sky Pointe Plaza. Update #1

SUBMITTAL: 3rd

SCANNED BY/DATE:

CHECKED BY/DATE:

CITY OF LAS VEGAS NEVADA

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: December 6, 2017
TO: **Land Development Services** Department of Public Works				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Sky Pointe Plaza – Update #1**			**COPIES TO:** Slater Hanifan Group
Cross Streets:	SWC of Sky Pointe Drive & Tenaya Way			Sky Pointe Hotel Group
File Number:	F:\Depot\DSMemos\DS4214D.doc			Bart Anderson, P.E., DevCo
Parcel Number:	125-27-410-004			
Zoning Action:	SDR-19097; VAR-19098; SUP-19100; VAR-19447 & ARC-20049			
FEMA Flood Zone	YES	NO	X	
Proposed Storm Drain	YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1st Submittal	7/30/2007	8/13/2007	Not Approved	$400.00	Paid: $400
2nd Submittal	8/31/2007, 9/28/2007 & 10/16/2007	10/16/2007	Conditional Approval	$400.00	76882: $400
CCRFCD & CLV Bldg.	11/20/2007 & 6/3/2008	6/3/2008	Concurrence Recv'd	N/C	N/C
3rd Submittal	11/16/2017	12/6/2017	See Comments Below	$100.00	491514: $100
			TOTAL FEES (LDDRS):	**$900.00**	**----**

REMARKS:

3rd Submittal: Update #1

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 NDOT concurrence.

1. Following the flow path from the northeast corner of the proposed building, Point "56.8FL" leads to a low point and invert of "56.4 LP/54.9 INV" and stop. No storm drain or any under sidewalk drain are shown to perpetuate the flow. Review and revise accordingly.

2. Page 5 of the subject Update stated that an 12"-PVC area drain is provided south of the building. However, this storm drain is to be found nowhere in the grading plan. Provide as such in the next submittal.

3. The project is adjacent to the *Nevada Department of Transportation* (NDOT) right-of-way (*Sky Pointe Drive*). The engineer must contact NDOT for any pertinent permit for the proposed project.

4. Submit legal description and an exhibit of the proposed public drainage easement (privately maintained) along the south boundary to *City of Las Vegas Right of Way Section* for vacation and recordation. The proposed vacation and recordation of the drainage easements must be done prior to the final approval of the improvement plans.

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

END OF REMARKS

ays

T/R/S: T19S/R60E/27
AREA G-27

TRANSACTION REPORT

DEC/06/2017/WED 05:28 PM

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	DEC/06	05:27PM	7022845399	0:00:34	2	MEMORY OK SG3	0028

CITY OF LAS VEGAS
INTER-OFFICE MEMORANDUM

DATE: December 6, 2017

TO:
Land Development Services
Department of Public Works

FROM:
Albert Sung, P.E.
Flood Control Project Engineer
Department of Public Works

SUBJECT: Drainage Study for:
Sky Pointe Plaza – Update #1

COPIES TO:
Slater Hanifan Group
Sky Pointe Hotel Group
Bart Anderson, P.E., DevCo

Cross Streets:	SWC of Sky Pointe Drive & Tenaya Way
File Number:	F:\Depot\DSMemos\DS4214D.doc
Parcel Number:	125-27-410-004
Zoning Action:	SDR-19097; VAR-19098; SUP-19100; VAR-19447 & ARC-20049

FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1st Submittal	7/30/2007	8/13/2007	Not Approved	$400.00	Paid: $400
2nd Submittal	8/31/2007, 9/28/2007 & 10/16/2007	10/16/2007	Conditional Approval	$400.00	76882: $400
CCRFCD & CLV Bldg.	11/20/2007 & 6/3/2008	6/3/2008	Concurrence Recv'd	N/C	N/C
3rd Submittal	11/16/2017	12/6/2017	See Comments Below	$100.00	491514: $100
			TOTAL FEES (LDDRS):	**$900.00**	

REMARKS:

3rd Submittal: Update #1

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	is approved subject to conformance to all City standards and the following conditions:
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Affix R.P.T.T. $ 520.00

GRANT, BARGAIN, SALE DEED

THIS INDENTURE WITNESSETH: That

PROPERTY HOLDING CORPORATION, A Nevada Corporation

FOR A VALUABLE CONSIDERATION, the receipt of which is hereby acknowledged, do es hereby Grant, Bargain, Sell and Convey to

ANN TENAYA PLAZA, LLC

UNOFFICIAL COPY

all that real property situated in the City of LAS VEGAS County of Clark State of Nevada, bounded and described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF FOR LEGAL DESCRIPTION.

Assessor's Parcel No: 125-27-801-001

SUBJECT TO:

1. Taxes for this current fiscal year, not due or delinquent and any and all taxes and assessments levied or assessed after the recording date of this document. This will include the lien of supplemental taxes, if any.
2. Restrictions, conditions, reservations, rights, rights of way and easements, now of record (if any) affecting the use and occupancy of this property as the same may now appear of record.

Together with all and singular tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

Witness my hand this 26th day of January, 19 96

PROPERTY HOLDING CORPORATION
BY:
Jim Ward, Vice President

STATE OF NEVADA
COUNTY OF Clark } ss.

On Jan. 26, 1996 personally appeared before me, a Notary Public, Jim Ward, Vice President of Property Holding Corporation personally known (or proven) to me to be the person whose name subscribed to the above instrument who acknowledged that he/she/they executed the instrument.

Signature: (Notary Public)

(Notarial Seal)

NOTARY PUBLIC
County of Clark-State of Nevada
DARLENE JUDD
No. 95-00983-1
My Appointment Expires Nov. 20, 1999

ESCROW NO. 168097-DJ
ORDER NO. 168097-DJ
WHEN RECORDED MAIL TO:
Ann Tenaya Plaza, LLC
c/o 720 Sth 4th Street #305
Las Vegas, Nev. 89101

251

Legal Description

Situate in the County of Clark, State of Nevada described as follows:

The West Half (W 1/2) of the Southeast Quarter (SE 1/4) of Section 27, Township 19 South, Range 60 East M.D.B. & M.

EXCEPTING THEREFROM that portion of said land as conveyed to the State of Nevada, acting by and through its Department of Transportation, by Deed recorded March 29, 1990 in Book 900329, as Document No. 00323 of Official Records, in the Office of the County Recorder of Clark County, Nevada.

UNOFFICIAL COPY

FURTHER EXCEPTING THEREFROM that portion of land lying Northeasterly of that portion deeded to the Department of Transportation by Deed recorded March 29, 1990 in Book 900329, as Document No. 00323 of Official Records, in the Office of the County Recorder of Clark County, Nevada.

FURTHER EXCEPTING THEREFROM that portion of land as conveyed to the State of Nevada, acting by and through its Department of Transportation, by Deed recorded July 31, 1995 in Book 950731, as Document No. 01354 of Official Records of Clark County, Nevada.

CLARK COUNTY, NEVADA
JUDITH A. VANDEVER, RECORDER
RECORDED AT REQUEST OF:

LAND TITLE OF NEVADA
01-30-96 08:03 RPC
OFFICIAL RECORDS
BOOK 960130 INST. 00304

FEE: 8.00 RPTT: 520.00

Amy Poechmann

From: Albert Sung <YSung@LasVegasNevada.GOV>
Sent: Monday, November 13, 2017 7:23 AM
To: Amy Poechmann
Subject: RE: Submittal Appointment for Sky Pointe Plaza Update

Amy,

Actually you may send a runner with a check of $100 to submit the update anytime within the week.

Albert Y. Sung
Project Engineer
Public Works Dept. / Flood Control
(702) 229-6541
333 N. Rancho Dr. 7th Floor
Las Vegas, NV 89106

lasvegasnevada.gov

Your opinion is important! Click here to take a short survey.

From: Amy Poechmann [mailto:apoechmann@shg-inc.com]
Sent: Thursday, November 9, 2017 9:34 AM
To: Albert Sung <YSung@LasVegasNevada.GOV>
Subject: Submittal Appointment for Sky Pointe Plaza Update

Albert,
I am planning on submitting an update for Sky Pointe Plaza (DS4214) next week.
Would you be available for a submittal meeting Wednesday, November 15th around 4pm?

Amy Poechmann, P.E.
Project Manager I

SLATER HANIFAN GROUP
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LAS VEGAS
5740 S. ARVILLE STREET #216
LAS VEGAS, NV 89118
T: 702.284.5300

PHOENIX
11201 N. TATUM BLVD. #250
PHOENIX, AZ 85028
T: 602.687.9664

LAKE HAVASU CITY
60 S. ACOMA BLVD. #C104
LAKE HAVASU CITY, AZ 86403
T: 928.202.4104

www.shg-inc.com

Any files contained within are to be used for information ONLY. Accuracy and/or design information to be verified from approved original plans.
Use of electronic media is at the sole risk of the user.

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

TRANSMITTAL

To: **Albert Sung, P.E.**
City of Las Vegas
333 North Rancho
Las Vegas, NV 89101

From: Amy Poechmann, P.E.

Date: November 16, 2017

Project No.: NIG1702.000

Subject: **Technical Drainage Study Update for Sky Pointe Plaza (DS 4214)**

CC: Amy Poechmann, SHG
CC: Mark Failla, SHG
CC: Derick Yoror, SHG
CC: Brent Parrish, SHG
CC: Chelsea Jensen, SHG
CC:

Transmitting Via:
☐ Mail
☒ Messenger / MDS
☐ Federal Express
☐ Pickup

For:
☒ Review & Comment
☐ Per your Request
☐ Information/File

Acknowledgement of Receipt:
☐ Not Required
☒ Acknowledgement Required
Received By: _____
Date: _____ Time: _____

Copies	Description
1	Subject Study
1	Grading Plan, Profile and Detail Sheets (folded in map pockets at end of study)
1	Stamped and Signed Standard Form 1 (bound in front)
1	CD containing PDF of submittal documents
1	Review Fee Check - $100 (#42085 from Slater Hanifan Group)
1	Email from Albert - no appt needed

Comments:
Enclosed please find the above listed items in support of the update for Sky Pointe Plaza.

Please contact us if there are any questions at 702-284-5300.

Thank you.

Signed: _____

Amy Poechmann
Flood Control Division

TECHNICAL DRAINAGE STUDY
UPDATE No. 1

Sky Pointe Plaza

City of Las Vegas, Nevada
Job No.: NIG1701.000
Date: November 2017

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

Prepared For:
Nigro Construction
9115 West Russell Road
Las Vegas, Nevada 89148
Phone: 702-247-1920



11-15-17

Amy Poechmann, P.E.
NV Professional Engineer No. 18320

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Sky Pointe Plaza - Update No. 1 Date: November 2017

Location of Development:
a) Descriptive (Cross Streets): North/South: Sky Pointe Drive
East/West: Ann Road
b) Section: 27 Township: 19 South Range: 60 East
c) APN: 125-27-410-004

Name of Owner: Sky Pointe Hotel Group, LLC
Telephone No.: 702-247-1920 Fax No.: E-mail Address: mnigro@nigrodevelopment.com
Address: 9115 West Russell Road Las Vegas NV 89148

Contact Person – Name: Amy Poechmann, P.E. Telephone No.: (702) 284-5300
*E-mail Address: APoechmann@shg-inc.com Fax No.: (702) 284-5399
Firm: Slater Hanifan Group
Address: 5740 S. Arville #216 Las Vegas NV 89118

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivison 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: 1.83 acres Being Developed/Disturbed: 1.83 acres

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

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

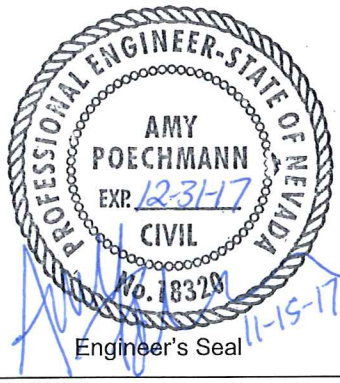
4. Proposed type of development (Residential, Commercial, Etc.): Commercial

5. Approximate upstream land area which drains to the subject site: 10 acres +/-

6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: Sky Pointe Plaza TDS (DS 4214)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Flows from the project site will be discharged to the east through an existing development and then into Sky Pointe Drive

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



Engineer's Seal 11-15-17

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

*Newly Required Field

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

Local Entity File No.

Revision	Date

REFERENCE: STANDARD FORM 1

Updated 05/01/2008

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 (CCRFCD) 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 CCRFCD Hydrologic Criteria and Drainage Design Manual (Design Manual).

An appointment must be made to preview this checklist in conjunction with CCRFCD 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.)
X	-	Copies of all conditions of approval for development related to this property. (e.g. zoning, use permit, tentative map, etc.) Verify compliance with conditions.
X	-	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	
X	-	(1) 24" X 36" copy of the Grading Plan, (including all Detail Sheets) sealed by the engineer.
X	-	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.
X	-	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.)

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.
X	-	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.
X	-	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.
X	-	Back of lot elevations and lot drainage pattern for all lots including common lots.
X	-	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. This was provided with the TDS.
X	-	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.
X	-	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	
X	-	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.
X	-	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. 10-ft easement provided for 20 cfs - see update for discussion
-	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.
X	-	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.
X	-	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.

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.

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

Project Name: Sky Pointe Plaza - Update No. 1	Map ID:
Firm Name: Slater Hanifan Group	Engineer: Amy Poechmann, P.E.
Address: 5740 S. Arville #216	
City: Las Vegas	State: NV Zip: 89118
Phone Number: (702) 284-5300	Fax Number: (702) 284-5399
Property Owner: Sky Pointe Hotel Group, LLC	
Address: 9115 West Russell Road	
City: Las Vegas	State: NV Zip: 89148

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	
X	-	Design Manual **Standard Form 1** with the engineer's seal and signature.
-	N/A	Design Manual **Standard Form 4**. Referenced from TDS
X	-	2 copies of the 24" x 36" Drainage Plan.
-	N/A	A notarized letter from the adjacent property owner(s) allowing off-site grading or discharge.

II. MAPS AND EXHIBITS

Yes	No	
X	-	A copy of a current Flood Insurance Rate Map (FIRM) with the site delineated.
X	-	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	
X	-	Off-site drainage basin maps for existing, interim and future conditions showing the existing topography, basin boundaries, concentration points, and flows in cfs.
X	-	Referenced from TDS 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.
X	-	Vicinity Map with local and major cross streets identified and a north arrow.

III. DRAINAGE PLAN

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

REFERENCE:	STANDARD FORM 2

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
-	N/A	Streets with off-set crowns.
X	-	Proposed contours or spot elevations in sufficient detail to exhibit intended drainage patterns and slopes.
X	-	Property lines.
X	-	Right-of-way lines and widths, existing and proposed.
X	-	Existing improvements and their elevations.
X	-	Delineation of proposed on-site drainage basins indicating area and 10-year and 100-year storm peak flows at basin concentration points. Referenced from TDS
X	-	Concentration points and drainage flow direction with Q_{100} and V_{100} and D_{100} in streets. Referenced from TDS
X	-	Cumulative flows, velocity, and direction of flow at upstream and downstream ends of site for the 10-year and 100-year flows. Referenced from TDS
X	-	Location and cross-section of street capacity calculations. Referenced from TDS
X	-	Cross-sectional detail for channels, including cutoff wall locations. Referenced from TDS
X	-	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. Referenced from TDS
X	-	Existing and proposed drainage easements and widths shown with sufficient detail. A cross sectional detail must be provided that shows appropriate lining and reinforcement. Referenced from TDS
-	N/A	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.
-	-	Location and detail of flood walls illustrating depth of flow, proposed grouting height, etc.
X	-	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.
X	-	Building and/or lot numbers.
X	-	Alignment of all existing, proposed, or future Regional Facilities adjacent to the site.
-	N/A	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

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.
X	-	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.
X	-	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	
X	-	Appropriate soil information and Soils Map for existing and future conditions with subbasins and property delineated.
X	-	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. Referenced from TDS
X	-	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. Referenced from TDS
X	-	Use of correct precipitation values in and around the McCarran Airport rainfall area. Referenced from TDS
X	-	A discussion in the text of the hydrologic analysis justifying subbasin boundaries and cutoffs, supporting assumptions, and calculations. Referenced from TDS
X	-	A summary table of stormwater flows showing basin area, Q_{10} and Q_{100} for both individual basins and combined basin flows, where applicable. Referenced from TDS
X	-	Copies of supporting technical information referenced from a previously approved study and a statement accepting these results.
X	-	On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners in accordance with current Nevada Drainage Law. Referenced from TDS
-	-	Calculation for impervious area for parking lots and LIDs (if required).

REFERENCE:	STANDARD FORM 2

DRAINAGE SUBMITTAL CHECKLIST

V. HYDRAULIC ANALYSIS

Yes	No	
-	N/A	Flow split calculations and supporting documentation or reference for the method of flow split calculations used.
X	-	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 x v $\leq$ 8. Q_{10} d x v $\leq$ 6 and 12 foot dry lane for rights-of-way $\geq$ 80 feet. Calculations must be labeled by street name as indicated on the Grading Plan.
X	-	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. Referenced from TDS
-	N/A	Appropriate hydraulic calculations for block wall openings assuming a 50 percent vertical clogging factor. (Assume the lower half of the opening is plugged.)
X	-	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.
X	-	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.
-	N/A	A complete water surface profile analysis (HEC-2, HEC-RAS, etc.) for channel flows and FEMA Zone A flood zones. • 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.
-	N/A	Provide a 50 percent clogging factor in the capacity calculation for drop inlets.
-	N/A	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.
X	-	The mitigation of nuisance water, both during construction and in the fully developed condition, must be addressed.
-	N/A	Provide BMP type, size and supporting calculations for parking lots and LIDs (if required).

REFERENCE:	STANDARD FORM 2

NIG1701.000

11/15/2017

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

Subject: Update No. 1 to the Technical Drainage Study for Sky Pointe Plaza (TDS DS#4214)

Dear Mr. Sung:

This letter serves as the Update No. 1 to the Technical Drainage Study for Sky Pointe Plaza (DS 4214). The technical study was approved in June 2008 and a copy of the approval letter is provided in Appendix D. However, the project was not constructed.

At this time, the client is proposing some changes to the original design and this update is to support those changes. In addition, the project is adjacent to the US-95 and NDOT has completed some roadway widening improvements adjacent to the project site. Therefore, the purpose of this update is to address the following:

- Update the upfront exhibits (MPU maps and FEMA maps) due to more current information becoming available since the submittal of the original technical drainage study.
- Check the impact of updated soils data.
- Verify that the widening of the US-95 does not increase flows impacting the project site.
- Verify that the proposed onsite improvements are in general conformance with the previously established drainage patterns and land use.
- Replace the previously proposed onsite storm drain with a concrete u-channel for flow conveyance.
- Establish that the proposed finished floor elevation still meets applicable criteria.

Each of the above are addressed in more detail below. In addition, the condition of approval has been updated and a copy of the revised conditions has been provided in Appendix G.

Upfront Exhibits

The original technical drainage study was submitted in 2007. Since that time, the Clark County Regional Flood Control District has updated the Master Plan (MPU), revised FEMA FIRM maps have been issued and the soils information available for Las Vegas valley has been updated. Therefore, the upfront exhibits (Exhibits A thru D) has been updated and are included in Appendix A. Each is discussed in more detail below.

Exhibit A – Location Map

The project is located on undeveloped land at the southwest corner of the intersection of North Tenaya Way and Sky Pointe Drive. The site is bound by an existing tavern to the west, existing Sky Pointe Drive improvements to the north, existing shopping center to the east and Ann Road to the south. A location map identified as Exhibit A is included in Appendix A for reference. Please

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note that the location of the project site and the site boundary have not changed with this update. This map is just provided with this update for informational purposes.

Exhibit B - FEMA FIRM Map

The project site is located in a FEMA designated Zone X (unshaded) as depicted on Flood Insurance Rate Map (FIRM) Panel 32003C1745E, dated September 27, 2002. A Zone X (unshaded) is described as an area determined to be outside the 0.2% annual chance flood. Exhibit B identifying the project site on the FIRM Panel has been included in Appendix A for reference.

Please note that this is the same FEMA panel as was previously submitted. Although many of the FEMA panels in Las Vegas were updated in 2011, this panel was not.

Exhibits C1 thru C3 - CCRFCD Facility Information

Figure F-19 from the 2013 Las Vegas Valley Flood Control Master Plan Update shows that the site is adjacent to an existing master planned drainage facility. This facility is identified as ANWE 0385, an existing 54-inch RCP with an MPU design flow of 161 cfs. This project does not propose any local facility that ties into the adjacent MPU Facility. Exhibit C1 and C2 identifying the project site on the MPU figure and providing the facility inventory table have been included in Appendix A for reference. In addition, Figure H-19 from the 2008 Las Vegas Valley Flood Control Master Plan Update shows the project site. Exhibit C3 identifying the project site on the MPU figure has been included in Appendix A for reference as well.

Updated Soils Data

The soils boundaries for this area have not been updated so the analyzed basins are still within soil types 192 and 305. The soils maps from the original technical drainage study are still valid and are included in Appendix D. However, the percentages of each hydrologic soil group (HSG) have been revised since the original technical drainage study. Refer to Appendix B for the updated soils data and to Appendix D for the referenced soils data utilized in the TDS. The table below compares the previous soils data utilized for the approved technical drainage study with the current information for this update.

Comparison of Soils Data					
Soil Type	**Version**	**A**	**B**	**C**	**D**
192	TDS	0%	90%	0%	10%
	Update	55%	35%	0%	10%
305	TDS	5%	25%	10%	60%
	Update	5%	0%	35%	60%

As shown in the table above, curve numbers generated utilizing the updated soil type 192 data will be lower and generate less flow because the percentage of HSG 'A' is higher in the current update version than the original TDS version. Curve numbers for soil type 305 will be slightly higher and generate slightly higher flow rates because the 25% HSG 'B' has been added to the HSG 'C'.

To show that the flow rates have not increased, the curve numbers for the TDS basins have been recalculated utilizing the updated soils information. The revised computations are included in Appendix B and the referenced computations are provided in Appendix D. The table below compares the curve numbers for each basin analyzed with the original TDS.

Compare Curve Numbers		
Basin	**Update**	**TDS**
EXIST1	78.7	83.6
EXIST2	80.7	83.9
US95	81.4	86.1
ON1	90.7	92.3
ON2	92.2	93.0
OFF1	80.3	84.6
OFF2	88.6	89.9
OFF1D	91.3	92.6
OFF2D	92.2	93.0

As shown in the table above, the curve number computed for the update with the revised soils data are all lower than the curve numbers utilized in the technical drainage study. Therefore, the current soils data for the update would generate lower flow rates than the flow rates determined with the technical drainage study. Therefore, utilizing the previously established technical drainage study flow rates is conservative and revised flow rates are not required to account for the change in soils data.

US-95 Widening

This section addresses the impact of the widening of the US-95 on the flows to the project site. In the original technical drainage study, flows from the US-95 (quantified by Basin US95) are routed under the US-95 onramp at Ann Road by the existing dual culverts. Based on the original study, approximately 10 acres generating 17 cfs in a 100-year storm event were routed through the existing culverts and into Basin OFF1 then into onsite Basin ON1 to concentration point PT1.

Plans for the US-95 widening were obtained from NDOT (see relevant plan sheets in Appendix E) along with the Ann Road plans for the regional storm drain in Sky Pointe Drive (see Appendix F) and a site visit was made to verify the existing storm drain systems as shown on the plans and to better determine the exact flows impacting the site. The plans and site visit confirmed that there are several upstream inlets in place which will collect a portion of the US-95 flows and route them into storm drain away from the project site. In addition, the center median ditch between the northbound and southbound lanes of the US-95 has been removed and concrete barrier has been installed at a crown between the northbound and southbound lanes.

Between these two differences, the amount of area routed to the dual culverts has been reduced to approximately 7 acres (compared to about 10 acres in the TDS). Exhibit G has been provided in Appendix A showing the existing storm drain and the reduced area of US-95 draining to the existing dual culverts. This reduction in area is expected to result in a reduction in flows especially considering that this area is entirely within soil type 192 which will further reduce the flows in comparison to the TDS since there is now a larger percentage of HSG 'A' soil within this soil type.

Please note that the Basin SKY for Sky Pointe Drive per the TDS is also likely larger than it needs to be, but this basin has not been adjusted since the larger area and higher flow rate are conservative.

Therefore, the use of the previously approved flow rates for the offsite basins is conservative and still acceptable and revised hydrologic computations are not required.

Onsite Improvements

The site plan and general layout is in general conformance with the previously approved study. The building footprint has been changed and is shifted slightly, but the overall site plan remains very similar to the original as previously approved and the land use is unchanged.

The onsite grading has been adjusted as well, but the overall drainage patterns remain the same with the north portion (Basin ON2) being routed east to concentration point PT2 and the southern portion being routed east to concentration PT1. Therefore, the hydrology from the original technical drainage study does not need to be updated and the use of the approved flow rates is still acceptable.

Revised Hydraulics

This section addresses the revised hydraulic computations included with this update which are provided to address the replacement of the storm drain with a concrete u-channel and the onsite drive aisle computations required to verify that the proposed finished floor elevation is still adequate.

Replace Storm Drain with U-Channel

In the original technical drainage study, storm drain was proposed south of the building to collect and convey the offsite flows through the site and discharge them to concentration point PT1. This update will replace the proposed storm drain with a 6-ft bottom width 1.5-ft deep concrete u-channel. The u-channel will discharge to the existing downstream drainage easement as in the previously approved study and plans.

The u-channel has a normal flow depth of 0.63-ft at a slope of 0.50% conveying the full 20 cfs from concentration point PT1 in a 100-year storm event. Since the channel has been designed with a depth of 1.5-ft, twice the depth of flow is contained within the u-channel. The u-channel makes a couple sharp turns so the specific energy has been checked and is contained within the 1.5-ft depth of the u-channel. A weir has been computed at the entrance (using the 14-ft bottom width at the entrance of the u-channel) to check the depth of flows entering the u-channel from the parking lot. The weir depth is also contained within the u-channel. Refer to Appendix C for the FlowMaster computations associated with the proposed u-channel.

The u-channel flattens out at the downstream end to a wider, shallower concrete section. This end remains as it was previously designed at the outfall of the previously proposed storm drain system. The solid grouted knee wall will remain along the eastern property line to route the flows to the existing drainage easement on the downstream property.

A 10-ft wide public drainage easement to be privately maintained is provided over the u-channel similar to the easement proposed with the original technical drainage study. Although 20-ft is required for any flows at or greater than 20 cfs, the 10-ft easement width was considered acceptable for the original technical drainage study since it matches the existing drainage easement onsite. Therefore, the proposed drainage easement remains at 10-ft wide.

The finished floor elevation of the proposed building was checked against the flow depths in the u-channel. Refer to the subsection on the finished floor analysis later in this letter for further discussion.

Other Hydraulic Sections

Section 1 in Sky Pointe Drive is still considered valid and shows a depth of 0.42-ft in Sky Pointe Drive adjacent to the project site. Humps have been provided at the driveway so that flows from Sky Pointe Drive do not enter the project site. Please note that the existing driveway at the east end does not have the 6-inches of freeboard on the existing downstream end, but this is an existing condition and any flows would enter the parking lot downstream of the project site and be routed away from the project site.

Section 2 is the two 2-ft wide by 6-inch deep concrete rectangular channels known as flumes. They are designed to discharge flows at PT2. These computations are still considered valid for this update.

Onsite Storm Drain

An area drains is provided south of the building. The storm drain system is a single 12-inch PVC private line which discharges into the proposed u-channel onsite. No hydraulic computations are provided for this system because it is a small private line intended to address nuisance flows. A wall opening has been provided in cause the inlet clogs.

Finished Floor Analysis

The normal depth in the u-channel is only 0.63-ft so twice the depth of flow is contained within the u-channel itself since the u-channel has a minimum depth of 1.5-ft. The proposed finished floor is at least 1.5-ft above the water surface elevation in the u-channel. Please note that the entrance to the u-channel is 14-ft wide which generates a weir depth of 0.67-ft which is slightly higher than the normal depth. Therefore, the weir depth is utilized for the finished floor elevation check at the high point of the easement.

Since Sky Pointe Drive is existing and the building finished floor elevation has not changed, the building still meets applicable City of Las Vegas criteria. The proposed finished floor elevation of the main building has been verified as being at least 6-inches above the top of curb elevation at the high side of the lot and at or above twice the depth of flow in the adjacent street (Sky Pointe Drive).

Conclusions

- The previously established flow rates are still valid for use in this update.
- The previously proposed storm drain has been replaced with a concrete u-channel.
- The proposed finished floor remains the same and has been verified as being sufficiently elevated above the flows in the u-channel.

- NDOT concurrence on the technical drainage study is not anticipated since NDOT concurrence was not required for the original technical drainage study.

The revised grading and detail sheets adopting the revisions addressed in in this letter have been included in Appendix H. If you have any questions or require additional information, please do not hesitate to contact us at 702-284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Amy Poechmann, P.E.
Flood Control Division

cc: Mark Failla, P.E., CFM – SHG
Derick Yoro, P.E. – SHG

APPENDIX

Appendix A Revised Drainage Exhibits
- Exhibit A – Location Map
- Exhibit B – FEMA FIRM Map
- Exhibit C1 – 2013 CCRFCD MPU Facilities Map
- Exhibit C2 – 2013 CCRFCD MPU Facilities Inventory
- Exhibit C3 – 2008 CCRFCD MPU Hydrology Map
- Exhibit G – Revised US-95 Area Exhibit

Appendix B Curve Number Information
- Soils Data
- Revised Curve Number Computations

Appendix C Hydraulic Computations
- FlowMaster Sections
- WSPGW Model for U-Channel

Appendix D Technical Drainage Study for Sky Pointe Plaza By SHG (DS 4214)
- Approval Letters
- Referenced Drainage Exhibits
- Referenced Curve Number Computations
- Referenced Hydraulic Computations
- Referenced Report Excerpts
- Referenced Relevant Sheets

Appendix E US-95 Plans

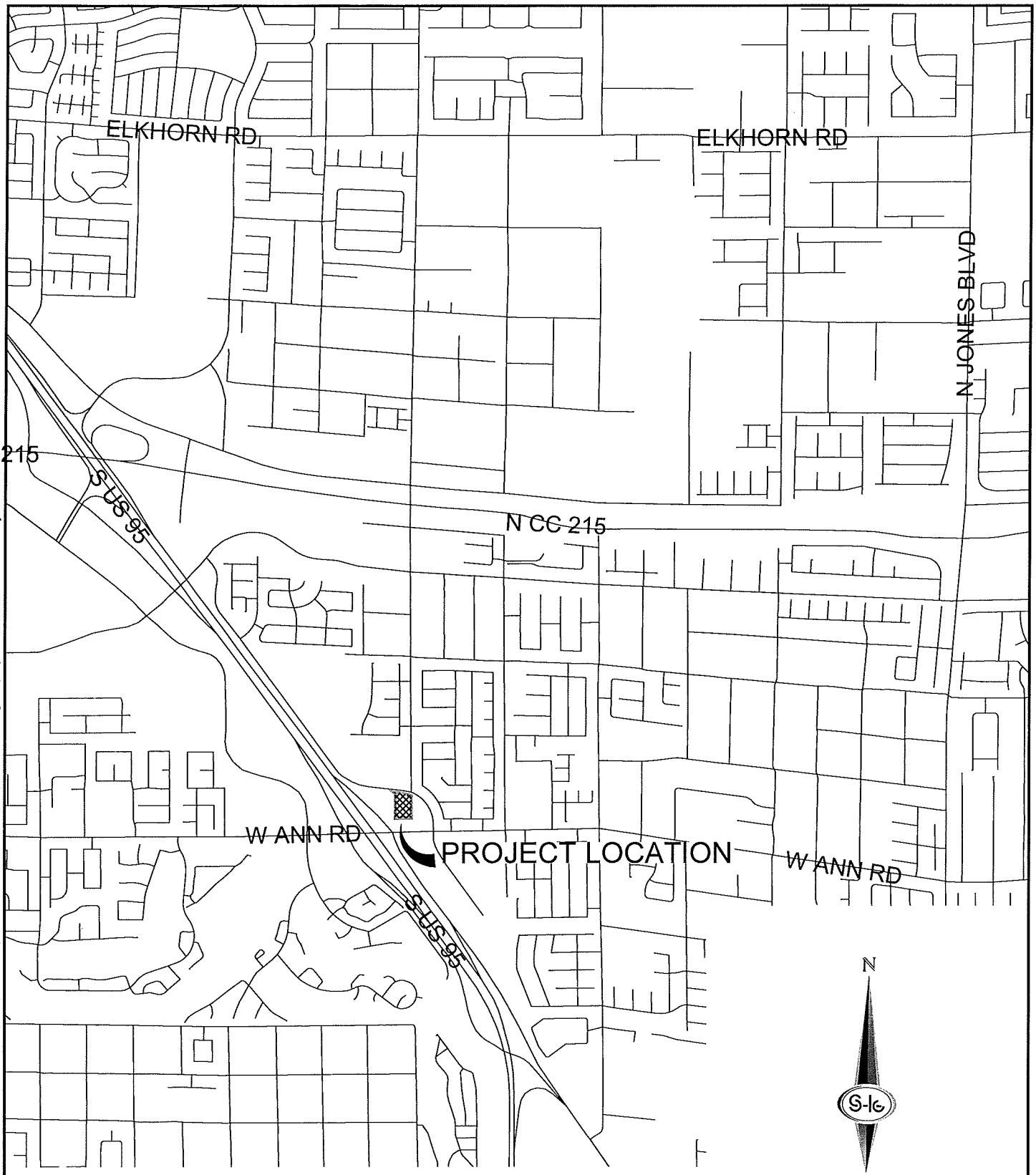
Appendix F Ann Road Plans

Appendix G Zoning and Planning Conditions

Appendix H Revised Grading & Detail Sheets

APPENDIX A

Revised Drainage Exhibits



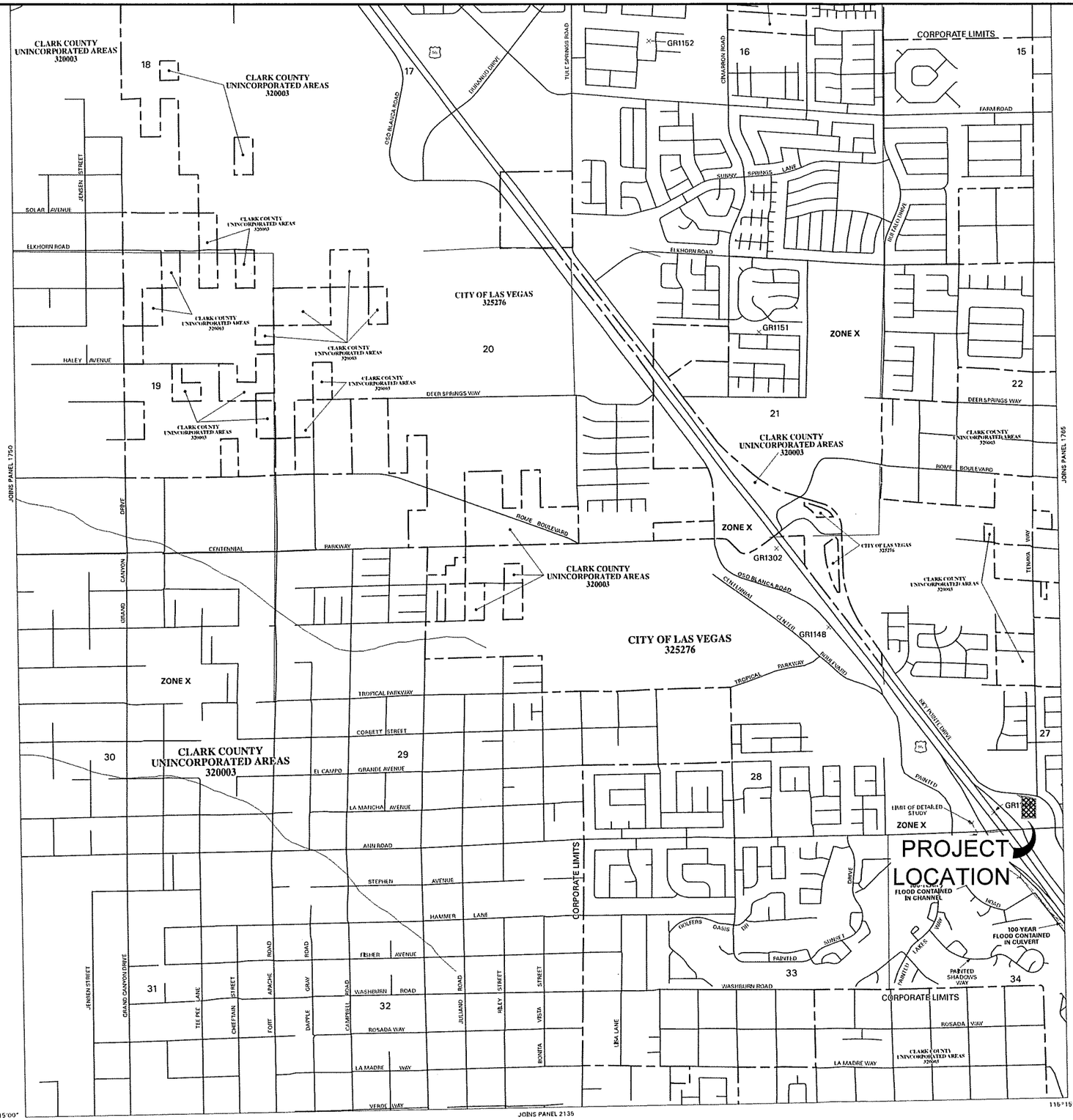
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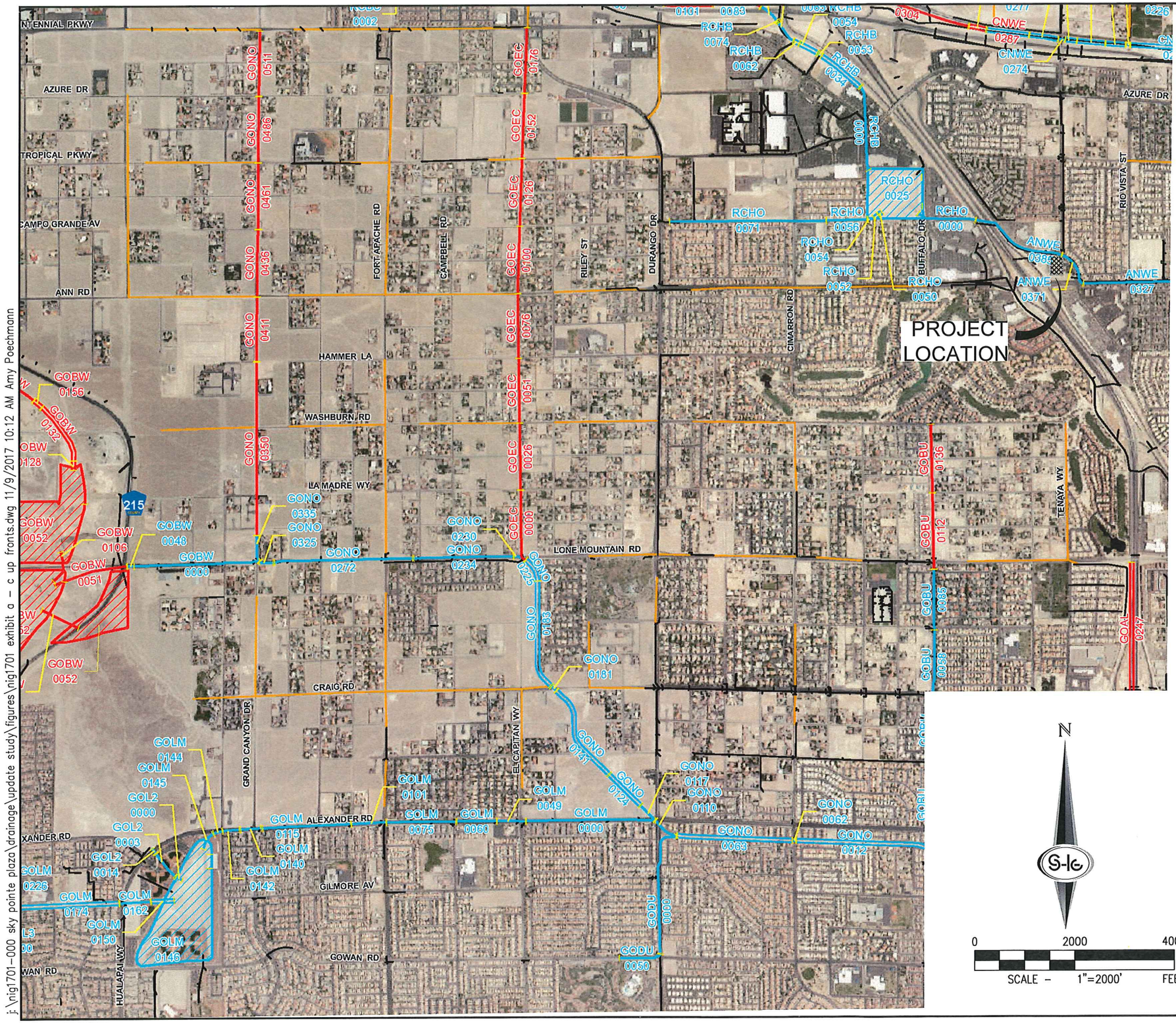
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SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA
LOCATION MAP

DATE: NOV 2017	PROJECT NO. NIG1701.000
DRAFTER: GNS	
DESIGNER: GNS	EXHIBIT A
CHECKED: ARP	SHEET 1 OF 1


CLARK COUNTY UNINCORPORATED AREAS 320003
CITY OF LAS VEGAS 325276
ZONE X
CORPORATE LIMITS
GR1152
GR1151
GR1302
GR1148
GR1153
JOINS PANEL 1750
JOINS PANEL 1765
JOINS PANEL 2135
CLARK COUNTY UNINCORPORATED AREAS 320003
CITY OF LAS VEGAS 325276
ZONE X



REGIONAL FLOOD CONTROL DISTRICT

2013
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

FIGURE F- 19
FLOOD CONTROL FACILITIES

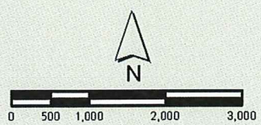
LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Local Proposed Facilities
- Detention Basin

- Stormdrain
- Lined Channel
- Unlined Channel
- Levee/Dike
- Natural Wash/Floodway
- ID-Mile Separator

Remove & Replace/Parallel Facilities

Category A	Category B
Channel	Channel
Stormdrain	Stormdrain



Scale: 1 inch = 2,000 feet

Refer to Figure G-2 for Aerial Source(s)



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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA
2013 CCRFCD MPU FACILITES MAP

DATE:	NOV 2017
DRAFTER:	GNS
DESIGNER:	GNS
CHECKED:	ARP
PROJECT NO.	NIG1701.000

EXHIBIT C1
SHEET 1 OF 1

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ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
ANRB		ANN ROAD CHANNEL WEST - RAINBOW						
0000	E	10' X 7' RCB	1320	721	CNW2B5-C	WEST3	0.99	0.40
ANWE		ANN ROAD CHANNEL WEST						
0245	E	10' X 9' RCB	1721	993	CNW2D1-C	WEST3	6.84	0.80
0279	E	10' X 9' RCB	553	743	2CNW2B5C	WEST3	6.37	0.80
0290	E	8' X 8' RCB	2050	743	2CNW2B5C	WEST3	6.37	0.70
0327	E	6' X 6' RCB	2360	161	RCHODB	WEST3	5.38	0.87
0371	E	6' X 6' RCB	760	161	RCHODB	WEST3	5.38	0.34
0385	E	54" RCP	1950	161	RCHODB	WEST3	5.38	1.17
CNWE		CENTENNIAL PKWY CHANNEL WEST						
0150	E	Conc Chnl 40'W 9.5'D 0:1 SS	2279	4233	CNW3B3-C	WEST3	5.64	0.42
0173	E	3: 18' X 8' RCBC @ Torrey Pines	200	4233	CNW3B3-C	WEST3	5.64	0.42
0176	E	Conc Chnl 40'W 9'D 0:1 SS	150	4233	CNW3B3-C	WEST3	5.64	0.41
0189	E	Conc Chnl 36'W 10'D 0:1 SS	1200	4067	CNW2D4-C	WEST3	5.15	0.42
0200	E	Conc Chnl 36'W 9'D 0:1 SS	2470	4067	CNW2D4-C	WEST3	5.15	1.00
0226	E	2: 18' X 8.5' RCBC @ Rio Vista	100	4067	CNW2D4-C	WEST3	5.15	0.51
0241	E	Conc Chnl 36'W 9.5'D 0:1 SS	405	3951	CNW2D3-C	WEST3	4.65	0.51
0251	E	Conc Chnl 36'W 9'D 0:1 SS	575	3951	CNW2D3-C	WEST3	4.65	0.51
0271	E	Conc Chnl 32'W 10'D 0:1 SS	229	3951	CNW2D3-C	WEST3	4.65	0.51
0274	E	32' X 10' RCBC @ Tenaya	142	3951	CNW2D3-C	WEST3	4.65	0.51
0277	E	Conc Chnl 32'W 9'D 0:1 SS	579	3951	CNW2D3-C	WEST3	4.65	0.64
0287	E	Conc Chnl 13'W 10'D 2:1 SS	605	3593	CNW2B2-C	WEST3	3.84	1.19
0301	P2	Conc Chnl 32'W 10'D 0:1 SS	235	3593	CNW2B2-C	WEST3	3.84	1.19
0304	P2	32' X 10' RCB	3259	3593	CNW2B2-C	WEST3	3.84	1.79
GO95		GOWAN OUTFALL - U.S. 95 CHANNEL						
0000	P1	Conc Chnl 12'W 4'D 2:1 SS	2640	299	GD17BG-C	ALLGOW3	0.36	0.30
0050	P1	Conc Chnl 12'W 4'D 2:1 SS	2450	299	GD17BG-C	ALLGOW3	0.36	0.30
GOA2		GOWAN OUTFALL - ALEXANDER BRANCH						
0000	P1	8' X 5' RCB	2281	523	CPT41-C	ALLGOW3	0.61	0.90
GOAL		GOWAN OUTFALL - ALEXANDER ROAD FACILITIES						
0111	P1	10' X 8' RCB	3000	880	CPT2B2	ALLGOW3	2.28	0.83
0168	P1	10' X 8' RCB	4200	880	CPT2B2	ALLGOW3	2.28	0.50
0247	P1	Conc Chnl 12'W 5.5'D 2:1 SS	2640	757	CGD20BMC	ALLGOW3	1.98	0.30
GOBU		GOWAN NORTH - BUFFALO BRANCH						
0000	E	2: 12' X 6' RCB	1705	961	CGD14CBC	ALLGOW3	2.53	0.20
0032	E	2: 12' X 5' RCB	1248	850	CGD14AAC	ALLGOW3	2.30	0.25
0058	E	2: 11' X 4' RCB	1398	745	CGD17AAC	ALLGOW3	1.90	0.25
0085	E	11' X 5' RCB	1266	614	CGD17ABC	ALLGOW3	1.52	0.25
0112	P1	8' X 6' RCB	1535	484	CGD20ABC	ALLGOW3	1.15	0.54
0136	P1	7' X 6' RCB	1400	344	CGD20AAC	ALLGOW3	0.76	0.36
GOBW		GOWAN BELTWAY WEST						
0000	E	48" RCP	2527	116	LMBWDB	ALLGOW4	10.68	4.37
0048	E	72" RCP	131	116	LMBWDB	ALLGOW4	10.68	2.21
0051	P1	72" RCP Outlet	1508	116	LMBWDB	ALLGOW4	10.68	0.30
0052	P1	589 ac-ft Lone Mountain-Beltway Detention Basin		5140	CLMBW1	GW3SC	3.50	
0082	P1	51,400 cfs PMF Spillway		51400	CLMBW1	GW3SC	3.50	
0096	P1	8' X 8' RCB Connector Pipe Under Beltway	839	5140	CLMBW1	GW3SC	3.50	0.30
0097	P1	54" RCP	394	525	UVB1-2	ALLGOW3	0.34	8.09
0100	P1	Energy Dissipator	143	525	UVB1-2	ALLGOW3	0.34	50.00
0106	P1	8' X 8' RCB Connector Pipe Under Lone Mountain	697	5140	CLMBW1	GW3SC	3.50	0.30
0128	P1	Conc Chnl 20'W 10'D 0:1 SS	190	3429	CWRBW1	ALLGOW3	6.06	25.00
0132	P1	Conc Chnl 14'W 10'D 0:1 SS	1286	2869	CHLBW1-C	GW3SC	1.84	5.00
0156	P1	Conc Chnl 16'W 10'D 0:1 SS	221	2869	CHLBW1-C	GW3SC	1.84	1.05
0160	P1	16' X 8' RCB	1230	2869	CHLBW1-C	GW3SC	1.84	1.05
GOBX		GOWAN BOX CANYON						
0000	P1	66" RCP	794	753	LWBW1	ALLGOW3	0.48	9.45
GODU		GOWAN NORTH - DURANGO BRANCH						
0000	E	12' X 6' RCB	2629	1150	CLV14-C	ALLGOW3	1.40	0.91
0050	E	9' X 6' RCB	865	835	CLV20-C	ALLGOW3	0.97	1.50

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
GOEC		GOWAN NORTH - EL CAPITAN BRANCH						
0000	P1	10' X 7' RCB	1445	1233	CLWFR-C	ALLGOW3	2.20	1.36
0026	P1	10' X 8' RCB	1320	1162	CWRJS-C	ALLGOW3	1.95	0.91
0051	P1	10' X 7' RCB	1320	1027	CHLFR-C	ALLGOW3	1.69	1.06
0076	P1	10' X 6' RCB	1320	894	CARFR-C	ALLGOW3	1.45	1.06
0100	P1	10' X 6' RCB	1320	745	CEAFR-C	ALLGOW3	1.21	0.76
0126	P1	10' X 7' RCB	1320	635	CTRFR-C	ALLGOW3	0.96	0.38
0152	P1	7' X 6' RCB	1320	485	CARFP-C	ALLGOW3	0.70	0.77
0176	P1	78" RCP	1320	363	CCPFR-C	ALLGOW3	0.46	1.15
GOL2		GOWAN LONE MOUNTAIN SYSTEM-BRANCH 2						
0000	E	5' X 4' RCB	150	461	CRBW	ALLGOW3	0.44	14.60
0003	E	66" RCP	607	461	CRBW	ALLGOW3	0.44	1.97
0014	E	84" RCPC @ Alexander	125	461	CRBW	ALLGOW3	0.44	4.00
GOLM		GOWAN LONE MOUNTAIN SYSTEM						
0000	E	78" RCP	2590	345	CLV15-C	ALLGOW4	11.88	1.80
0049	E	6' X 5' RCB	585	345	CLV15-C	ALLGOW4	11.88	1.87
0060	E	66" RCP	817	345	CLV15-C	ALLGOW4	11.88	2.40
0075	E	60" RCP	1385	345	CLV15-C	ALLGOW4	11.88	2.55
0101	E	54" RCP	701	190	LMTNDB	ALLGOW4	11.52	1.74
0115	E	48" RCP	1799	190	LMTNDB	ALLGOW4	11.52	3.08
0140	E	42" RCP	439	190	LMTNDB	ALLGOW4	11.52	1.60
0142	E	48" RCP	348	190	LMTNDB	ALLGOW4	11.52	2.14
0144	E	66" RCP	196	190	LMTNDB	ALLGOW4	11.52	5.44
0145	E	66" RCP Outlet	378	190	LMTNDB	ALLGOW4	11.52	0.90
0146	E	888 ac-ft Lone Mountain Detention Basin		7252	LMTNIN	GW3SC	6.13	
0147	E	36,000 cfs PMF Spillway		36000	LMTNIN	GW3SC	6.13	
0150	E	Drop Structure	481	6323	CGABW	GW3SC	5.12	
0162	E	28' X 8' RCBC @ Hualapai	625	6323	CGABW	GW3SC	5.12	1.86
0174	E	Conc Chnl 28'W 8'D 0:1 SS	2715	6173	CCLMT5	GW3SC	4.92	3.20
GOLO		GOWAN OUTFALL - LONE MTN. ROAD BRANCH						
0275	E	8' X 6' RCB	3000	590	CPT3AA2	ALLGOW3	1.16	0.77
GONO		GOWAN NORTH SYSTEM						
0000	E	8' X 8' RCB Outlet	184	558	GWNNDB	ALLGOW5	68.49	0.51
0001	E	8' X 8' RCB Outlet	156	558	GWNNDB	ALLGOW5	68.49	0.63
0006	E	30,780 cfs PMF Spillway		30780	GWNNDB	ALLGOW5	68.49	
0008	E	921 ac-ft Gowan North Detention Basin		4937	CCLV43-C*	GW4SC	11.93	
0009	E	3: 13' X 8' RCB	1662	4563	CLV43-C	GW4SC	11.24	0.62
0012	E	Conc Chnl 30'W 8'-9.5'D 0:1 SS	2665	4117	CCLV36-C	GW4SC	8.54	1.18
0062	E	Bridge 30'W 8.5'D @ Cimarron	80	3844	CCLV15-C	GW4SC	8.03	0.30
0063	E	Conc Chnl 30'W 8.5'-10'D 0:1 SS	2302	3844	CCLV15-C	GW4SC	8.03	1.00
0110	E	2: 12' X 8' RCAC @ Alexander	547	3352	CCRSFR-C*	GW3SC	6.10	1.00
0117	E	2: 12' X 8' RCAP	424	3352	CCRSFR-C*	GW3SC	6.10	1.10
0124	E	Conc Chnl 24'W 9'D 0:1 SS	887	3352	CCRSFR-C*	GW3SC	6.10	1.36
0141	E	Conc Chnl 24'W 9'-10.5'D 0:1 SS	2064	3352	CCRSFR-C	GW3SC	6.10	0.59
0181	E	Bridge 30'W 7'D @ Craig	142	2846	CRSFR-C	GW3SC	5.20	0.65
0183	E	Conc Chnl 22'W 8'-10.6'D 0:1 SS	2193	2846	CRSFR-C	GW3SC	5.20	0.72
0225	E	Conc Chnl Width Varies Depth Varies 0:1 SS	508	2605	CCLWFR-C	GW3SC	4.54	1.05
0230	E	13' X 5' RCB	256	1486	CCWRHW-C	GW3SC	2.34	2.78
0234	E	12' X 6' RCB	2010	1486	CCWRHW-C	GW3SC	2.34	1.67
0272	E	10' X 6' RCB	2797	1486	CCWRHW-C	GW3SC	2.34	3.15
0325	E	15' X 7' RCB	291	1486	CCWRHW-C	GW3SC	2.34	1.79
0335	E	15' X 7' RCB	529	1486	CWRHW-C	ALLGOW3	2.34	1.79
0350	P1	10' X 9' RCB	3473	1486	CWRHW-C	ALLGOW3	2.34	0.88
0411	P1	10' X 9' RCB	1320	1404	CARHW-C	ALLGOW3	1.89	0.76
0436	P1	10' X 7' RCB	1320	1173	CEAHW-C	ALLGOW3	1.53	1.14
0461	P1	10' X 9' RCB	1320	959	CTRHW-C	ALLGOW3	1.22	0.38
0486	P1	8' X 7' RCB	1320	747	CADHW-C	ALLGOW3	0.90	0.76
0511	P1	7' X 6' RCB	1320	546	CCPHW-C	ALLGOW3	0.60	1.14

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
GOOF		GOWAN OUTFALL FACILITIES						
0511	E	8' X 5' RCB	8390	699	CPT6B-C	GW3SC	1.08	0.50
0531	E	8' X 5' RCB	1300	558	GWNNDB	ALLGOW5	68.49	0.50
0551	E	72" RCP	524	558	GWNNDB	ALLGOW5	68.49	0.62
0773	E	60" RCP	803	286	LV30-C	ALLGOW3	0.42	1.40
0775	E	60" RCP	1300	286	LV30-C	ALLGOW3	0.42	1.00
RCHB		RANCHO ROAD SYSTEM - BELTWAY						
0000	E	2: 12' X 8.5' RCAP	1700	2631	CNW1C-W	WEST3	4.68	0.63
0034	E	Conc Chnl 21'W 8'D 0:1 SS	1000	2631	CNW1C-W	WEST3	4.68	1.19
0053	E	2: 12' X 8' RCBC @ South Ramp Connector	85	2304	CDW1C1	WEST3	4.31	1.40
0054	E	Conc Chnl 21'W 8'D 0:1 SS	432	2304	CDW1C1	WEST3	4.31	1.51
0062	E	Transition Structure	130	2304	CDW1C1	WEST3	4.31	1.51
0065	E	24' X 7' RCB	480	2304	CDW1C1	WEST3	4.31	0.30
0074	E	24' X 6' RCB	50	2226	CNWBC6-C	WEST3	4.17	0.30
0075	E	20' X 6' RCBC @ Beltway	428	2226	CNWBC6-C	WEST3	4.17	2.81
0083	P1	20' X 6' RCB	950	2226	CNWBC6-C	WEST3	4.17	2.49
0101	P1	Conc Chnl 20'W 7'D 0:1 SS	980	2226	CNWBC6-C	WEST3	4.17	2.38
0120	E	20' X 6' RCBC @ Grand Montecito	120	2226	CNWBC6-C	WEST3	4.17	1.00
0122	P1	Conc Chnl 16'-20'W 6'D 0:1 SS	350	2226	CNWBC6-C	WEST3	4.17	1.84
0130	P1	Conc Chnl 16'W 6'D 0:1 SS	1012	2226	CNWBC6-C	WEST3	4.17	2.67
RCHO		RANCHO ROAD SYSTEM						
0000	E	60" RCP with 36" Orifice Plate	1183	161	RCHODB	WEST3	5.38	0.74
0025	E	321 ac-ft Rancho Road Detention Basin		3115	RCHOIN	WEST3	5.38	
0027	E	18,000 cfs PMF Spillway		18000	RCHOIN	WEST3	5.38	
0050	E	Energy Dissipator	65	402	CNW1A4-C	WEST3	0.51	
0052	E	Conc Chnl 10'W 10'D 0:1 SS	115	402	CNW1A4-C	WEST3	0.51	11.73
0054	E	10' X 5' RCB	115	402	CNW1A4-C	WEST3	0.51	0.50
0056	E	10' X 5' RCB	835	402	CNW1A4-C	WEST3	0.51	0.47
0071	E	72" RCP	3126	402	CNW1A4-C	WEST3	0.51	1.80

** The HEC-1 node shown identifies the controlling concentration point for the associated facility and is located upstream of this facility due to decreasing peak flow with increasing tributary area caused by storm distribution transitions, depth area reduction factors, or attenuation of flow from routing.*

*** As-built or design slopes were used when available. All other slopes are based on existing topography. The user should verify the facility slope listed prior to performing any facility specific analysis.*

^ For parallel facilities, the existing facility flow equals its normal depth capacity, and the proposed parallel facility flow equals the remaining flow (i.e., HEC-1 Node flow = existing facility normal depth capacity + proposed parallel facility flow).

REGIONAL FLOOD CONTROL DISTRICT

2013 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

FACILITY INVENTORY
FIGURE F - 19

LEGEND

ID (Facility Identifier) AABB
Parent Stream Name
Stream Name
River Mile 0000
Distance Above Confluence with Parent Stream (Miles)
Miles in Hundredths

Existing Facility.....E
Proposed or Modified Facility.....P
Contingency Level
Category B.....P0
Master Plan.....P1
Preliminary Design.....P2
Design.....P3

Bottom Width.....W
Depth.....D
Side Slope, H:V.....SS

Construction Features

Cast in Place Concrete Pipe.....CIPCP	Reinforced Concrete Arch Culvert.....RCAC
Corrugated Metal Arch Pipe Culvert.....CMAP	Reinforced Concrete Box.....RCB
Corrugated Metal Pipe Culvert.....CMPC	Reinforced Concrete Box Culvert.....RCBC
High Density Polyethylene.....HDPE	Reinforced Concrete Pipe.....RCP
Horizontal Elliptical Reinforced Concrete Pipe.....HERCP	Reinforced Concrete Pipe Culvert.....RCPC
Reinforced Concrete Arch Pipe.....RCAP	Storm Sewer Pipe.....SSP

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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP

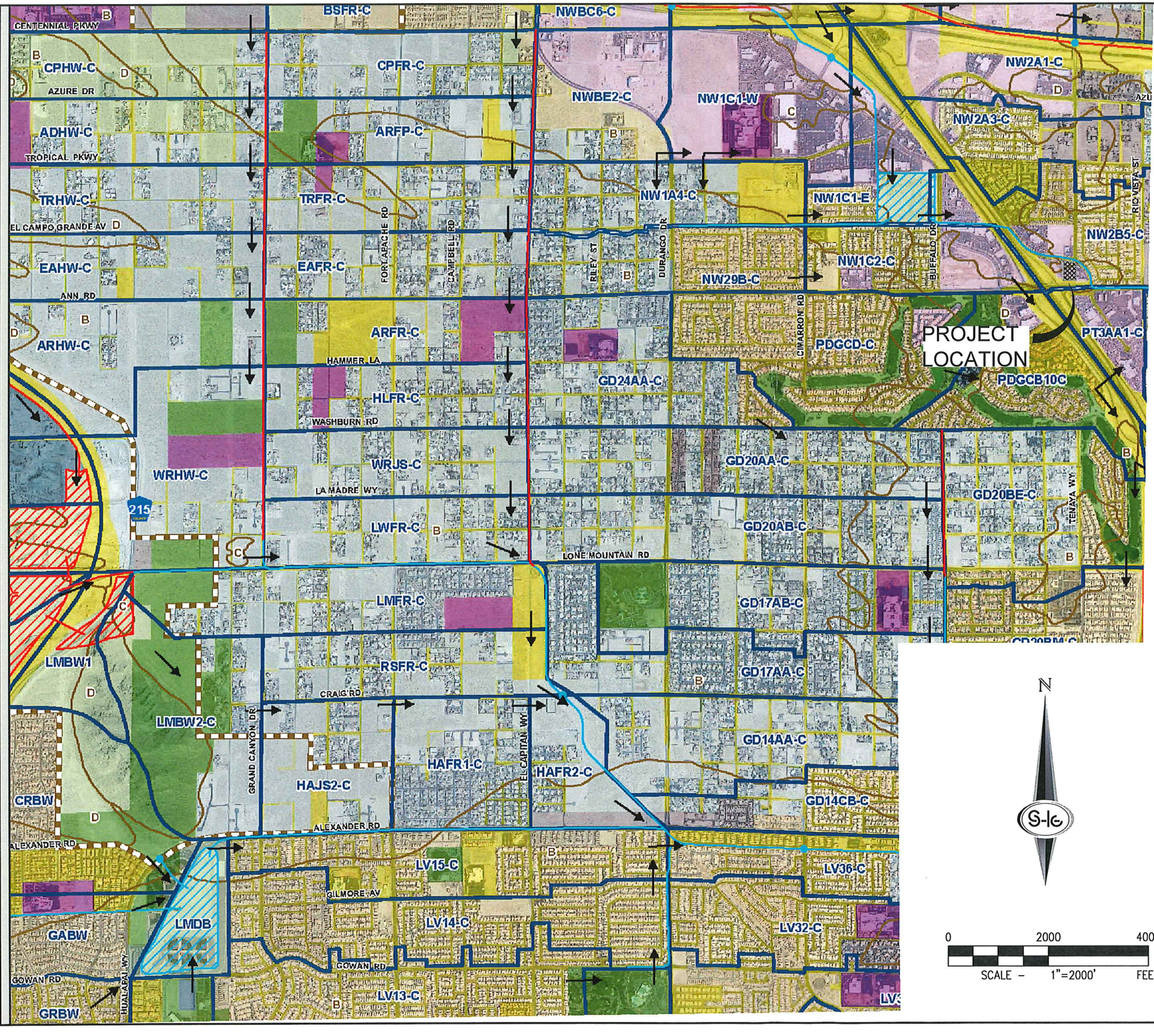
SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA
2013 CCRFCD MPU FACILITIES INVENTORY

DATE:	NOV 2017
DRAFTER:	GNS
DESIGNER:	GNS
CHECKED:	ARP
PROJECT NO.	NIG1701.000

EXHIBIT C2
SHEET 1 OF 1

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REGIONAL FLOOD CONTROL DISTRICT

2008
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

FIGURE H-19
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*	Commerical, Retail, Casino, High Rise Condominiums
10 / 20*	Light Industrial
11 / 21*	Heavy Industrial
12 / 22*	Schools
13	Lakes

* Drought Ordinance Applied

N

0 500 1,000 2,000 3,000
Feet
Scale: 1 inch = 2,000 feet
Refer to Figure G-2 for Aerial Source(s)

US95 I-15 I-215

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NO.	DESCRIPTION	DATE	BY	APP. AFE DATE	APP.

SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA
2008 CCRFCD MPU HYDROLOGY MAP

DATE:	NOV 2017
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DESIGNER:	GNS
CHECKED:	ARP
PROJECT NO.	NIG1701.000

EXHIBIT C3
SHEET 1 OF 1

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NO	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA

US95 BASIN

S 27
T 19 S
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DATE:	NOV 2017
DRAFTER:	GNS
DESIGNER:	GNS
CHECKED:	ARP
PROJECT NO.	NIG1701.000

EXHIBIT G

SHEET 1 OF 1

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APPENDIX B

Curve Number Information

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

Soil Data & Curve Number Computation

Project Name & Number: Sky Pointe Plaza
Date: 11/9/2017
By: ARP

Data:

Reference:
Referenced exhibits
NRCS Soil Data

Soil Type - Soil Survey Area & Version, Soil Description				A	B	C	D
LV	192	Las Vegas Valley 2016	Dalian-McCullough complex, 0 to 4 percent slopes	55%	35%	0%	10%
LV	305	Las Vegas Valley 2016	Las Vegas-Destazo complex, 0 to 2 percent slopes	5%	0%	35%	60%

Land Use	A	B	C	D
Desert Shrub (poor)	63	77	85	88
Roadway	98	98	98	98
Commercial	89	92	94	95

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
EXIST1	LV	192	64.7%	Desert Shrub (poor)	55%	35%	0%	10%	63	77	85	88	1.1	45.55
	LV	305	23.5%	Roadway	5%	0%	35%	60%	98	98	98	98	0.4	23.06
	LV	305	11.8%	Desert Shrub (poor)	5%	0%	35%	60%	63	77	85	88	0.2	10.08
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									1.7	78.7

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
EXIST2	LV	192	44.1%	Desert Shrub (poor)	55%	35%	0%	10%	63	77	85	88	1.50	31.06
	LV	192	20.6%	Commercial	55%	35%	0%	10%	89	92	94	95	0.70	18.66
	LV	305	26.5%	Desert Shrub (poor)	5%	0%	35%	60%	63	77	85	88	0.90	22.69
	LV	305	8.8%	Commercial	5%	0%	35%	60%	89	92	94	95	0.30	8.33
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									3.40	80.7

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
US95	LV	192	60.2%	Desert Shrub (poor)	55%	35%	0%	10%	63	77	85	88	5.6	42.39
	LV	192	39.8%	Roadway	55%	35%	0%	10%	98	98	98	98	3.7	38.99
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									9.3	81.4

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
ON1	LV	192	100.0%	Commercial	55%	35%	0%	10%	89	92	94	95	0.50	90.65
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									0.50	90.7

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
ON2	LV	192	58.3%	Commercial	55%	35%	0%	10%	89	92	94	95	0.70	52.88
	LV	305	41.7%	Commercial	5%	0%	35%	60%	89	92	94	95	0.50	39.31
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									1.20	92.2

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
OFF1	LV	192	58.8%	Desert Shrub (poor)	55%	35%	0%	10%	63	77	85	88	1.00	41.41
	LV	305	29.4%	Roadway	5%	0%	35%	60%	98	98	98	98	0.50	28.82
	LV	305	11.8%	Desert Shrub (poor)	5%	0%	35%	60%	63	77	85	88	0.20	10.08
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									1.70	80.3

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
OFF2	LV	192	12.8%	Desert Shrub (poor)	55%	35%	0%	10%	63	77	85	88	0.4	9.04
	LV	192	45.4%	Commercial	55%	35%	0%	10%	89	92	94	95	1.5	41.13
	LV	305	11.9%	Desert Shrub (poor)	5%	0%	35%	60%	63	77	85	88	0.4	10.23
	LV	305	29.9%	Commercial	5%	0%	35%	60%	89	92	94	95	1.0	28.16
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									3.4	88.6

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
OFF1D	LV	192	83.3%	Commercial	55%	35%	0%	10%	89	92	94	95	1.0	75.54
	LV	305	16.7%	Commercial	5%	0%	35%	60%	89	92	94	95	0.2	15.73
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									1.2	91.3

BASIN ID	SURVEY AREA	SOIL TYPE	SUBAREA PERCENT	LAND USE	HYDROLOGIC SOIL GROUP				LAND USE CN				SUBAREA ACRES	CURVE NUMBER
					A	B	C	D	A	B	C	D		
OFF2D	LV	192	58.8%	Commercial	55%	35%	0%	10%	89	92	94	95	2.0	53.32
	LV	305	41.2%	Commercial	5%	0%	35%	60%	89	92	94	95	1.4	38.85
TOTAL PERCENT			100.0%	TOTAL AREA & COMPOSITE CURVE NUMBER:									3.4	92.2

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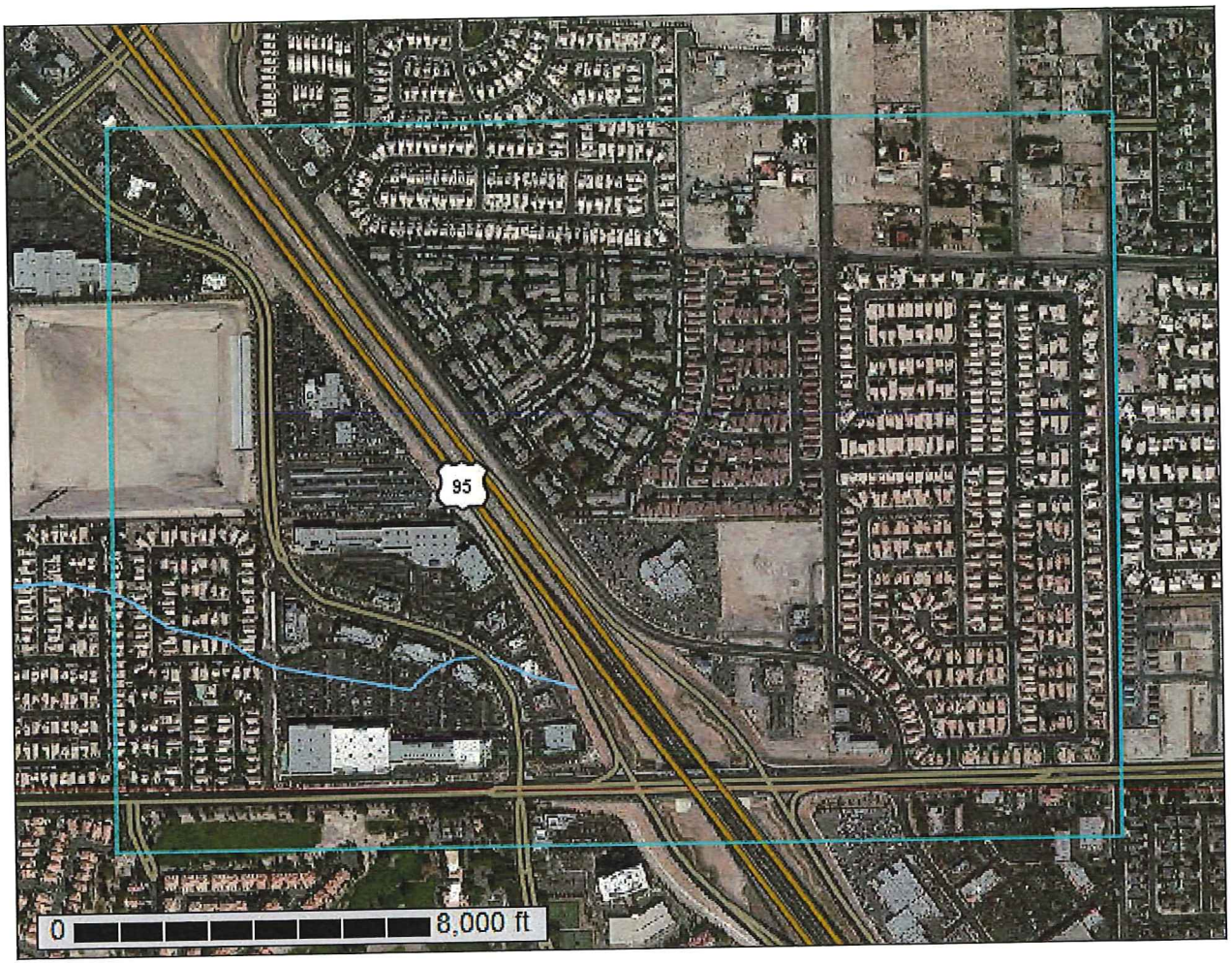
United States Department of Agriculture

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



November 9, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Las Vegas Valley Area, Nevada, Part of Clark County
Survey Area Data: Version 12, Sep 15, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 7, 2011—Feb 25, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
191	Dalian very cobbly fine sandy loam, 2 to 8 percent slopes	1.9	0.5%
192	Dalian-McCullough complex, 0 to 4 percent slopes	230.6	60.8%
305	Las Vegas-DeStazo complex, 0 to 2 percent slopes	146.8	38.7%
Totals for Area of Interest		**379.2**	**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.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Las Vegas Valley Area, Nevada, Part of Clark County

191—Dalian very cobbly fine sandy loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: hrb4
Elevation: 2,200 to 3,400 feet
Mean annual precipitation: 4 to 6 inches
Mean annual air temperature: 61 to 66 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Dalian

Setting

Landform: Fan skirts
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and dolostone

Typical profile

H1 - 0 to 5 inches: very cobbly fine sandy loam
H2 - 5 to 60 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

192—Dalian-McCullough complex, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: hrb5
Elevation: 1,800 to 5,700 feet
Mean annual precipitation: 4 to 10 inches
Mean annual air temperature: 57 to 68 degrees F
Frost-free period: 170 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Dalian and similar soils: 55 percent
Mccullough and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dalian

Setting

Landform: Fan skirts
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Alluvium derived from limestone and dolostone

Typical profile

H1 - 0 to 5 inches: very gravelly fine sandy loam
H2 - 5 to 60 inches: very gravelly fine sandy loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Mccullough

Setting

Landform: Fan skirts
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 5 inches: very gravelly very fine sandy loam
H2 - 5 to 30 inches: stratified sandy loam to loam
H3 - 30 to 40 inches: stratified coarse sand to loamy fine sand
H4 - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Gypsum, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Minor Components

Las vegas

Percent of map unit: 5 percent
Landform: Basin-floor remnants
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Tencee

Percent of map unit: 5 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

305—Las Vegas-DeStazo complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hrbs
Elevation: 1,400 to 5,200 feet
Mean annual precipitation: 3 to 10 inches
Mean annual air temperature: 55 to 70 degrees F
Frost-free period: 180 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Las vegas and similar soils: 60 percent
Destazo and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Las Vegas

Setting

Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from limestone

Typical profile

H1 - 0 to 2 inches: gravelly fine sandy loam
H2 - 2 to 8 inches: fine sandy loam
H3 - 8 to 12 inches: gravelly sandy clay loam
H4 - 12 to 16 inches: indurated

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 3 to 14 inches to petrocalcic
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 85 percent
Gypsum, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 12.0
Available water storage in profile: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D

Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Description of Destazo

Setting

Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 11 inches: fine sandy loam
H2 - 11 to 51 inches: very gravelly sandy clay loam
H3 - 51 to 62 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Other vegetative classification: LIMY 3-5" P.Z. (030XB019NV_3)
Hydric soil rating: No

Minor Components

Glencarb

Percent of map unit: 5 percent
Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: LOAMY BOTTOM (030XB020NV)
Hydric soil rating: No

Bluepoint

Percent of map unit: 5 percent
Landform: Fan piedmonts, sand sheets
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Other vegetative classification: LIMY SAND 5-7" P.Z. (030XB037NV_2)
Hydric soil rating: No

Skyhaven

Percent of map unit: 5 percent

Landform: Alluvial flats
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: SHALLOW LIMESTONE SLOPE 5-8 P.Z. (030XB030NV_2)
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Hydrologic Soil Group and Surface Runoff

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or

soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Report—Hydrologic Soil Group and Surface Runoff

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Hydrologic Soil Group and Surface Runoff–Las Vegas Valley Area, Nevada, Part of Clark County			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
191—Dalian very cobbly fine sandy loam, 2 to 8 percent slopes			
Dalian	100	Low	A
192—Dalian-McCullough complex, 0 to 4 percent slopes			
Dalian	55	Very low	A
Mccullough	35	Low	B
Las vegas	5	Very high	D
Tencee	5	Very high	D
305—Las Vegas-DeStazo complex, 0 to 2 percent slopes			
Las vegas	60	Very high	D
Destazo	25	Low	C *
Bluepoint	5	Very low	A
Glencarb	5	Low	C *
Skyhaven	5	Very high	C *

>10% D

* C = 25+5+5 = 35%

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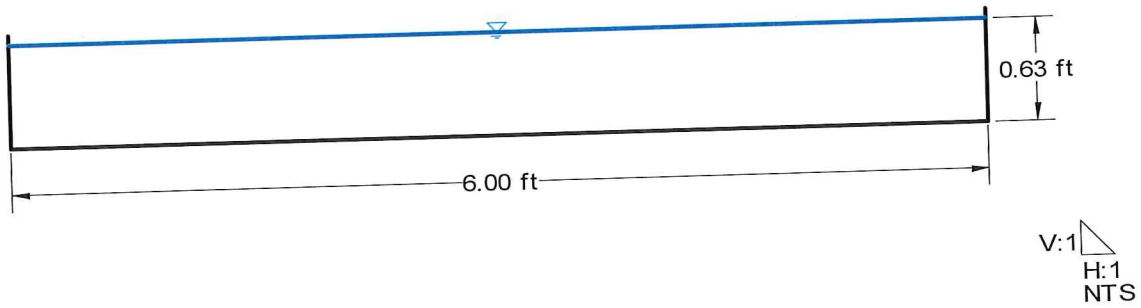
APPENDIX C

Hydraulic Computations

U-Channel
Cross Section for Rectangular Channel

Project Description	
Worksheet	U-Channel
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.013	
Channel Slope	0.50	%
Depth	0.63	ft
Bottom Width	6.00	ft
Discharge	20.00	cfs



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37 Brookside Road Waterbury, CT 06708 USA +1-203-755-1666

U-Channel
Worksheet for Rectangular Channel

Project Description	
Worksheet	U-Channel
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.013
Channel Slope	0.50 %
Bottom Width	6.00 ft
Discharge	20.00 cfs

Results	
Depth	0.63 ft
Flow Area	3.8 ft²
Wetted Perimeter	7.27 ft
Top Width	6.00 ft
Critical Depth	0.70 ft
Critical Slope	0.37 %
Velocity	5.25 ft/s
Velocity Head	0.43 ft
Specific Energy	1.06 ft
Froude Number	1.16
Flow Type	Supercritical

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U-Channel - Weir at Entrance
Worksheet for Broad Crested Weir

Project Description	
Worksheet	U-Channel - Weir at Entrance
Type	Broad Crested Weir
Solve For	Headwater Elevation

Input Data		
Discharge	20.00	cfs
Crest Elevation	0.00	ft
Tailwater Elevation	0.63	ft
Crest Surface Type	Paved	
Crest Breadth	1.00	ft
Crest Length	14.00	ft

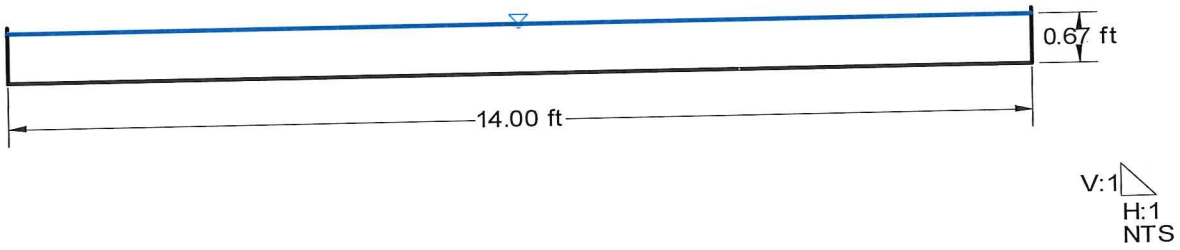
Results		
Headwater Elevation	0.67	ft
Headwater Height Above Crest	0.67	ft
Tailwater Height Above Crest	0.63	ft
Discharge Coefficient	3.09	US
Submergence Factor	0.84	
Adjusted Discharge Coefficient	2.59	US
Flow Area	9.4	ft^2
Velocity	2.12	ft/s
Wetted Perimeter	15.35	ft
Top Width	14.00	ft

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U-Channel - Weir at Entrance
Cross Section for Broad Crested Weir

Project Description	
Worksheet	U-Channel - Weir at Entrance
Type	Broad Crested Weir
Solve For	Headwater Elevation

Section Data		
Discharge	20.00	cfs
Headwater Elevation	0.67	ft
Crest Elevation	0.00	ft
Tailwater Elevation	0.63	ft
Crest Surface Type	Paved	
Crest Breadth	1.00	ft
Crest Length	14.00	ft



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APPENDIX D

Reference Material

Technical Drainage Study for Sky Pointe Plaza

(DS 4214) by SHG

Approval Letters

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: June 3, 2008
TO: **Land Development Services** Department of Public Works			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Sky Pointe Plaza**		**COPIES TO:** Slater Hanifan Group
Cross Streets:	SWC of Sky Pointe Drive & Tenaya Way		Nigro Development
File Number:	F:\Depot\DSMemos\DS4214C.doc		Bart Anderson, P.E., DevCo
Parcel Number:	125-27-410-004		CCRFCD
Zoning Action:	SDR-19097; VAR-19098; SUP-19100; VAR-19447 & ARC-20049		NDOT
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES	NO X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Transaction #
1st Submittal	7/30/2007	8/13/2007	Not Approved	$400.00	Paid: $400
2nd Submittal	8/31/2007, 9/28/2007 & 10/16/2007	10/16/2007	Conditional Approval	$400.00	76882: $400
CCRFCD & CLV Bldg.	11/20/2007 & 6/3/2008	6/3/2008	Concurrence Recv'd	N/C	N/C
			TOTAL FEES (LDDRS):	**$800.00**	----

REMARKS:

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

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

1. The project is adjacent to the *Nevada Department of Transportation* (NDOT) right-of-way (*Sky Pointe Drive*). The engineer must contact NDOT for any pertinent permit for the proposed project.

2. Submit legal description and an exhibit of the proposed public drainage easement (privately maintained) along the south boundary to *City of Las Vegas Right of Way Section* for vacation and recordation. The proposed vacation and recordation of the drainage easements must be done prior to the final approval of the improvement plans.

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.

T/R/S: T19S/R60E/27
AREA G-27

END OF REMARKS
ays

REGIONAL FLOOD CONTROL DISTRICT

Gale Wm. Fraser, II, P.E.
General Manager/Chief Engineer

BOARD OF DIRECTORS

Larry Brown
Chairman
City of Las Vegas

Chip Maxfield
Vice-Chairman
Clark County

David Bennett
City of Mesquite

Robert L. Eliason
City of North Las Vegas

Mayor Oscar Goodman
City of Las Vegas

Andy Hafen
City of Henderson

Mayor Roger Tobler
City of Boulder City

Bruce L. Woodbury
Clark County

November 16, 2007

Mr. Randy Fultz, P.E.
City of Las Vegas Public Works
731 S. 4th Street
Las Vegas, NV 89101

DISTRICT CONCURRENCE: SKY POINTE PLAZA (DS4214) (RFCD No. 07-7432)

Dear Mr. Fultz:

Clark County Regional Flood Control District (District) reviewed Technical Drainage Study dated July 30, 2007, Addendum No. 1 dated August 31, 2007, Supplement No. 1 dated September 28, 2007 for above-mentioned project as submitted by SLATER HANIFAN GROUP. In addition, District is in receipt of the Conditional Letter of Acceptance from City of Las Vegas Public Works dated October 16, 2007.

District concurs with acceptance of this Technical Drainage Study by City of Las Vegas Public Works.

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

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

GALE WM. FRASER, II, P.E.
General Manager/Chief Engineer

BY: _____
Abigail Mayrena, P.E.
Senior Engineer

_____
Andrew R. Trelease, P.E., CFM
Principal Civil Engineer

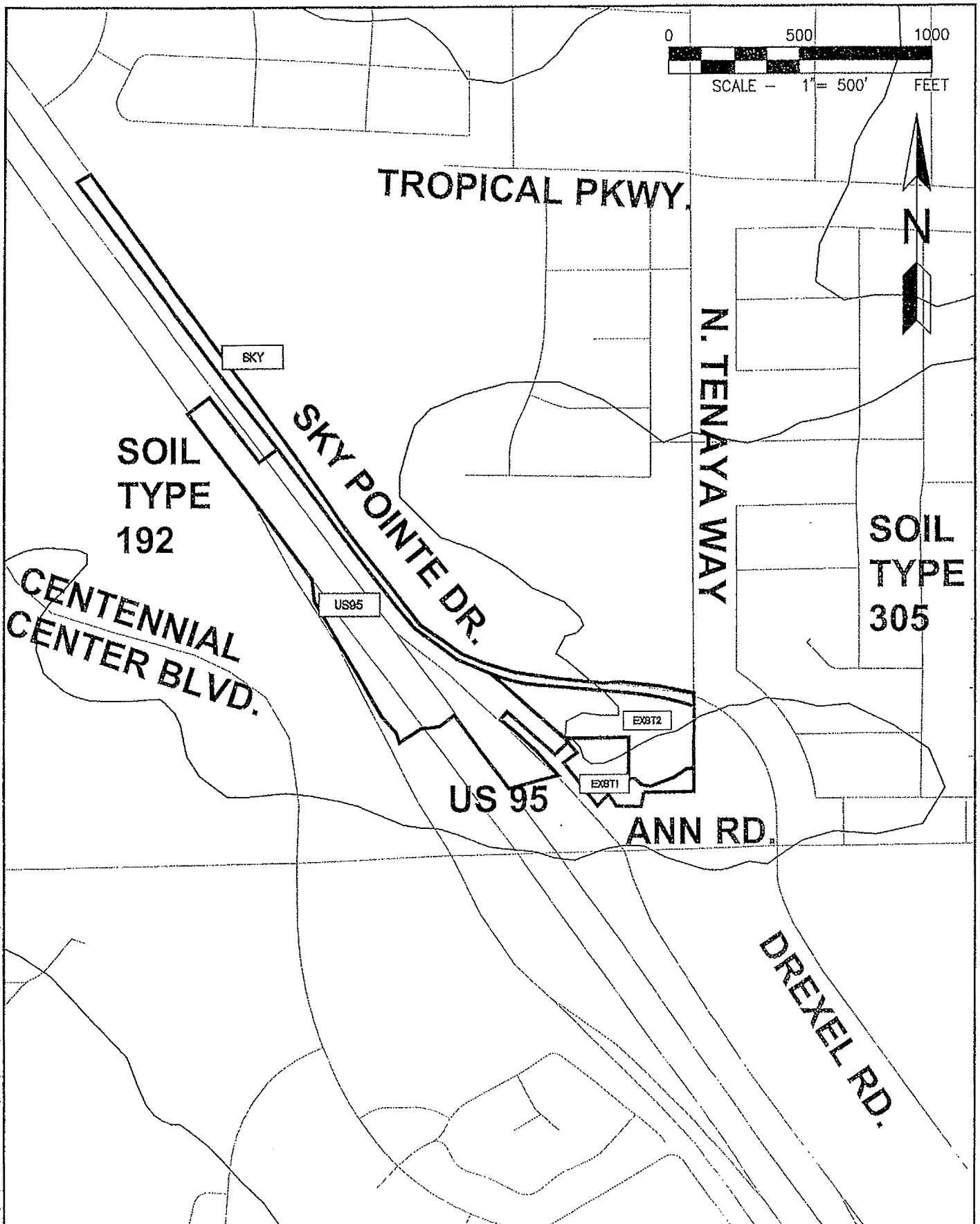
AM:ART:ph

c: Mark J. Failla, P.E., SLATER HANIFAN GROUP

P:\Letters and Memos\Local Drainage\Land Development & Drainage\Concurrence Letters\2007\Nov07\19-60-27.SHG.doc

600 S Grand Central Parkway, Suite 300 • Las Vegas, Nevada 89106-4511
(702) 455-3139 • FAX: (702) 455-3870
Website: *http://www.regionalflood.org*

Referenced Drainage Exhibits



SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NIGRO DEVELOPMENT

SKY POINTE PLAZA

SOILS MAP – EXISTING CONDITION

DATE: 07/01/07

DRAFTER: SMJ

DESIGNER: SMJ

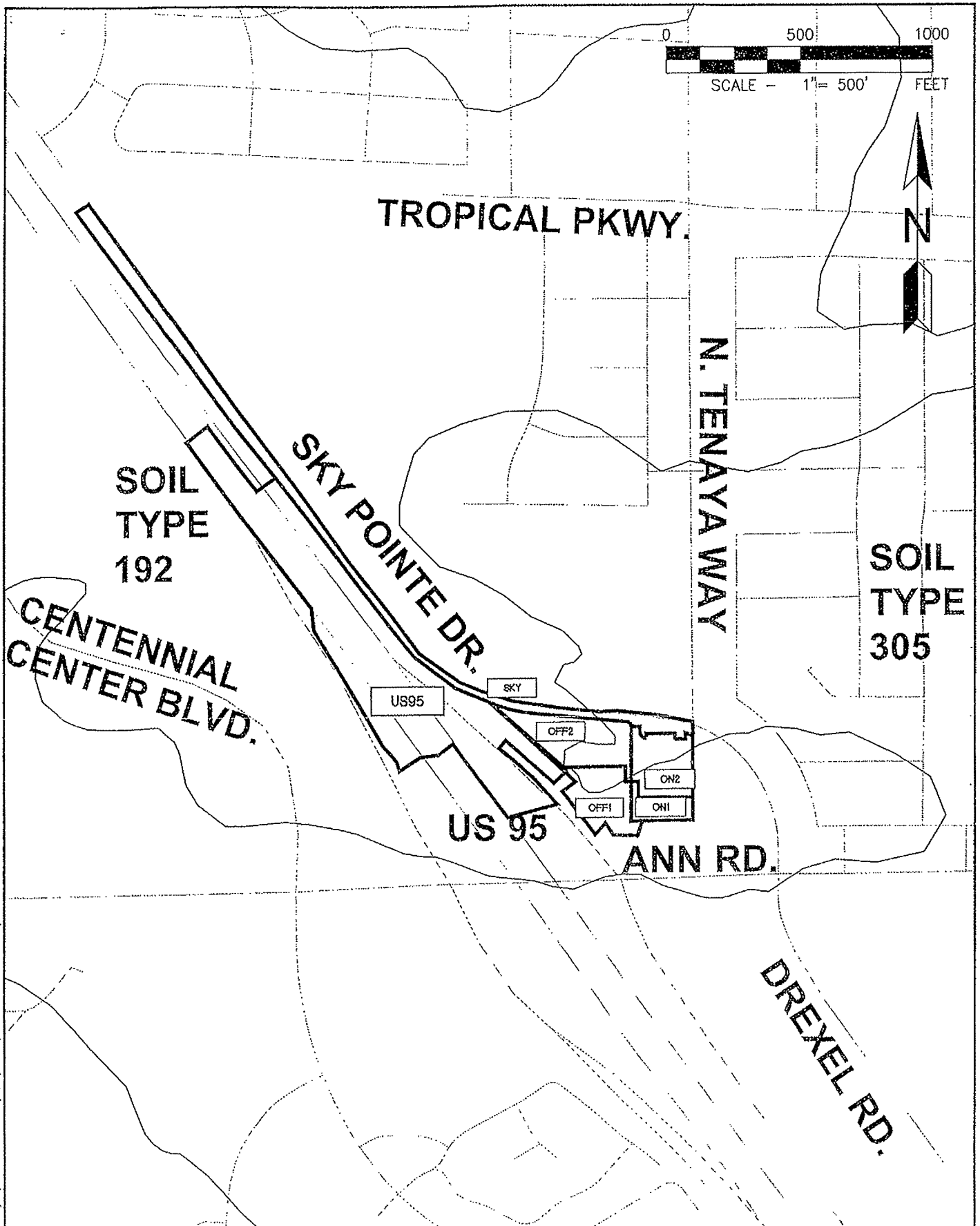
CHECKED: MJF

PROJECT NO. NIG0701.000

EXHIBIT D

SHEET 1 OF 2

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

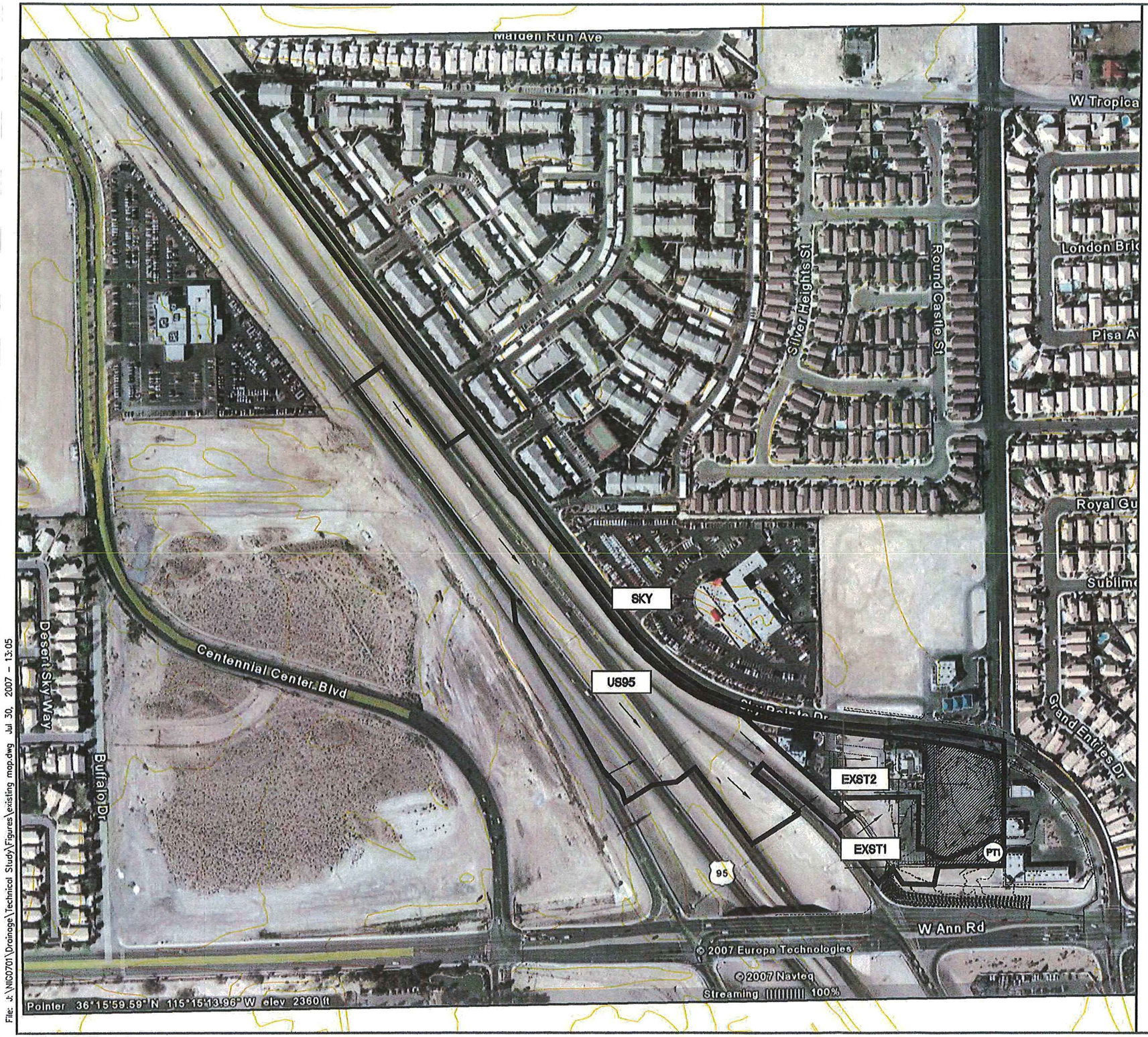
NIGRO DEVELOPMENT

SKY POINTE PLAZA

SOILS MAP - DEVELOPED CONDITION

DATE: 07/01/07	PROJECT NO. NIG0701.000
DRAFTER: SMJ	
DESIGNER: SMJ	EXHIBIT D
CHECKED: MJF	SHEET 2 OF 2

File: J:\NIG\NIG0701.000\Hydrology Study\Figures\Soils Map - Proposed.dwg Jul 30, 2007 10:47



N

0 300 600

SCALE – 1"= 300' FEET

LEGEND

- BASIN BOUNDARY
- SUBA — BASIN ID
- (1) — STREET SECTION
- FLOW ARROW
- (PT2) — CONCENTRATION POINT

HEC-1 Summary
Existing Condition

Basin ID	Area (ac)	Q_{100} (cfs)	Q_{10} (cfs)
EXST1	1.4	3	1
EXST2	3.4	6	2
US95	9.3	17	6
SKY	2.0	5	3
PT1	N/A	19	7

NOTE **- HATCHED AREA SHOWS PROJECT BOUNDARY**

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

NO.	DESCRIPTION	DATE	BY	APP.

NIGRO DEVELOPMENT

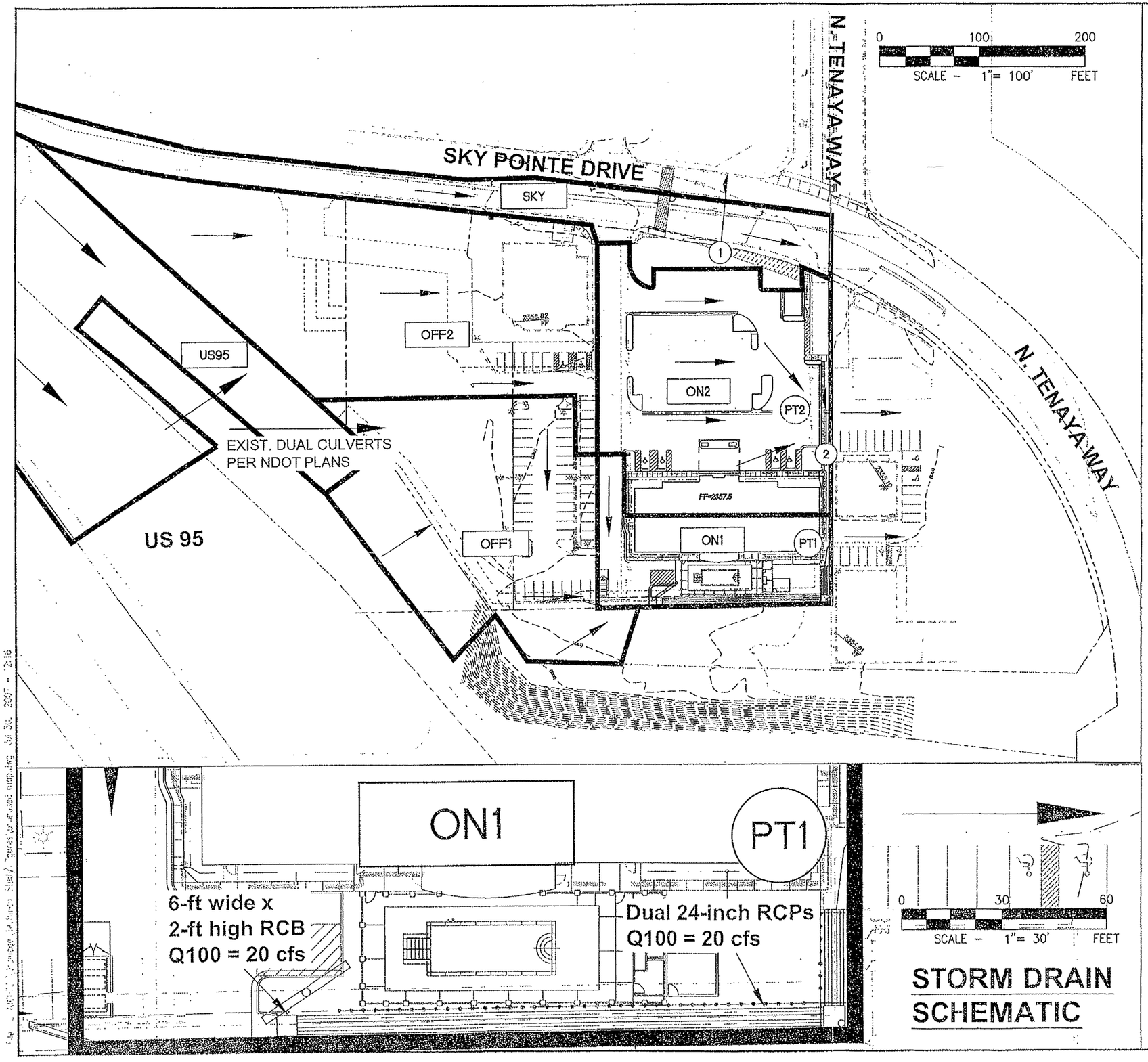
SKY POINTE PLAZA

EXISTING CONDITION DRAINAGE MAP

DATE: 07/12/07
DRAFTER: SMJ
DESIGNER: SMJ
CHECKED: MJF
PROJECT NO. NIG0701.000

EXHIBIT E
SHEET 1 OF 1

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STORM DRAIN SCHEMATIC

LEGEND

- BASIN BOUNDARY
- SUBA — BASIN ID
- (1) — STREET SECTION
- FLOW ARROW
- (PT2) — CONCENTRATION POINT

N

HEC-1 Summary
Proposed Condition

Basin ID	Area (ac)	Q_{100} (cfs)	Q_{10} (cfs)
OFF1	1.2	2	1
OFF2	1.8	4	2
US95	9.3	17	6
ON1	0.5	2	1
ON2	1.2	4	2
SKY	2.0	5	3
PT1	N/A	20	8
PT2	N/A	8	4

HEC-1 Summary
Future Condition

Basin ID	Area (ac)	Q_{100} (cfs)	Q_{10} (cfs)
OFF1	1.2	4	2
OFF2	1.8	5	2
US95	10.1	17	6
ON1	0.5	2	1
ON2	1.2	4	2
SKY	2.3	5	3
PT1	N/A	20	8
PT2	N/A	9	4

Normal Depth Cross Section Summary

Location	Q (cfs)	Slope (%)	Depth (ft)	Velocity (ft/s)	D x V
Section 1	5	0.8	0.42	2.31	1.0
Section 2	4.5	1.6	0.41	5.44	N/A

SLATER HANFAN GROUP
CONSULTING ENGINEERS & PLANNERS
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PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.

NIGRO DEVELOPMENT
SKY POINTE PLAZA
PROPOSED AND FUTURE CONDITION DRAINAGE MAP

DATE: 7/13/07
DRAFTER: SMJ
DESIGNER: SMJ
CHECKED: MJF
PROJECT NO. NIG0701.000

EXHIBIT F
SHEET 1 OF 1

File: N:\NIG0701.000 Nigro\Civil\Exhibits\Exhibit F - Proposed and Future Condition Drainage Map.dwg Jul 30, 2007 - 2:16

Referenced Curve Number Computations

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

Soil & Curve Number Summary Data

Project: Sky Pointe Plaza
Date: 7/1/2007

Data: **Reference**

Project is located in the following soil types:
192 Dallan-McCullough Complex
305 Las Vegas-Destazo Complex

Exhibit D
SCS Soil Data

Dallan-McCullough Complex (Soil Type 192)				
Composition	HSG	Percent	Desert Shrub (Poor Condition)	Commercial
Dallan	B	55.0%	77	92
McCullough	B	35.0%	77	92
Las Vegas	D	5.0%	88	95
Tencee	D	5.0%	88	95
		100.0%	78.1	92.3

> 90% B
> 10% D

Las Vegas-Destazo Complex (Soil Type 305)				
Composition	HSG	Percent	Desert Shrub (Poor Condition)	Commercial
Las Vegas	D	60.0%	88	95
Destazo	B	25.0%	77	92
Bluepoint	A	5.0%	63	89
Glencarb	C	5.0%	85	94
Skyhaven	C	5.0%	85	94
		100.0%	83.7	93.9

> 10% C

Subbasin	Soil Type	% Area	Land Use	CN	Area (Acres)	Composite CN
EXST1	192	65%	Desert Shrub	78.1	1.1	50.8
	192, 305	25%	Parking	98.0	0.4	24.5
	305	10%	Desert Shrub	83.7	0.2	8.4
		100%			1.7	83.6
EXST2	192	45%	Desert Shrub	78.1	1.5	35.1
	192	20%	Commercial	92.3	0.7	18.5
	305	25%	Desert Shrub	83.7	0.9	20.9
	305	10%	Commercial	93.9	0.3	9.4
		100%			3.4	83.9
US95	192	60%	Desert Shrub	78.1	5.6	46.9
	192	40%	Roadway	98.0	3.7	39.2
		100%			9.3	86.1
ON2	192	55%	Commercial	92.3	0.7	50.8
	305	45%	Commercial	93.9	0.5	42.2
		100%			1.2	93.0
OFF1	192	60%	Desert Shrub	78.1	1.0	46.9
	192, 305	30%	Parking	98.0	0.5	29.4
	305	10%	Desert Shrub	83.7	0.2	8.4
		100%			1.7	84.6
OFF2	192	13%	Desert Shrub	78.1	0.4	10.2
	192	45%	Commercial	92.3	1.5	41.5
	305	12%	Desert Shrub	83.7	0.4	10.0
	305	30%	Commercial	93.9	1.0	28.2
		100%			3.4	89.9
OFF1D	192	80%	Commercial	92.3	1.0	73.8
	305	20%	Commercial	93.9	0.2	18.8
		100%			1.2	92.6
OFF2D	192	58%	Commercial	92.3	2.0	53.5
	305	42%	Commercial	93.9	1.4	39.4
		100%			3.4	93.0

5740 S. Arville St., Suite 216 - Las Vegas, NV 89118
Ph. 702-284-5300 - Fx. 702-284-5399

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 *               JUN   1998              *
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*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*    HYDROLOGIC ENGINEERING CENTER      *
*         609 SECOND STREET             *
*       DAVIS, CALIFORNIA 95616         *
*           (916) 756-1104              *
*                                       *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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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 -AMSKK- 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

              *DIAGRAM
    1         ID     SKY POINTE PLAZA
    2         ID     NIGRO DEVELOPMENT
    3         ID     EXISTING DRAINAGE CONDITIONS
    4         ID
    5         ID     RETURN PERIOD ------- 10/100-YEAR
    6         ID     DISTRIBUTION -------- 6-HOUR SDN3
    7         ID     PROJECT NO. ---------- NIG0701.000
    8         ID     FILENAME ------------ Existing.H1
    9         ID     DATE ----------------- 7/13/07
   10         ID     MODELED BY ---------- SMJ
   11         ID
   12         ID        SIX HOUR DEPTH-AREA REDUCTION FACTORS
   13         ID        DRAINAGE AREA (MI^2)     DARF
   14         ID        0.0-0.49                 1.00
   15         ID
   16         ID        10 YEAR                  0.57
   17         ID
   18         IT       5       0       0     300
   19         IO       5       0       0
   20         IN       5       0       0
   21         JR    PREC       1    0.57
              *
   22         KK   EXST1
   23         BA   .0022
   24         PB    2.77
   25         PC       0   0.020   0.057   0.070   0.087   0.108   0.124   0.130   0.130   0.130
   26         PC   0.130   0.130   0.130   0.133   0.140   0.142   0.148   0.158   0.172   0.181
   27         PC   0.190   0.197   0.199   0.200   0.201   0.204   0.214   0.229   0.241   0.249
   28         PC   0.251   0.256   0.270   0.278   0.281   0.283   0.295   0.322   0.352   0.409
   29         PC   0.499   0.590   0.710   0.744   0.781   0.812   0.819   0.835   0.851   0.856
   30         PC   0.860   0.868   0.876   0.888   0.910   0.926   0.937   0.950   0.970   0.976
   31         PC   0.982   0.985   0.987   0.989   0.990   0.993   0.993   0.994   0.995   0.998
   32         PC   0.998   0.999       1
   33         LS       0    83.6
   34         UD   0.100
              *
   35         KK    US95
   36         BA   .0145
   37         PB    2.77
   38         LS       0    86.1
   39         UD   0.186
              *
   40         KK     PT1
   41         HC       2
              *
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1 HEC-1 INPUT PAGE 2

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LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

   42         KK   EXST2
   43         BA   .0053
   44         PB    2.77
   45         LS       0    83.9
   46         UD   0.162
              *
   47         KK     SKY
   48         BA   .0031
   49         PB    2.77
   50         LS       0    98.0
```

```
            S1           UD   0.245
                         *
            S2           ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK

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

    22       EXST1
                .
                .
    35          .        US95
                .          .
                .          .
    40        PT1.....     .
                .          .
                .          .
    42          .        EXST2
                .          .
                .          .
    47          .          .          SKY

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
**************************************
 *                                    *                                    *
 *                                    *                                    *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                    *   U.S. ARMY CORPS OF ENGINEERS
 *                                    *                                    *
 *               JUN   1998           *                                    *   HYDROLOGIC ENGINEERING CENTER
 *                                    *                                    *
 *            VERSION 4.1             *                                    *        609 SECOND STREET
 *                                    *                                    *
 *                                    *                                    *      DAVIS, CALIFORNIA 95616
 *                                    *                                    *
 *  RUN DATE   24JUL07   TIME  10:42:07   *                                    *         (916) 756-1104
 *                                    *                                    *
 *                                    *                                    *
 **************************************
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SKY POINTE PLAZA
NIGRO DEVELOPMENT
EXISTING DRAINAGE CONDITIONS

RETURN PERIOD ------- 10/100-YEAR
DISTRIBUTION -------- 6-HOUR SDN3
PROJECT NO. --------- NIG0701.000
FILENAME ------------ Existing.H1
DATE ---------------- 7/13/07
MODELED BY ---------- SMJ

SIX HOUR DEPTH-AREA REDUCTION FACTORS

DRAINAGE AREA (MI^2)	DARF
0.0-0.49	1.00
10 YEAR	0.57

```
  19 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         300  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE     2   0  ENDING DATE
                      NDTIME      0055  ENDING TIME
                      ICENT         19  CENTURY MARK

                   COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE   24.92 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
                   1.00       .57
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

                                                                 RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION      AREA     PLAN                   RATIO 1  RATIO 2
                                                                1.00      .57

 HYDROGRAPH AT
+                 EXST1        .00      1   FLOW                 3.       1.
                                            TIME              3.50     3.58
```

HYDROGRAPH AT						
+	US95	.01	1	FLOW	17.	6.
				TIME	3.58	3.67
2 COMBINED AT						
+	PT1	.02	1	FLOW	19.	7.
				TIME	3.58	3.58
HYDROGRAPH AT						
+	EXST2	.01	1	FLOW	6.	2.
				TIME	3.58	3.58
HYDROGRAPH AT						
+	SKY	.00	1	FLOW	5.	3.
				TIME	3.67	3.67

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

Proposed Condition

```
1*****************************************
*****************************************
 *                                       *                                       *
 *                                       *                                       *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                       *    U.S. ARMY CORPS OF ENGINEERS
 *                                       *                                       *
 *              JUN   1998               *                                       *    HYDROLOGIC ENGINEERING CENTER
 *                                       *                                       *
 *            VERSION 4.1                *                                       *         609 SECOND STREET
 *                                       *                                       *
 *                                       *                                       *       DAVIS, CALIFORNIA 95616
 *                                       *                                       *
 *  RUN DATE   24JUL07  TIME  11:52:42   *                                       *          (916) 756-1104
 *                                       *                                       *
 *                                       *                                       *
 *****************************************
*****************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX  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 -AMSKK- 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

              *DIAGRAM
    1         ID     SKY POINTE PLAZA
    2         ID     NIGRO DEVELOPMENT
    3         ID     PROPOSED DRAINAGE CONDITIONS
    4         ID
    5         ID     RETURN PERIOD ------- 10/100-YEAR
    6         ID     DISTRIBUTION -------- 6-HOUR SDN3
    7         ID     PROJECT NO. ---------- NIG0701.000
    8         ID     FILENAME ------------ Proposed.H1
    9         ID     DATE ---------------- 7/13/07
   10         ID     MODELED BY ---------- SMJ
   11         ID
   12         ID        SIX HOUR DEPTH-AREA REDUCTION FACTORS
   13         ID        DRAINAGE AREA (MI^2)     DARF
   14         ID        0.0-0.49                 1.00
   15         ID
   16         ID        10 YEAR                  0.57
   17         ID
   18         IT       5       0       0     300
   19         IO       5       0       0
   20         IN       5       0       0
   21         JR    PREC       1    0.57
              *
   22         KK     ON1
   23         BA    .0008
   24         PB    2.77
   25         PC       0   0.020   0.057   0.070   0.087   0.108   0.124   0.130   0.130   0.130
   26         PC   0.130   0.130   0.130   0.133   0.140   0.142   0.148   0.158   0.172   0.181
   27         PC   0.190   0.197   0.199   0.200   0.201   0.204   0.214   0.229   0.241   0.249
   28         PC   0.251   0.256   0.270   0.278   0.281   0.283   0.295   0.322   0.352   0.409
   29         PC   0.499   0.590   0.710   0.744   0.781   0.812   0.819   0.835   0.851   0.856
   30         PC   0.860   0.868   0.876   0.888   0.910   0.926   0.937   0.950   0.970   0.976
   31         PC   0.982   0.985   0.987   0.989   0.990   0.993   0.993   0.994   0.995   0.998
   32         PC   0.998   0.999       1
   33         LS       0    92.3
   34         UD   0.060
              *
   35         KK    US95
   36         BA   .0145
   37         PB    2.77
   38         LS       0    86.1
   39         UD   0.186
              *
   40         KK    OFF1
   41         BA   .0019
   42         PB    2.77
   43         LS       0    84.6
   44         UD   0.100
              *
```

1 HEC-1 INPUT PAGE 2

```
LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

   45         KK     PT1
   46         HC       3
              *
   47         KK     ON2
   48         BA   .0019
   49         PB    2.77
   50         LS       0    93.0
```

```
             51           UD   0.060
                          *

             52           KK    OFF2
             53           BA   .0028
             54           PB    2.77
             55           LS       0    89.9
             56           UD   0.130
                          *

             57           KK     PT2
             58           HC       2
                          *

             59           KK     SKY
             60           BA   .0031
             61           PB    2.77
             62           LS       0    98.0
             63           UD   0.245
                          *

             64           ZZ
1
                 SCHEMATIC DIAGRAM OF STREAM NETWORK

 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    22         ON1
                 .
                 .
    35           .         US95
                 .           .
                 .           .
    40           .           .         OFF1
                 .           .           .
                 .           .           .
    45         PT1.......................
                 .
                 .
    47           .          ON2
                 .           .
                 .           .
    52           .           .         OFF2
                 .           .           .
                 .           .           .
    57           .          PT2.............
                 .           .
                 .           .
    59           .           .          SKY

  (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
*****************************************
 *                                       *                                       *
*                                                                                 *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *     U.S. ARMY CORPS OF ENGINEERS      *
*                                                                                 *
 *              JUN   1998               *     HYDROLOGIC ENGINEERING CENTER     *
*                                                                                 *
 *           VERSION 4.1                 *          609 SECOND STREET            *
*                                                                                 *
 *                                       *        DAVIS, CALIFORNIA 95616        *
*                                                                                 *
 *  RUN DATE   24JUL07  TIME  11:52:42   *            (916) 756-1104             *
*                                                                                 *
 *                                       *                                       *
*                                                                                 *
 *****************************************
*****************************************


                          SKY POINTE PLAZA
                          NIGRO DEVELOPMENT
                          PROPOSED DRAINAGE CONDITIONS

                          RETURN PERIOD ------- 10/100-YEAR
                          DISTRIBUTION -------- 6-HOUR SDN3
                          PROJECT NO. --------- NIG0701.000
                          FILENAME ------------ Proposed.HI
                          DATE ---------------- 7/13/07
                          MODELED BY ---------- SMJ

                             SIX HOUR DEPTH-AREA REDUCTION FACTORS
                             DRAINAGE AREA (MI^2)     DARF
                             0.0--0.49                1.00

                             10 YEAR                  0.57

   19 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         300  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE     2    0  ENDING DATE
                       NDTIME       0055  ENDING TIME
                       ICENT          19  CENTURY MARK

                     COMPUTATION INTERVAL      .08 HOURS
                         TOTAL TIME BASE    24.92 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
1.00 .57
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 1.00	RATIO 2 .57
HYDROGRAPH AT						
+	ON1	.00	1	FLOW	2.	1.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	US95	.01	1	FLOW	17.	6.
				TIME	3.58	3.67
HYDROGRAPH AT						
+	OFF1	.00	1	FLOW	2.	1.
				TIME	3.50	3.58
3 COMBINED AT						
+	PT1	.02	1	FLOW	20.	8.
				TIME	3.58	3.58
HYDROGRAPH AT						
+	ON2	.00	1	FLOW	4.	2.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	OFF2	.00	1	FLOW	4.	2.
				TIME	3.58	3.58
2 COMBINED AT						
+	PT2	.00	1	FLOW	8.	4.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	SKY	.00	1	FLOW	5.	3.
				TIME	3.67	3.67

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

Future Condition

```
1*****************************************
*****************************************
 *                                       *
 *                                       *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
 *                                       *
 *              JUN   1998               *
 *                                       *
 *           VERSION 4.1                 *
 *                                       *
 *                                       *
 *                                       *
 *  RUN DATE   30JUL07  TIME  10:07:24   *
 *                                       *
 *                                       *
 *                                       *
 *****************************************
*****************************************
```


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
XXXXXXX  XXXX     X        XXXXX  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 -AMSKK- 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
              *DIAGRAM
    1         ID     SKY POINTE PLAZA
    2         ID     NIGRO DEVELOPMENT
    3         ID     FUTURE DRAINAGE CONDITIONS
    4         ID
    5         ID     RETURN PERIOD ------- 10/100-YEAR
    6         ID     DISTRIBUTION -------- 6-HOUR SDN3
    7         ID     PROJECT NO. --------- NIG0701.000
    8         ID     FILENAME ------------ Future.H1
    9         ID     DATE ---------------- 7/13/07
   10         ID     MODELED BY ---------- SMJ
   11         ID
   12         ID        SIX HOUR DEPTH-AREA REDUCTION FACTORS
   13         ID        DRAINAGE AREA (MIA2)    DARF
   14         ID        0.0-0.49                1.00
   15         ID
   16         ID        10 YEAR                 0.57
   17         ID
   18         IT       5       0       0     300
   19         IO       5       0       0
   20         IN       5       0       0
   21         JR    PREC       1    0.57
              *
   22         KK     ON1
   23         BA   .0008
   24         PB    2.77
   25         PC       0   0.020   0.057   0.070   0.087   0.108   0.124   0.130   0.130   0.130
   26         PC   0.130   0.130   0.130   0.133   0.140   0.142   0.148   0.158   0.172   0.181
   27         PC   0.190   0.197   0.199   0.200   0.201   0.204   0.214   0.229   0.241   0.249
   28         PC   0.251   0.256   0.270   0.278   0.281   0.283   0.295   0.322   0.352   0.409
   29         PC   0.499   0.590   0.710   0.744   0.781   0.812   0.819   0.835   0.851   0.856
   30         PC   0.860   0.868   0.876   0.888   0.910   0.926   0.937   0.950   0.970   0.976
   31         PC   0.982   0.985   0.987   0.989   0.990   0.993   0.993   0.994   0.995   0.998
   32         PC   0.998   0.999       1
   33         LS       0    92.3
   34         UD   0.060
              *
   35         KK    US95
   36         BA   .0145
   37         PB    2.77
   38         LS       0    86.1
   39         UD   0.186
              *
   40         KK   OFF1D
   41         BA   .0019
   42         PB    2.77
   43         LS       0    92.6
   44         UD   0.050
              *
```

1 HEC-1 INPUT PAGE 2

```
LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
   45         KK     PT1
   46         HC       3
              *
   47         KK     ON2
   48         BA   .0019
   49         PB    2.77
   50         LS       0    93.0
```

```
             51           UD   0.060
                          *

             52           KK   OFF2D
             53           BA   .0028
             54           PB    2.77
             55           LS       0    93.0
             56           UD   0.105
                          *

             57           KK     PT2
             58           HC       2
                          *

             59           KK     SKY
             60           BA   .0031
             61           PB    2.77
             62           LS       0    98.0
             63           UD   0.245
                          *

             64           ZZ
1
                 SCHEMATIC DIAGRAM OF STREAM NETWORK

 INPUT
  LINE      (V) ROUTING          (---->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<----) RETURN OF DIVERTED OR PUMPED FLOW

    22         ON1
                 .
                 .
    35           .         US95
                 .           .
                 .           .
    40           .           .        OFF1D
                 .           .          .
                 .           .          .
    45         PT1.....................
                 .
                 .
    47           .          ON2
                 .           .
                 .           .
    52           .           .        OFF2D
                 .           .          .
                 .           .          .
    57           .          PT2.............
                 .           .
                 .           .
    59           .           .          SKY

  (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
****************************************
 *                                      *                    *
*                                                                *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS
*                                                                *
 *              JUN   1998              *                    *   HYDROLOGIC ENGINEERING CENTER
*                                                                *
 *           VERSION 4.1                *                    *        609 SECOND STREET
*                                                                *
 *                                      *                    *     DAVIS, CALIFORNIA 95616
*                                                                *
 *  RUN DATE   30JUL07  TIME  10:07:24  *                    *          (916) 756-1104
*                                                                *
 *                                      *                    *
*                                                                *
 ****************************************
****************************************
```

SKY POINTE PLAZA
NIGRO DEVELOPMENT
FUTURE DRAINAGE CONDITIONS

RETURN PERIOD ------- 10/100-YEAR
DISTRIBUTION -------- 6-HOUR SDN3
PROJECT NO. --------- NIG0701.000
FILENAME ------------ Future.H1
DATE ---------------- 7/13/07
MODELED BY ---------- SMJ

SIX HOUR DEPTH-AREA REDUCTION FACTORS	
DRAINAGE AREA (MI^2)	DARF
0.0-0.49	1.00
10 YEAR	0.57

```
  19 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         300  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE     2   0  ENDING DATE
                      NDTIME       0055  ENDING TIME
                      ICENT         19  CENTURY MARK

                   COMPUTATION INTERVAL      .08 HOURS
                       TOTAL TIME BASE    24.92 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
1.00 .57

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 1.00	RATIO 2 .57
HYDROGRAPH AT						
+	ON1	.00	1	FLOW	2.	1.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	US9S	.01	1	FLOW	17.	6.
				TIME	3.58	3.67
HYDROGRAPH AT						
+	OFF1D	.00	1	FLOW	4.	2.
				TIME	3.50	3.50
3 COMBINED AT						
+	PT1	.02	1	FLOW	20.	8.
				TIME	3.58	3.58
HYDROGRAPH AT						
+	ON2	.00	1	FLOW	4.	2.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	OFF2D	.00	1	FLOW	5.	2.
				TIME	3.50	3.50
2 COMBINED AT						
+	PT2	.00	1	FLOW	9.	4.
				TIME	3.50	3.50
HYDROGRAPH AT						
+	SKY	.00	1	FLOW	5.	3.
				TIME	3.67	3.67

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

Referenced Hydraulic Sections

Section 1 - Sky Pointe Drive
Worksheet for Irregular Channel

Project Description	
Worksheet	Section 1 - Sky Pointe Drive
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Channel Slope	0.80	%
Discharge	5.00	cfs

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

Results		
Mannings Coefficient	0.016	
Water Surface Elevation	0.42	ft
Elevation Range	0.00 to 0.65	
Flow Area	2.2	ft²
Wetted Perimeter	14.71	ft
Top Width	14.24	ft
Actual Depth	0.42	ft
Critical Elevation	0.43	ft
Critical Slope	0.73	%
Velocity	2.31	ft/s
Velocity Head	0.08	ft
Specific Energy	0.51	ft
Froude Number	1.05	
Flow Type	Supercritical	

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00.0	0+38.0	0.016

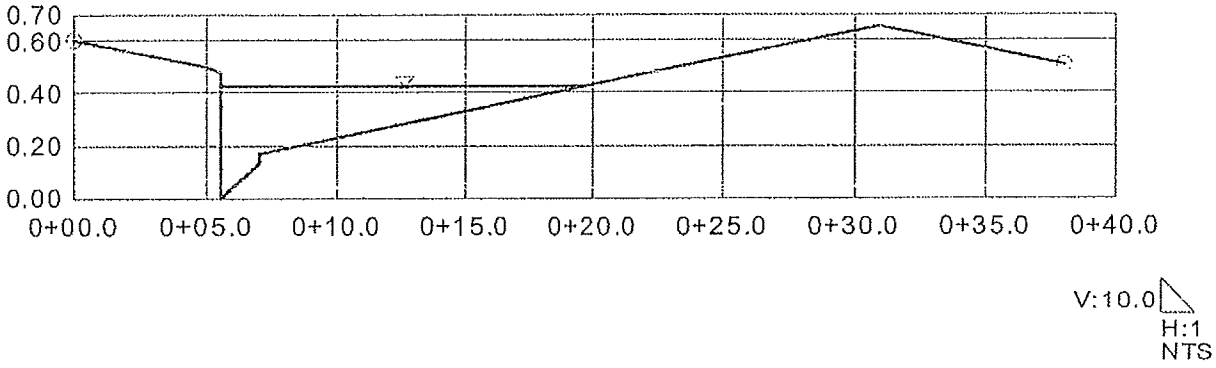
Natural Channel Points

Station (ft)	Elevation (ft)
0+00.0	0.60
0+05.0	0.50
0+05.5	0.48
0+05.5	0.00
0+07.0	0.13
0+07.0	0.17
0+31.0	0.65
0+38.0	0.51

Section 1 - Sky Pointe Drive
Cross Section for Irregular Channel

Project Description	
Worksheet	Section 1 - Sky Pointe Drive
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.016	
Channel Slope	0.80	%
Water Surface Elevation	0.42	ft
Elevation Range	0.00 to 0.65	
Discharge	5.00	cfs



Section 2 - 1/2 PT2 Flows
Worksheet for Rectangular Channel

Project Description	
Worksheet	Section 2 - Concrete Flume
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Channel Depth

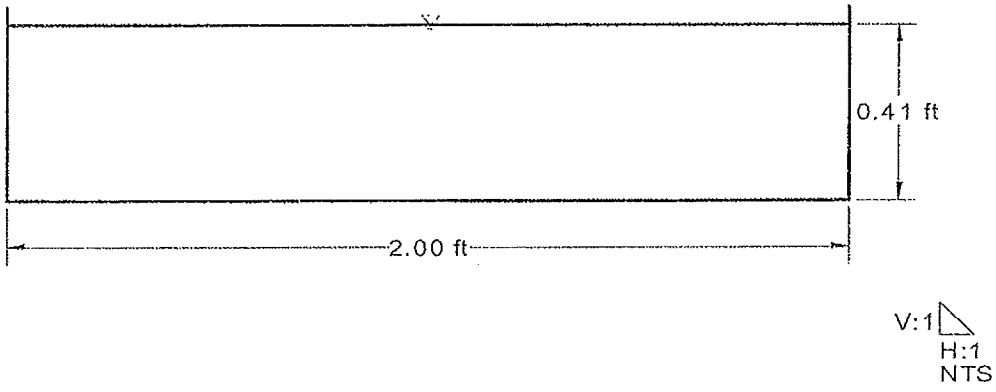
Input Data		
Mannings Coefficient	0.015	
Channel Slope	1.55	%
Bottom Width	2.00	ft
Discharge	4.50	cfs

Results		
Depth	0.41	ft
Flow Area	0.8	ft²
Wetted Perimeter	2.83	ft
Top Width	2.00	ft
Critical Depth	0.54	ft
Critical Slope	0.72	%
Velocity	5.44	ft/s
Velocity Head	0.46	ft
Specific Energy	0.87	ft
Froude Number	1.49	
Flow Type	Supercritical	

Section 2 - 1/2 PT2 Flows
Cross Section for Rectangular Channel

Project Description	
Worksheet	Section 2 - Concrete Flume
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Channel Slope	1.55	%
Depth	0.41	ft
Bottom Width	2.00	ft
Discharge	4.50	cfs



TECHNICAL DRAINAGE STUDY
ADDENDUM NO.1

Sky Pointe Plaza

City of Las Vegas, Nevada

Job No.: NIG0701.000
Date: August 2007

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

Prepared For:
Nigro Development
3965 Durango Drive, Suite 106
Las Vegas, Nevada 89147
Phone: 702-247-1920 ▪ Fax: 702-247-1916

Mark J. Failla, P.E.
NV Professional Engineer No. 14566

Assisted by: Steve Jones, E.I.

Referenced Report Excerpts

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

NIG0701.000

August 30, 2007

Albert Sung, P.E. – Flood Control Project Engineer
City of Las Vegas Department of Public Works
400 Stewart Avenue
Las Vegas, Nevada 89101

Subject: Addendum No.1 to the Technical Drainage Study for Sky Pointe Plaza – CLV No. DS4214

Dear Mr. Sung:

This letter is submitted in response to comments contained in the August 13, 2007 review memorandum prepared by the City of Las Vegas, regarding the above referenced project. The comments contained in the review memorandum have been individually addressed as follows:

1. **Comment:** *Sites with a grade difference of 2 feet above or below existing are required to have approval from the City Planning and Development Department. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the City Planning Department (229-6301). The engineer must provide Planning approval with the next submittal;*

   Response: The approval from the planning department regarding grade difference on the site has been included in the Appendix B.

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

   Response: The comment is noted. Upon conditional approval from the City of Las Vegas, the study will be submitted to CCRFCD for concurrence.

3. **Comment:** *The project is adjacent to the Nevada Department of Transportation (NDOT) right-of-way (Sky Pointe Drive). The engineer must contact NDOT for any pertinent permit for the proposed project;*

   Response: Contact has been made with NDOT and this office is no longer required to obtain an encroachment permit, because the site was turned over to Clark County in 2000.

4. **Comment:** *It is not clear whether the subject site is a portion of a commercial subdivision. If it is, provide a copy of the commercial subdivision plat map to prove it has inter-lot drainage right. If it is not a commercial subdivision and since the subject development accepts offsite flows, identify and dedicate public drainage easement(s) (privately maintained) through the site for legal passage of offsite flows. The dedication must be recorded by separate document with City of Las Vegas Right-of-Way Section prior to final approval of the drainage study;* Commercial Subdivision discussion

5740 S. Arville Street #216, Las Vegas, NV 89118 ph (702) 284-5300 fax (702) 284-5399

Commercial Subdivision discussion

Response: The commercial subdivision map showing cross lot drainage across the project site, allowing this site to accept offsite flows from the west within an existing drainage easement, has been included in Appendix C of this submittal.

5. **Comment:** *The proposed finish floor elevation of the new building meets the criteria per the 100-year street flow in Sky Pointe Drive. However, the building floor must also be set at a minimum of 18" above the 100-year water surface (WSE = 56.97) at the entrance of the 6'x2' RCB to the south. The proposed finish floor at FF = 2357.50 is not adequate. Review and revise accordingly;*

Response: The water surface elevation at 56.97 feet provides a depth of flow adjacent to the building of 0.19 feet from a flowline elevation of 56.78 feet. The established finished floor elevation of 57.50 feet is set at an elevation greater than twice the depth of flow. To prevent ponding occurring behind the building in the pool area, the TW elevation at the box culvert inlet has been raised to 57.00 feet, which is above the water surface elevation.

Per our August 21 meeting discussion, it was noted that the building is not adjacent to the drainage easement, rather there is approximately a 40-foot separation that includes the pool area. Additionally, it was shown that an overflow path to the south, away from the building, is provided. Therefore, the proposed finished floor is deemed acceptable to the CLV as shown with the original submittal. Please see revised grading plan and detail sheets in Appendix E.

FF discussion

6. **Comment:** *The daylight point of the proposed dual 24" RCP is adjacent to parking spaces in the neighboring parcel. Provide a minimum 1' stem wall along the east property line for flood protection of the adjacent parked vehicles. Revise the grading plan and the "Rear Property Grading Detail" in Sheet D-1 accordingly;*

Response: A solid grouted kneewall has been placed at the outlet of the dual 24-inch RCP along the eastern property boundary to protect flooding of parked vehicles. The kneewall has been designed to be a minimum 18-inches high, 1-foot above the flow depth. The normal depth calculation has been included in Appendix D. Please see the revised grading plan and detail sheets in Appendix E.

Easement width

7. **Comment:** *Note that a 20' wide public drainage easement (privately maintained) is required if the 100-year flow is at or greater than 20 cfs. Review and revise accordingly;*

Response: Per discussion in a meeting with you on the date of 8/21/07, a width of 10-feet (matches the existing drainage easement) is acceptable. The existing drainage easement recorded document number has been provided on the plans.

8. **Comment:** *Construction Note #11 calls out one concrete flume, however, Page 7 of the Study specifies two concrete flumes at "Discharge Point PT2". Resolve in the next submittal;*

Response: At this location, one concrete flume is proposed. The normal depth calculation showing the revised flow depth for one concrete flume has been included in Appendix D.

5740 S. Arville Street #216, Las Vegas, NV 89118 ph (702) 284-5300 fax (702) 284-5399

9. **Comment:** *Sheet D-2: Detail B: Provide detail for the headwall structure*;

   Response: The standard NDOT Detail R-2.5.1 for the headwall structure has been provided on Sheet D-2. Please see the revised detail sheet in Appendix E.

10. **Comment:** *Identify if there is any existing public drainage easement(s) (onsite and/or offsite) on the grading plan and label with dimension and City of Las Vegas recorded document number(s)*;

    Response: The existing 10-foot drainage easement, onsite and to the west on APN 125-27-410-005, has been labeled and dimensioned on the grading plan with the City of Las Vegas recorded document number. The existing 20-foot drainage easement to the east on APN 125-27-801-001 has been labeled and dimensioned on the grading plan; however, after research no City of Las Vegas recorded document number was found for this easement. The approved grading plan and approval letter for the above mentioned property showing the proposed easement has been referenced in Appendix C, verifying the easement in highlighted yellow. Please see the revised grading plan and detail sheets in Appendix E.

Existing easements

11. **Comment:** *The proposed storm drain manhole/junction is a special design structure. Provide structural calculations to the City of Las Vegas Building Department for review and approval prior to the final approval of the drainage study;*

    Response: A structural calculations supplement for the manhole structure within the onsite drainage easement has been submitted to the City of Las Vegas Building Department. This office asks for conditional approval upon the approval of the structural calculations supplement.

12. **Comment:** *Provide a note on the grading plan: "All onsite storm drain facilities are privately owned and to be privately maintained";*

    Response: The note has been added to the plans. Please see revised grading plan and detail sheets in Appendix E.

13. **Comment:** *Complete the "Flood Certification" block with drainage study number "DS4214" to replace "File Number -----";*

    Response: The drainage study number has been added to the "Flood Certification" block. Please see revised grading plan and detail sheets in Appendix E.

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If you have any questions or require additional information, please do not hesitate to contact us at 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP

Steve Jones, E.I.
Flood Control Division

pc: Mark J. Failla, SHG
Jared Bunch, SHG

5740 S. Arville Street #216, Las Vegas, NV 89118 ph (702) 284-5300 fax (702) 284-5399

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS

NIG0701.000

August 23, 2007

Steve Gebeke
City of Las Vegas
Current Planning
731 S. Fourth Street
Las Vegas, Nevada 89101

Subject: Sky Pointe Plaza

Dear Mr. Gebeke:

According to the current requirements of the City of Las Vegas Drainage Submittal Checklist, we are required to submit a grading plan to Current Planning when "...grade differences two feet above or below existing ground are required to have approval from City of Las Vegas Current Planning." Due to site grading constraints, we feel the grade difference of 2.4' above the existing ground is acceptable. We are hereby submitting this plan for your review and approval.

Should you need additional information or have questions, do not hesitate to contact me.

Very truly yours,

SLATER HANIFAN GROUP, INC.

Jared L. Bunch, P.E.

Enclosure

APPROVED
GRADE DIFFERENCE GREATER THAN 2'-0" ONLY
(SEE ALSO, ATTACHED FAX COVER SHEET)
BY _____ 083007
CURRENT PLANNING DIVISION
CITY OF LAS VEGAS

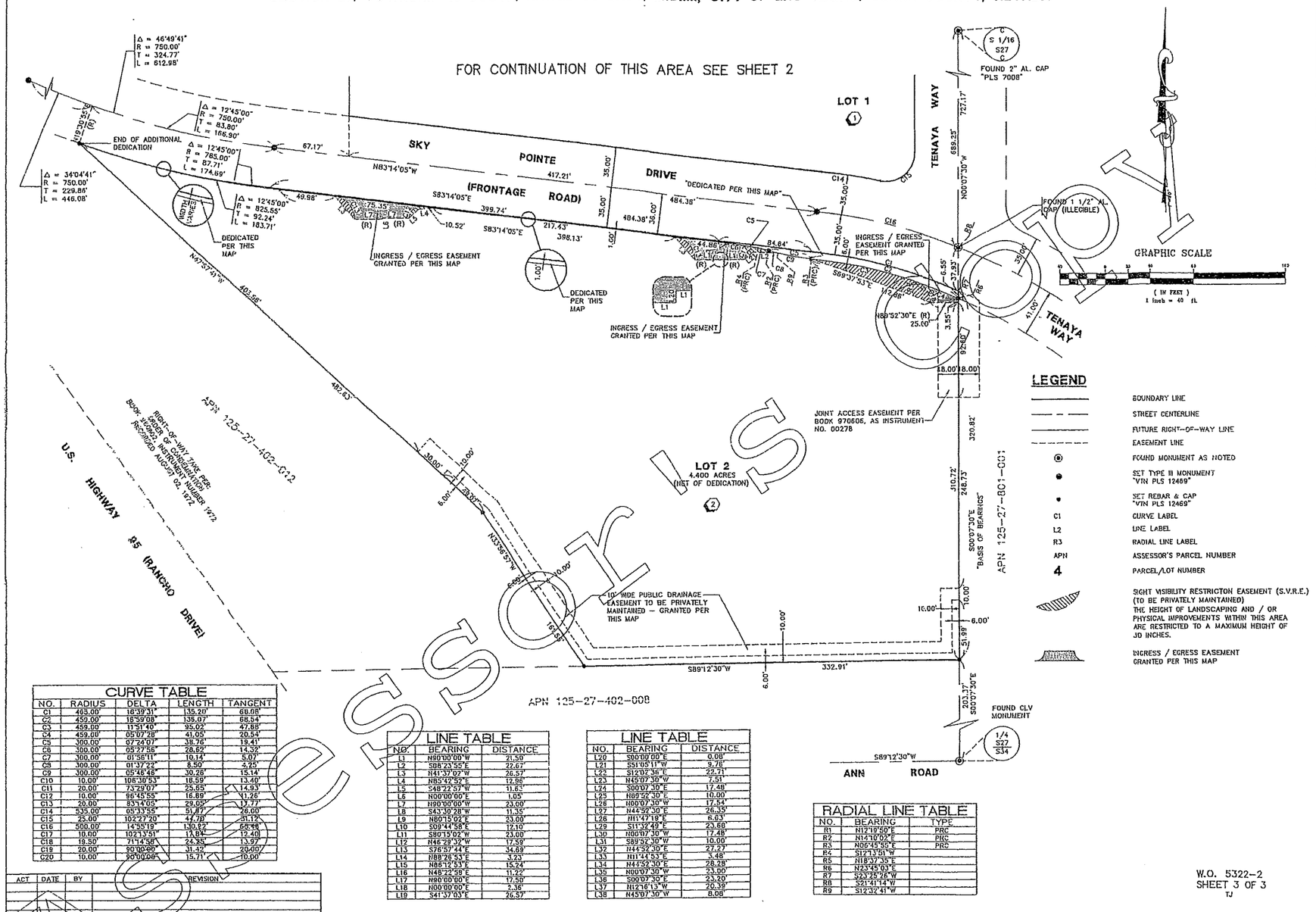
5740 S. Arville Street #216, Las Vegas, NV 89118 ph (702) 284-5300 fax (702) 284-5399

990226

00750

ANN / TENAYA

(A COMMERCIAL SUBDIVISION)
BEING A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF
SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA



LEGEND

———	BOUNDARY LINE
— — —	STREET CENTERLINE
———	FUTURE RIGHT-OF-WAY LINE
- - - - -	EASEMENT LINE
◉	FOUND MONUMENT AS NOTED
●	SET TYPE III MONUMENT "VIN PLS 12469"
•	SET REBAR & CAP "VIN PLS 12469"
C1	CURVE LABEL
L2	LINE LABEL
R3	RADIAL LINE LABEL
APN	ASSESSOR'S PARCEL NUMBER
4	PARCEL/LOT NUMBER

SIGHT VISIBILITY RESTRICTON EASEMENT (S.V.R.E.)
(TO BE PRIVATELY MAINTAINED)
THE HEIGHT OF LANDSCAPING AND / OR PHYSICAL IMPROVEMENTS WITHIN THIS AREA ARE RESTRICTED TO A MAXIMUM HEIGHT OF 30 INCHES.

INGRESS / EGRESS EASEMENT GRANTED PER THIS MAP

CURVE TABLE

NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	465.00'	16°39'31"	135.20'	68.08'
C2	459.00'	16°59'08"	136.07'	68.54'
C3	459.00'	11°51'40"	95.02'	47.68'
C4	459.00'	05°07'28"	41.05'	20.54'
C5	300.00'	07°24'07"	38.76'	19.41'
C6	300.00'	05°27'56"	28.62'	14.32'
C7	300.00'	01°56'11"	10.14'	5.07'
C8	300.00'	01°37'22"	8.50'	4.25'
C9	300.00'	05°46'48"	30.28'	15.14'
C10	10.00'	108°30'53"	18.59'	13.40'
C11	20.00'	73°29'07"	25.65'	14.93'
C12	10.00'	86°45'55"	16.89'	10.26'
C13	20.00'	83°14'05"	29.05'	17.77'
C14	535.00'	05°33'55"	51.87'	26.00'
C15	25.00'	102°27'20"	47.70'	31.12'
C16	500.00'	14°55'19"	130.62'	65.68'
C17	10.00'	102°13'51"	17.84'	12.40'
C18	19.50'	71°14'56"	24.35'	13.97'
C19	20.00'	90°00'00"	31.42'	20.00'
C20	10.00'	90°00'00"	15.71'	10.00'

ACT	DATE	BY	REVISION

LINE TABLE

NO.	BEARING	DISTANCE
L1	N90°00'00"W	21.50'
L2	S08°23'55"E	22.67'
L3	N41°37'02"W	26.57'
L4	N85°42'52"E	12.96'
L5	S48°22'57"W	11.65'
L6	N00°00'00"E	1.05'
L7	N90°00'00"W	23.00'
L8	S43°30'28"W	11.35'
L9	N80°15'02"E	23.00'
L10	S09°44'58"E	12.10'
L11	S80°15'02"W	23.00'
L12	N46°29'02"W	17.59'
L13	S76°57'44"E	34.88'
L14	N88°28'53"E	5.23'
L15	N86°12'53"E	15.24'
L16	N48°22'59"E	11.22'
L17	N90°00'00"E	17.50'
L18	N00°00'00"E	2.36'
L19	S41°37'03"E	26.57'

LINE TABLE

NO.	BEARING	DISTANCE
L20	S00°00'00"E	0.08'
L21	S51°05'11"W	9.78'
L22	S12°02'36"E	22.71'
L23	N45°07'30"W	7.51'
L24	S00°07'30"E	17.48'
L25	N89°52'30"E	10.00'
L26	N00°07'30"W	17.54'
L27	N44°52'30"E	26.35'
L28	N11°43'19"E	6.63'
L29	S11°32'49"E	23.86'
L30	N00°07'30"W	17.48'
L31	S89°52'30"W	10.00'
L32	N44°52'30"E	27.27'
L33	N11°44'53"E	3.48'
L34	N44°52'30"E	28.28'
L35	N00°07'30"W	23.00'
L36	S00°07'30"E	23.20'
L37	N12°16'13"W	20.39'
L38	N45°07'30"W	8.08'

RADIAL LINE TABLE

NO.	BEARING	TYPE
R1	N12°19'50"E	PRC
R2	N14°10'02"E	PRC
R3	N06°45'55"E	PRC
R4	S12°13'51"W	
R5	N18°37'35"E	
R6	N23°45'03"E	
R7	S23°25'26"W	
R8	S21°41'14"W	
R9	S12°32'41"W	

W.O. 5322-2
SHEET 3 OF 3
TJ

APPROVED

Book 88 Page 55

990226

00750

ANN / TENAYA

(A COMMERCIAL SUBDIVISION)

BEING A PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

CERTIFICATE OF OWNERSHIP AND EASEMENT DEDICATION

KRYFAM LIMITED PARTNERSHIP, A NEVADA LIMITED PARTNERSHIP, DOES HEREBY CERTIFY THAT IT IS THE OWNER OF THE PARCEL OF LAND WHICH IS SHOWN UPON THE PLAT OF ANN / TENAYA, A COMMERCIAL SUBDIVISION, AND DOES HEREBY CONSENT TO THE PREPARATION AND RECORDATION OF THE PLAT AND DOES HEREBY OFFER AND DEDICATE ALL PUBLIC STREETS, EASEMENTS, AND RIGHTS-OF-WAY, AS INDICATED AND OUTLINED HEREON, FOR THE USE OF THE PUBLIC; NO PART OF THE PARCELS MARKED 'NOT A PART OF THIS SUBDIVISION' IS OFFERED FOR DEDICATION.

FURTHERMORE, THE UNDERSIGNED OWNER OF THE WITHIN PLATTED LANDS DOES HEREBY GRANT AND CONVEY TO NEVADA POWER COMPANY AND SPRINT, JOINTLY AND SEVERALLY, AND TO SOUTHWEST GAS CORPORATION, LAS VEGAS VALLEY WATER DISTRICT AND COMMUNITY CABLE T.V., INC., AND TO THEIR RESPECTIVE SUCCESSORS AND ASSIGNS:

(I) A PERMANENT EASEMENT ACROSS ALL AREAS NOT OCCUPIED BY ANY BUILDING STRUCTURE FOR THE CONSTRUCTION, MAINTENANCE, OPERATION, AND FINAL REMOVAL OF STREET LIGHTS AND FIRE HYDRANTS, AND UNDERGROUND POWER, TELEPHONE, GAS, WATER, AND CABLE T.V. LINES AND APPURTENANCES, AND FOR ABOVE GROUND TRANSFORMER PADS AND TELEPHONE EQUIPMENT PADS, TOGETHER WITH THE RIGHT OF INGRESS THERETO AND EGRESS THEREFROM.

FURTHER, THE UNDERSIGNED OWNER HEREBY GRANTS AND CONVEYS TO THE CITY OF LAS VEGAS AND TO ITS SUCCESSORS AND ASSIGNS: (I) A FIVE FOOT WIDE EASEMENT ADJACENT TO ALL PROPERTY LINES WHERE LOTS ABUT PUBLIC STREETS FOR PURPOSES OF PLACING PUBLIC FIRE HYDRANTS AND PUBLIC STREETLIGHTS; (II) AN ADDITIONAL EASEMENT OF UP TO TWO FEET IN RADIUS FROM EACH FIRE HYDRANT AND STREETLIGHT, TO EXTEND BEYOND THE FIVE-FOOT EASEMENT, IF NECESSARY, TOGETHER WITH THE RIGHT OF INGRESS TO AND EGRESS FROM THESE EASEMENTS.

KRYFAM LIMITED PARTNERSHIP, A NEVADA LIMITED PARTNERSHIP, BY:

Wayne Krygier — 11-12-98
DATE

OFFICIAL SEAL
DANIELLE LAMOTHE
Notary Public - State of Nevada
My Comm. Expires July 10, 1999
No. 93-0040-1

ACKNOWLEDGEMENT

STATE OF NEVADA)
COUNTY OF CLARK) SS

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON November 12, 1998 BY Wayne Krygier AS President OF KRYFAM LIMITED PARTNERSHIP, A NEVADA LIMITED PARTNERSHIP.

Danielle Lamothe
NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE
MY COMMISSION EXPIRES July 10, 1999.

CERTIFICATE OF EASEMENT RECIPIENTS

WE, THE HEREIN NAMED EASEMENT RECIPIENTS, APPROVE THE GRANT OF THE DESIGNATED EASEMENTS.

Yolanda M. Benito — 11-17-98
NEVADA POWER COMPANY - YOLANDA M. BENITO — DATE

11/23/98
SPRINT - DEAN T. WHITMAN — DATE

11/12/98
SOUTHWEST GAS CORPORATION - CLARK G. MCCARRELL, JR. — DATE

11-13-98
LAS VEGAS VALLEY WATER DISTRICT - GARY LAMKE — DATE

11/12/98
COMMUNITY CABLE T.V. - LARRY NORMAN — DATE

2-23-99
CITY OF LAS VEGAS - CHARLES KRJKOWSKI JR. — DATE

COUNTY RECORDER'S NOTE

ANY SUBSEQUENT CHANGES TO THIS MAP SHOULD BE EXAMINED AND MAY BE DETERMINED BY REFERENCE TO THE COUNTY RECORDER'S CUMULATIVE INDEX. N.R.S. 278.5695

CITY SURVEYOR'S CERTIFICATE

I, RITA M. LUMOS, CITY SURVEYOR FOR THE CITY OF LAS VEGAS, DO HEREBY CERTIFY THAT I HAVE EXAMINED THE FINAL COMMERCIAL SUBDIVISION MAP OF ANN / TENAYA, AND AM SATISFIED THAT THE MAP IS TECHNICALLY CORRECT. MONUMENTS HAVE NOT BEEN SET, BUT A PROPER FINANCIAL GUARANTEE HAS BEEN DEPOSITED TO GUARANTEE THEIR SETTING ON OR BEFORE 3-2-2000

Rita M. Lumos — 2/26/99
RITA M. LUMOS, P.L.S.
CITY OF LAS VEGAS SURVEYOR
NEVADA CERTIFICATE NO. 5094

CITY OF LAS VEGAS — SURVEYOR — PUBLIC WORKS — NEVADA

LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING PARCEL 3-2 PARCEL MAP: FILE 87, PAGE 61, TOGETHER WITH PARCEL 4 OF PARCEL MAP: FILE 81, PAGE 97, ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA IN THEIR RESPECTIVE FILES OF PARCEL MAPS, AT THEIR RESPECTIVE PAGES.

EXCEPTING THEREFROM THAT PORTION OF LAND CONDEMNED BY A FINAL ORDER OF CONDEMNATION, RECORDED AUGUST 2, 1996 IN BOOK 960802 AS DOCUMENT NO. 1972 OF OFFICIAL RECORDS.

CONTAINING 4.43 ACRES FOR PARCEL 4 AND 6.97 ACRES FOR PARCEL 3-2, WITH A 11.40 ACRES TOTAL, MORE OR LESS AS DETERMINED BY COMPUTER METHODS.

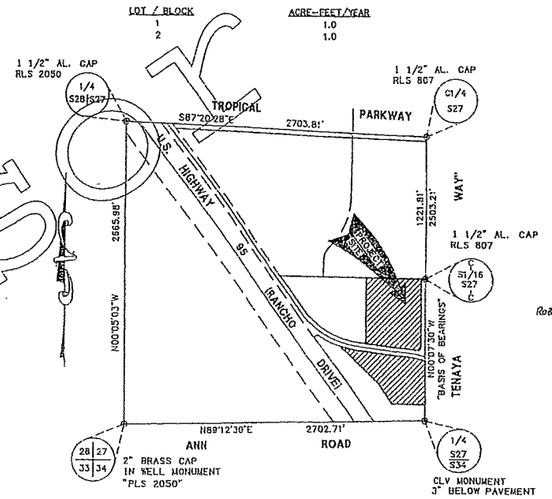
BASIS OF BEARINGS

NORTH 00°07'30" WEST — BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN BY A MAP ON FILE IN THE OFFICE OF THE COUNTY RECORDER IN FILE 79 OF PARCEL MAPS, AT PAGE 15.

WATER COMMITMENT:

RECORDATION OF THIS SUBDIVISION MAP ESTABLISHES A LIMITED WATER COMMITMENT FROM THE LAS VEGAS VALLEY WATER DISTRICT AS FOLLOWS:

LOT / BLOCK	ACRE-FEET/YEAR
1	1.0
2	1.0



SURVEY ANALYSIS
NOT TO SCALE

SURVEYOR'S CERTIFICATE

I, ALAN R. RIEKKI, A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF NEVADA, AS AN AGENT FOR VTN NEVADA, CERTIFY THAT:

1. THIS PLAT REPRESENTS THE RESULTS OF A SURVEY CONDUCTED UNDER MY DIRECT SUPERVISION AT THE INSTANCE OF KRYFAM LIMITED PARTNERSHIP, A NEVADA LIMITED PARTNERSHIP.
2. THE LANDS SURVEYED LIE WITHIN A PORTION OF THE SE 1/4 OF THE SW 1/4 OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AND THE SURVEY WAS COMPLETED ON 11/7/97.
3. THIS PLAT COMPLIES WITH THE APPLICABLE STATE STATUTES AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE GOVERNING BODY GAVE ITS FINAL APPROVAL.
4. THE MONUMENTS DEPICTED ON THIS PLAT WILL BE OF THE CHARACTER SHOWN AND OCCUPY THE POSITIONS INDICATED BY 3-2-2000 AND AN APPROPRIATE FINANCIAL GUARANTEE WILL BE POSTED WITH THE GOVERNING BODY BEFORE RECORDATION TO ASSURE THE INSTALLATION OF MONUMENTS.

ALAN R. RIEKKI, P.L.S.
NEVADA LICENSE NO. 12469

ALAN R. RIEKKI — NEVADA — 12469 — PLS — LAND SURVEYOR — STATE OF NEVADA

10/19/98

DISTRICT BOARD OF HEALTH CERTIFICATE

THIS FINAL MAP IS APPROVED BY THE CLARK COUNTY DISTRICT BOARD OF HEALTH. THIS APPROVAL CONCERNS SEWAGE DISPOSAL, WATER POLLUTION, WATER QUALITY, AND WATER SUPPLY FACILITIES AND IS PREDICATED UPON PLANS FOR A PUBLIC WATER SUPPLY AND COMMUNITY SYSTEM FOR DISPOSAL OF SEWAGE.

S. Robert Yager — 2-4-99
DISTRICT BOARD OF HEALTH - S. Robert Yager — DATE

DIVISION OF WATER RESOURCES CERTIFICATE

THIS FINAL MAP IS APPROVED BY THE DIVISION OF WATER RESOURCES OF THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES CONCERNING WATER QUANTITY SUBJECT TO THE REVIEW OF APPROVAL ON FILE IN THIS OFFICE.

1-28-99
DIVISION OF WATER RESOURCES - ROBERT COACHE, P.E. — DATE

CERTIFICATE OF PLANNING COMMISSION/ DIRECTOR OF PLANNING AND DEVELOPMENT APPROVAL

I CERTIFY THAT THIS FINAL MAP SUBSTANTIALLY COMPLIES WITH THE TENTATIVE MAP AND ANY APPROVED ALTERATIONS THERETO; THAT THE MAP COMPLIES WITH APPLICABLE STATUTORY AND ORDINANCE PROVISIONS; THAT ALL CONDITIONS IMPOSED UPON THE FINAL MAP HAVE BEEN MET; AND THAT THE MAP WAS APPROVED AND THE PARCELS HEREIN WERE ACCEPTED BY THE PLANNING COMMISSION OF THE CITY OF LAS VEGAS, NEVADA, ON THE 3rd DAY OF DECEMBER 1998.

ROBERT S. GENZER FOR THERESA A. O'DONNELL
DIRECTOR OF PLANNING AND DEVELOPMENT AND SECRETARY OF THE PLANNING COMMISSION
CITY OF LAS VEGAS

2/25/99
DATE

W.O. 5322-2
SHEET 1 OF 3

FM-99-98

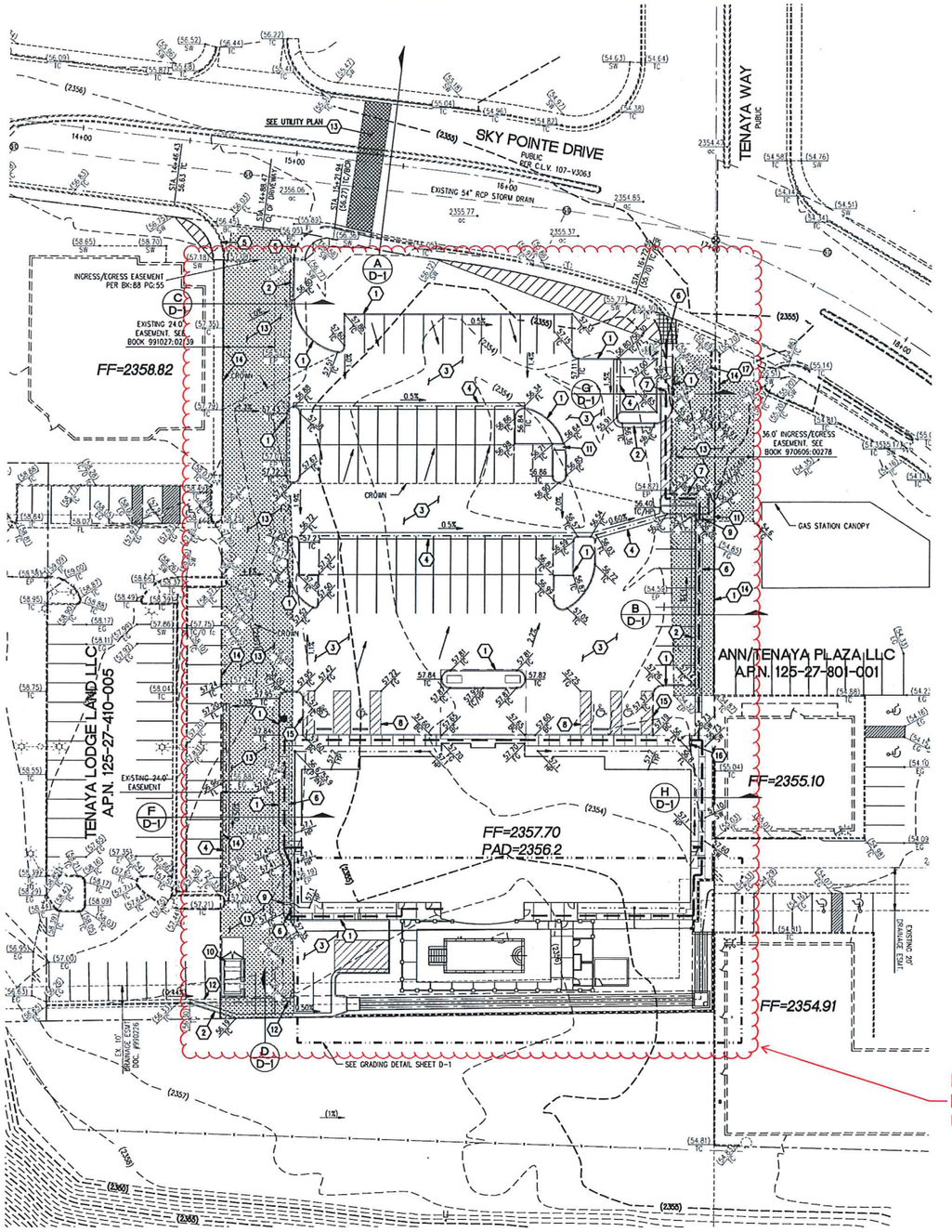
NO. 00750

FILED AT THE REQUEST OF :
VTN nevada
DATED 2-26-99 AT 08:32 H
BOOK 88 PAGE 55
OF PLATS
OFFICIAL RECORDS BOOK NO. 990226
CLARK COUNTY, NEVADA RECORDS
JUDITH A. VANDEVER, RECORDER
FEE $ 35.70 DEPUTY PAA

Book 88 Page 55

ASSESSOR'S COPY

Referenced Relevant Sheets



Plan is similiar but building and grading have been revised and SD replaced with U-channel









LIST OF ABBREVIATIONS

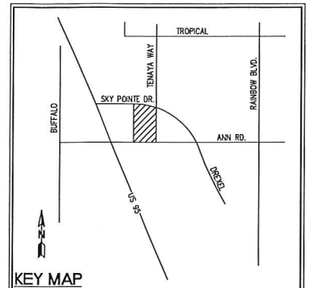
AC	ASPHALTIC CONCRETE
CCAUSD	CLARK COUNTY AREA STANDARD DRAWINGS
CE	COMMON ELEMENT
CL	CENTER LINE
EP	EDGE OF PAVEMENT
FG	FINISH GRADE
FL	FLOW LINE
GB	GRADE BREAK
HP	HIGH POINT
LE	LANDSCAPE EASEMENT
LF	LINEAR FEET
LP	LOW POINT
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
OS	OPEN SPACE
PAE	PED. ACCESS EASEMENT
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PL	PROPERTY LINE
ROW	RIGHT OF WAY
R/W	RIGHT OF WAY
SDMH	STORM DRAIN MANHOLE
STA	STATION
TC	TOP OF CURB
THW	TOP OF HEADWALL
TRW	TOP OF RETAINING WALL
TW	TOP OF WALL
VC	VERTICAL CURVE
SW	EXISTING SIDEWALK

LEGEND

- RIGHT-OF-WAY LINE
- CENTERLINE
- RETAINING WALL
- (2870) EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- SIGHT VISIBILITY RESTRICTION ZONE: NO STRUCTURE, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES (MEASURED FROM TOP OF THE ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.
- T NEVADA POWER TRANSFORMER
- HANDICAP PARKING SYMBOL
- SAWCUT AREA
- HANDICAP ACCESS PATH AND LOADING AREAS
- ROW DEDICATION
- (57.05) EXISTING ELEVATION
- 57.05 PROPOSED ELEVATION
- 2575 PROPOSED FINISH GRADE CONTOUR

NOTE:

ALL ONSITE STORM DRAIN FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED.



KEY MAP
NO SCALE

FLOOD ZONE:

PROJECT IS LOCATED WITHIN A FEMA ZONE X (AREA OF 0.2% CHANCE OF ANNUAL FLOOD) PER FIRM PANEL 32003C1745E DATED 9/27/02.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. BLV90 34NES

BEING A RIVET AND PLATE IN TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

ELEVATION – 708.825 (METERS) / 2325.54 (U.S. SURVEY FEET)
NORTH AMERICAN VERTICAL DATUM OF 1988

BASIS OF BEARING

NORTH 00°07'30" WEST, BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PLAT MAP, BOOK 88, PAGE 55 ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

GEOTECHNICAL REPORT

PREPARED BY:
PREPARED FOR: NGRO DEVELOPMENT
PREPARED ON:
PROJECT NO.:

CONSTRUCTION NOTES

1. CONSTRUCT 6" "A" TYPE CURB PER DETAIL "E" ON SHEET D-1
2. CONSTRUCT "L" CURB GUTTER PER CCAUSD #216
3. CONSTRUCT 3" AC OVER 6" TYPE II AGGREGATE BASE OVER 12" STRUCTURAL FILL. SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS
4. CONSTRUCT 3' VALLEY GUTTER PER DETAIL "J" ON SHEET D-1
5. EXISTING CURB, GUTTER & SIDEWALK TO REMAIN
6. CONSTRUCT SIDEWALK PER CCAUSD #234
7. CONSTRUCT SIDEWALK RAMP PER DETAIL "L" ON SHEET D-1
8. HANDICAP LOADING AREA AND ACCESS PATH
9. CONSTRUCT SIDEWALK UNDERDRAIN PER CCAUSD 236
10. TRASH ENCLOSURE PER ARCHITECTURAL PLANS
11. CONSTRUCT 2' WIDE CONC. FLUME PER DETAIL "K" ON D-1
12. REMOVE AND REPLACE CURB AND GUTTER, AS SHOWN
13. SAWCUT EXISTING AC PAVEMENT, LIMITS & THICKNESS OF PATCH TO BE DETERMINED IN THE FIELD BY A CLV INSPECTOR.
14. FIELD ADJUST TO MATCH EXISTING AC PAVEMENT
15. TRANSITION A-CURB FROM 6" FACE TO 0" FACE
16. INSTALL SIDEWALK CROSS DRAIN PER DETAIL "M" ON D-1
17. CONSTRUCT MEDIAN ISLAND CURB PER CCAUSD #219

FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED FLOOD STUDY ON FILE AT THE CITY OF LAS VEGAS FOR THE SUBJECT PROJECT (FILE NUMBER DS4214)

JARED L. BUNCH, P.E. 17526 — DATE

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.

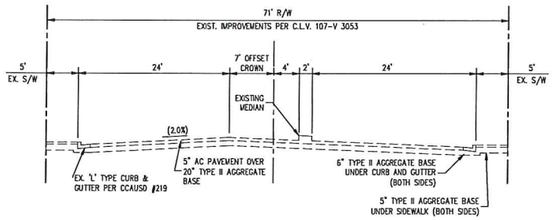
NIGRO DEVELOPMENT
SKY POINTE PLAZA
GRADING PLAN

DATE: 10/08/07
DRAFTER: TND
DESIGNER: JLB
CHECKED: JLB
PROJECT NO.
NIG0701.0

PROFESSIONAL ENGINEER - STATE OF NEVADA
JARED L. BUNCH
Exp. 12/31/2008
CIVIL
No. 017526

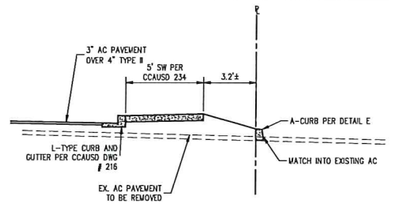
G-1
SHEET 3 OF 7

I:\nig0701\dwg\Tmpnrv\Nig0701-d1.dwg 10/8/2007 11:03 AM TAMARA DOLSON



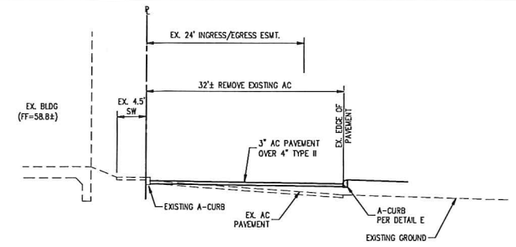
71' EXSTING ROW SKY POINTE DRIVE (A)

NOT TO SCALE



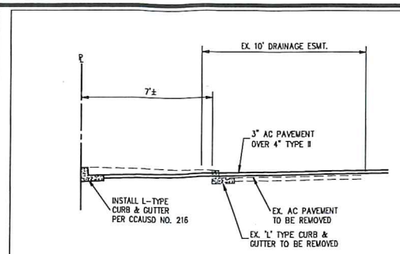
EAST SIDE PROPERTY LINE SECTION (B)

NOT TO SCALE



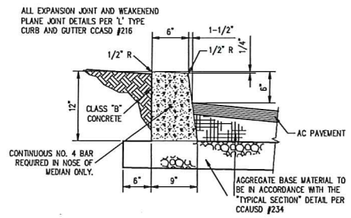
WEST SIDE PROPERTY LINE SECTION (C)

NOT TO SCALE



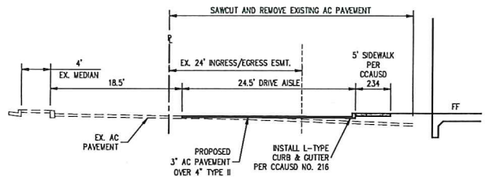
REAR PROPERTY LINE SECTION (D)

NOT TO SCALE



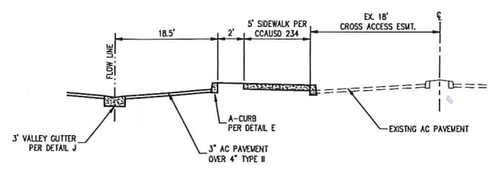
6" TYPE "A" CURB (E)

NOT TO SCALE



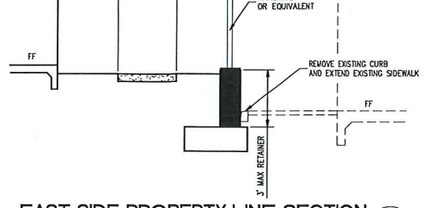
WEST SIDE PROPERTY LINE SECTION (F)

NOT TO SCALE



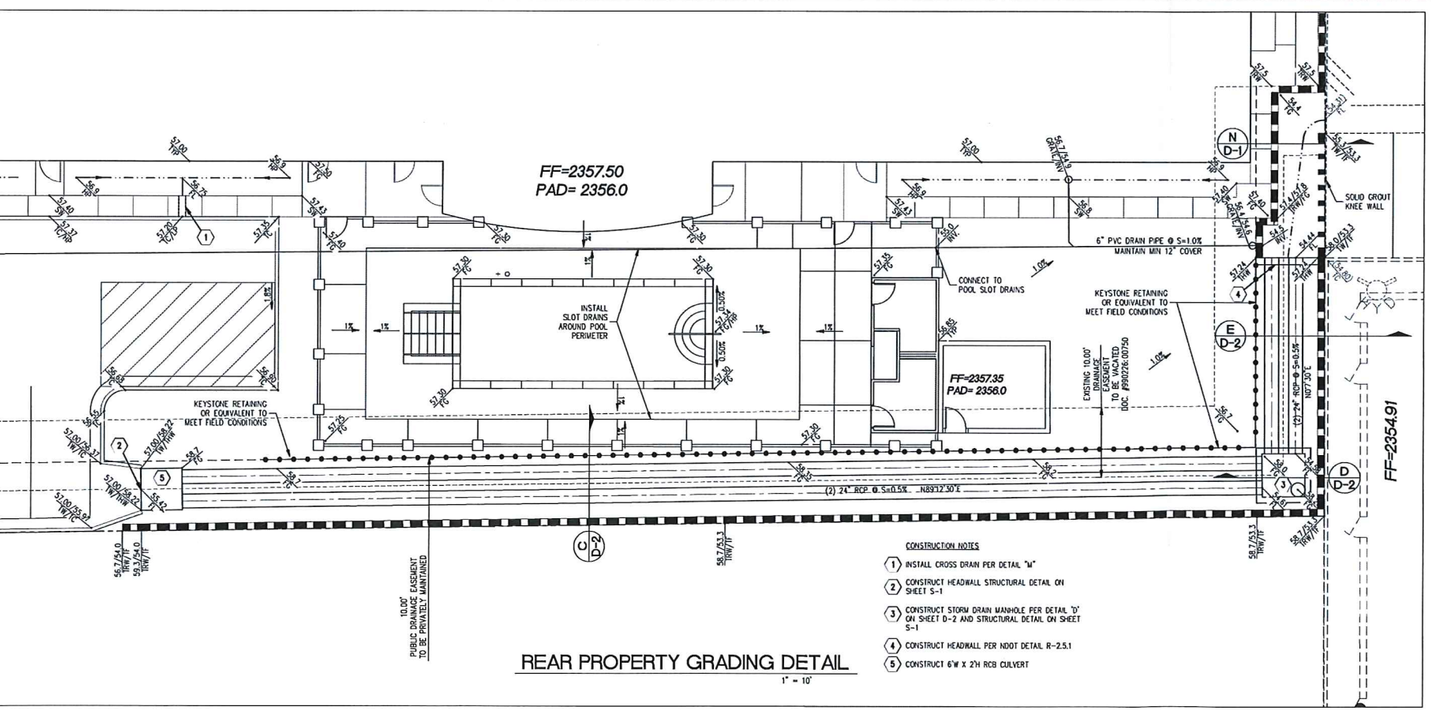
EAST SIDE PROPERTY LINE SECTION (G)

NOT TO SCALE



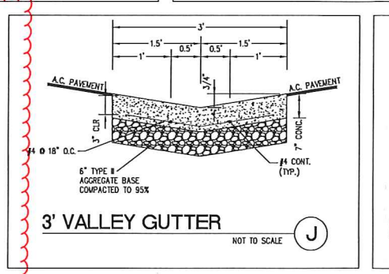
EAST SIDE PROPERTY LINE SECTION (H)

NOT TO SCALE



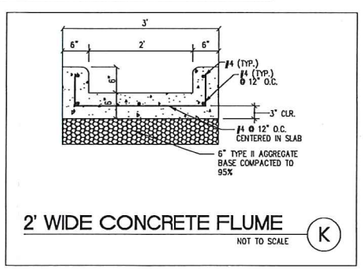
REAR PROPERTY GRADING DETAIL

1" = 10'



3' VALLEY GUTTER (J)

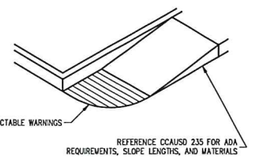
NOT TO SCALE



2' WIDE CONCRETE FLUME (K)

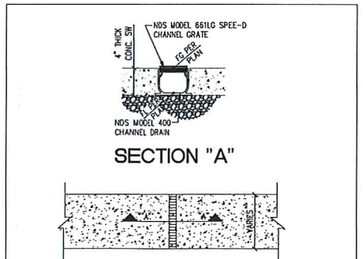
NOT TO SCALE

NOTE:
THE DETAILS ON THIS SHEET ARE MINIMUM ADA STANDARDS THAT MUST BE COMPLIED WITH. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY DETAILS ON THE CIVIL PLANS THAT DO NOT COMPLY WITH THE MINIMUM ADA AND CLV STANDARDS SHOWN HEREON.



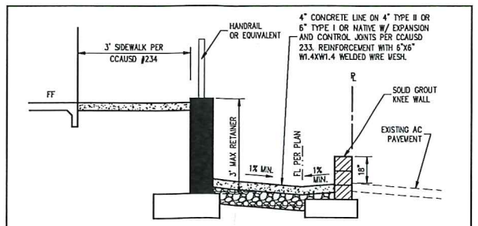
ONSITE SIDEWALK RAMP (L)

NOT TO SCALE



CROSS DRAIN DETAIL (M)

NOT TO SCALE



EAST SIDE PROPERTY LINE SECTION (N)

NOT TO SCALE

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

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

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 254-5300 FAX (702) 254-5399

NO.	DESCRIPTION	DATE	BY	APP.

NIGRO DEVELOPMENT

SKY POINTE PLAZA

SECTIONS AND DETAILS

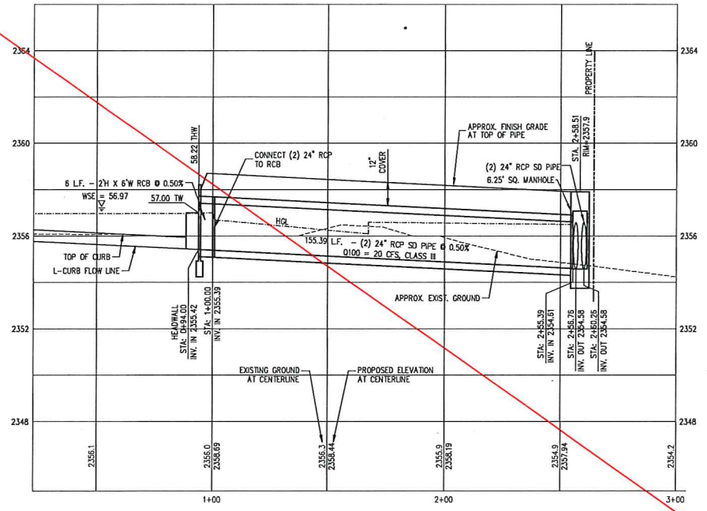
DATE: 10/08/07
DRAFTER: TND
DESIGNER: JLB
CHECKED: JLB

PROJECT NO.
NIG0701.0

PROFESSIONAL ENGINEER - STATE OF NEVADA
JARED L. BUNCH
Exp. 12/31/2008
CIVIL
No. 017526

D-1
SHEET 4 OF 7

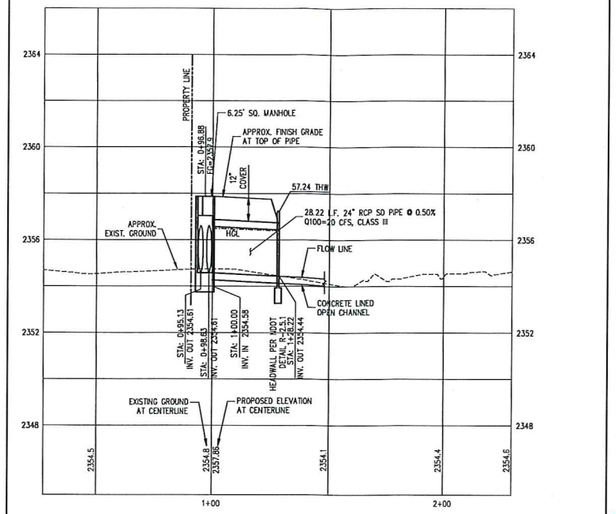
J:\nig0701\dwg\Improv\nig0701-d1.dwg 10/8/2007 11:42 AM TIMOTHY DOLSON



PROFILE

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

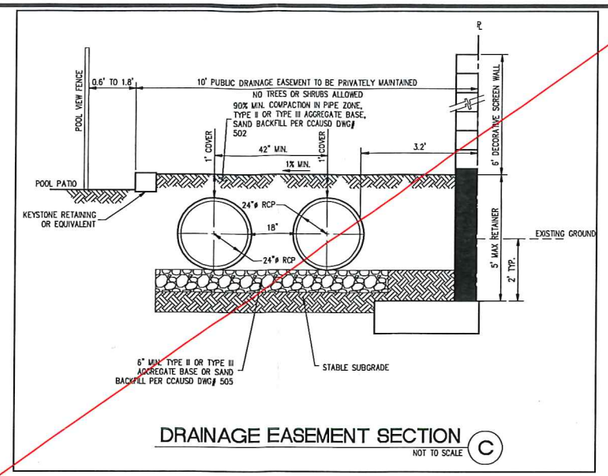
(2) 24" RCP STORM DRAIN PIPE PROFILE (A)



PROFILE

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

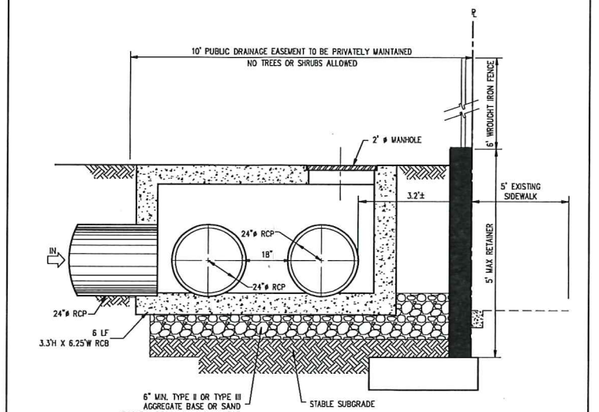
(2) 24" RCP STORM DRAIN PIPE PROFILE (B)



DRAINAGE EASEMENT SECTION (C)

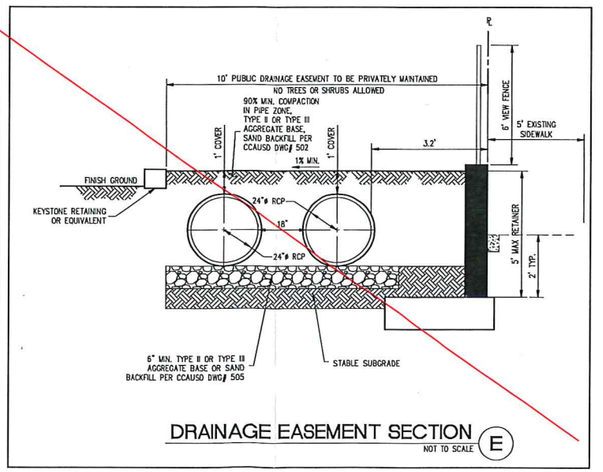
NOT TO SCALE

Storm Drain replaced with u-channel -
U-channel detail sections this sheet instead



MANHOLE / JUNCTION SECTION

NOT TO SCALE (D)



DRAINAGE EASEMENT SECTION (E)

NOT TO SCALE

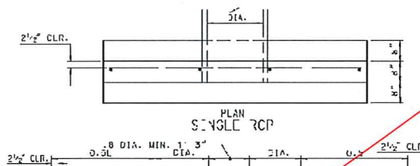
QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS.

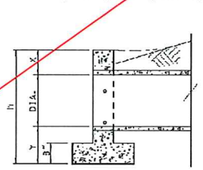
RCP SIZE DIA.	RCP AREA SQ.FT.	SINGLE RCP 0° SKEW CONC. CU. YD.	0° SKEW STEEL LB.	15° SKEW CONC. CU. YD.	15° SKEW STEEL LB.	30° SKEW CONC. CU. YD.	30° SKEW STEEL LB.	45° SKEW CONC. CU. YD.	45° SKEW STEEL LB.	DOUBLE RCP 0° SKEW CONC. CU. YD.	0° SKEW STEEL LB.	15° SKEW CONC. CU. YD.	15° SKEW STEEL LB.	30° SKEW CONC. CU. YD.	30° SKEW STEEL LB.	45° SKEW CONC. CU. YD.	45° SKEW STEEL LB.	X	Y	L	h
12"	0.79	1.00	46	1.03	49	1.10	52	1.14	55	1.41	59	1.52	62	1.58	64	1.72	67	0'-0"	1'-2"	4'-2"	3'-0"
15"	1.23	1.32	55	1.45	58	1.47	55	1.52	60	1.80	70	1.93	73	2.01	75	2.16	79	0'-0 1/4	1'-2 1/4"	3'-3"	3'-3 1/2"
18"	1.77	1.62	65	1.77	73	1.80	74	1.93	75	2.15	85	2.31	93	2.40	91	2.60	96	0'-0 1/2"	1'-2 1/2"	3'-3"	3'-3"
21"	2.41	1.95	77	2.13	82	2.16	83	2.23	85	2.59	95	2.79	105	2.90	102	3.12	108	0'-0 3/4"	1'-2 3/4"	3'-6"	3'-10 1/2"
24"	3.14	2.27	96	2.48	102	2.52	103	2.60	100	3.01	116	3.24	122	3.37	125	3.64	131	0'-1"	1'-3"	3'-9"	4'-2"
27"	3.98	2.62	106	2.86	111	2.90	115	2.98	111	3.48	126	3.74	141	3.89	137	4.21	141	0'-1"	1'-3"	3'-11"	4'-5"
30"	4.91	3.08	117	3.37	123	3.41	124	3.51	121	4.07	141	4.38	148	4.55	152	4.90	159	0'-1 1/2"	1'-3 1/2"	4'-0"	4'-7"
33"	5.94	3.50	125	3.82	132	3.87	134	3.98	131	4.62	153	4.98	163	5.17	164	5.56	172	0'-1 3/4"	1'-3 3/4"	4'-2"	4'-9"
36"	7.07	3.93	161	4.29	169	4.34	171	4.47	174	5.19	190	5.59	205	5.80	204	6.24	213	0'-2"	1'-4"	4'-3"	5'-0"

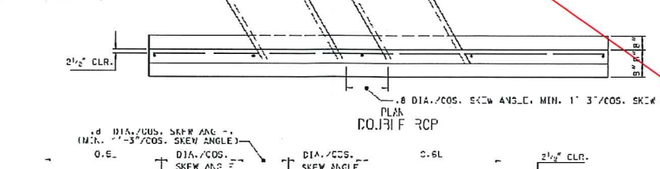
QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL.

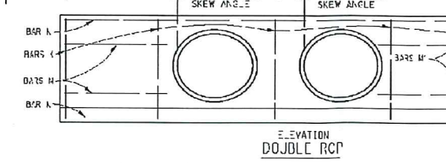
LENGTH OF REINFORCING BARS

RCP SIZE DIA.	SINGLE RCP 0° SKEW W	0° SKEW N	15° SKEW W	15° SKEW N	30° SKEW W	30° SKEW N	45° SKEW W	45° SKEW N	SKEW DOUBLE RCP 0° SKEW W	0° SKEW N	15° SKEW W	15° SKEW N	30° SKEW W	30° SKEW N	45° SKEW W	45° SKEW N	DOUBLE RCP 0° SKEW W	0° SKEW N	15° SKEW W	15° SKEW N	30° SKEW W	30° SKEW N	45° SKEW W	45° SKEW N
12"	6'0"-6"	2'6"-6"	6'1"-6"	2'6"-6"	6'3"-0"	2'6"-6"	6'5"-7"	2'6"-6"	6'0"-7"	1'3"-5"	6'0"-1"	1'3"-5"	6'0"-1"	1'3"-5"	6'0"-1"	1'3"-5"	7'0"-9"	2'0"-6"	7'0"-6"	2'0"-6"	7'0"-6"	2'0"-6"	7'0"-11"	2'0"-6"
15"	6'0"-1"	2'6"-0"	6'0"-6"	2'6"-8"	6'0"-8"	2'6"-8"	6'2"-0"	2'6"-8"	6'0"-1"	1'3"-1"	6'0"-1"	1'3"-1"	6'0"-1"	1'3"-1"	6'0"-1"	1'3"-1"	7'0"-1"	2'0"-5"	7'0"-1"	2'0"-5"	7'0"-1"	2'0"-5"	7'0"-5"	2'0"-5"
18"	6'0"-1"	2'6"-0"	6'0"-3"	2'6"-5"	6'0"-3"	2'6"-5"	6'2"-0"	2'6"-5"	6'0"-1"	1'3"-2"	6'0"-1"	1'3"-2"	6'0"-1"	1'3"-2"	6'0"-1"	1'3"-2"	7'0"-3"	2'0"-5"	7'0"-3"	2'0"-6"	7'0"-3"	2'0"-6"	7'0"-7"	2'0"-6"
21"	6'0"-3"	2'6"-0"	6'0"-5"	2'6"-5"	6'0"-5"	2'6"-5"	6'2"-0"	2'6"-5"	6'0"-1"	1'3"-3"	6'0"-1"	1'3"-3"	6'0"-1"	1'3"-3"	6'0"-1"	1'3"-3"	7'0"-5"	2'0"-5"	7'0"-5"	2'0"-5"	7'0"-5"	2'0"-5"	7'0"-9"	2'0"-5"
24"	6'0"-5"	2'6"-0"	6'0"-8"	2'6"-10"	6'1"-0"	2'6"-10"	6'3"-1"	2'6"-10"	6'0"-1"	1'3"-4"	6'0"-1"	1'3"-4"	6'0"-1"	1'3"-4"	6'0"-1"	1'3"-4"	7'0"-7"	2'0"-5"	7'0"-7"	2'0"-5"	7'0"-7"	2'0"-5"	7'0"-11"	2'0"-5"
27"	6'0"-7"	2'6"-0"	6'0"-10"	2'6"-11"	6'1"-2"	2'6"-11"	6'3"-3"	2'6"-11"	6'0"-1"	1'3"-5"	6'0"-1"	1'3"-5"	6'0"-1"	1'3"-5"	6'0"-1"	1'3"-5"	7'0"-9"	2'0"-5"	7'0"-9"	2'0"-5"	7'0"-9"	2'0"-5"	7'1"-1"	2'0"-5"
30"	6'0"-9"	2'6"-0"	6'1"-0"	2'6"-11"	6'1"-4"	2'6"-11"	6'3"-5"	2'6"-11"	6'0"-1"	1'3"-6"	6'0"-1"	1'3"-6"	6'0"-1"	1'3"-6"	6'0"-1"	1'3"-6"	7'0"-11"	2'0"-5"	7'0"-11"	2'0"-5"	7'0"-11"	2'0"-5"	7'1"-3"	2'0"-5"
33"	6'0"-10"	2'6"-0"	6'1"-2"	2'6"-11"	6'1"-6"	2'6"-11"	6'3"-7"	2'6"-11"	6'0"-1"	1'3"-7"	6'0"-1"	1'3"-7"	6'0"-1"	1'3"-7"	6'0"-1"	1'3"-7"	7'1"-1"	2'0"-5"	7'1"-1"	2'0"-5"	7'1"-1"	2'0"-5"	7'1"-5"	2'0"-5"
36"	6'0"-11"	2'6"-0"	6'1"-4"	2'6"-11"	6'1"-8"	2'6"-11"	6'3"-9"	2'6"-11"	6'0"-1"	1'3"-8"	6'0"-1"	1'3"-8"	6'0"-1"	1'3"-8"	6'0"-1"	1'3"-8"	7'1"-3"	2'0"-5"	7'1"-3"	2'0"-5"	7'1"-3"	2'0"-5"	7'1"-7"	2'0"-5"









GENERAL NOTES:

1. CONCRETE SHALL BE CLASS A OR AA.
2. REINFORCING STEEL SHALL BE DEFORMED BARS WITH MAXIMUM SPACING OF 6" SET 2 1/2" CLEAR OF SURFACE OF CONCRETE EXCEPT AS NOTED. BAR ENDS SHALL BE KEPT 1 1/2" CLEAR OF SURFACE OF CURBRAIL. HEADING BARS MAY BE CUT AND BENT IN FIELD.
3. DIMENSIONS SHOWN ARE TO MINIMUM END SEAL OR EXTERIOR FACE OF PIPE IS INSULIN - OR LION IS SEEN.
4. CULVERT PIPES TO BE SET ON A SKEW SHALL BE MITERED WHEN HEADWALLS ARE CONSTRUCTED. WHEN HEADWALLS ARE NOT CONSTRUCTED THE PIPES SHALL NOT BE MITERED EXCEPT IN OVERFLOW SECTION.
5. FOR ESTIMATING HEADWALL QUANTITIES ON SKEWED CULVERTS:
   0° to 10°--USE QUANTITIES FOR 0° SKEW.
   11° to 25°--USE QUANTITIES FOR 15° SKEW.
   26° to 40°--USE QUANTITIES FOR 30° SKEW.
   41° to 55°--USE QUANTITIES FOR 45° SKEW.
   OVER 55°--CALCULATE QUANTITIES REQUIRED.
   CULVERTS SHOULD BE INSTALLED ON 5° INCREMENTS WHERE IT IS PRACTICAL.
6. DIMENSIONS X, Y, L, AND h TO REMAIN CONSTANT REGARDLESS OF MINOR VARIATIONS IN WALL THICKNESS DUE TO CLASS OF PIPE USED.

NEVADA DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
12" RCP TO 36"RCP

Signed Original On File R 2.5.1 (502)
CHIEF HYDRAULICS ENGINEER ADOPTED 8/69 REVISED 10/94

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

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.

NIGRO DEVELOPMENT

SKY POINTE PLAZA

STORM DRAIN DETAILS AND SECTIONS

DATE: 10/08/07
DRAFTER: TND
DESIGNER: JLB
CHECKED: JLB

PROJECT NO.
NIG0701.0

PROFESSIONAL ENGINEER - STATE OF NEVADA
JARED L. BUNCH
Exp. 12/31/2008
CIVIL
No. 017535

D-2
SHEET 5 OF 7

J:\Nig0701\Cad\Version\Nig0701-dt.dwg 10/8/2007 11:02 AM TAMARA DOSON

APPENDIX E

US-95 Plan Sheets

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(061)	CLARK	D2

(1) "CDSB" 21+36 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE) 38.7' LT (GRATE ELEV. = 2359.82', H = 2.50'). INSTALL 15"x70' RCP (UIE = 2357.32', LIE = 2356.98'). CONNECT TO TYPE 2 DROP INLET (DOUBLE GRATE) "CDSB" 20+66, 39.6' LT. (SEE SHEET DP1)

(2) "CDSB" 21+68 / "CDSB" 22+07 — CONSTRUCT V-DITCH FROM "CDSB" 22+07, 53.6' LT (IE = 2357.61') TO "CDSB" 21+68, 76.4' LT (IE = 2357.44'). (SS = 3:1, H = 1.5')

(3) "XS1e" 135+70 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE) 17.0' LT (GRATE ELEV. = 2362.02', H = 2.93'). INSTALL 15"x52' RCP (UIE = 2359.09') OUTLETTING TO "XS1e" 135+70, 68.5' LT. (LIE = 2358.86'). INSTALL PRECAST END SECTION AT OUTLET. CONSTRUCT CLASS 150 RIPRAP APRON AT OUTLET. (SEE SHEET DP2)

(4) "XS1e" 135+85 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE) 17.3' LT (GRATE ELEV. = 2362.10', H = 2.85'). INSTALL 15"x15' RCP (UIE = 2359.25', LIE = 2359.19'). CONNECT TO TYPE 2 DROP INLET (DOUBLE GRATE) "XS1e" 135+70, 17.0' LT. (SEE SHEET DP2)

(5) "CDSB" 23+57 / "CDSB" 29+90 — CONSTRUCT CLASS 150 RIPRAP V-DITCH FROM "CDSB" 29+90, 76.7' LT (IE = 2360.58') TO "CDSB" 23+80, 204.6' LT (IE = 2360.14') GRADE TO DRAIN TO CONCRETE FLAT BOTTOM DITCH AT "CDSB" 23+57, 221.3' LT. (SS = 2:1, H = 2.5'). TIE INTO ROADSIDE DITCH FLOWLINE AT "CDSB" 29+90.

(6) "CDSB" 22+80 / "CDSB" 23+80 — CONSTRUCT CLASS 150 RIPRAP PAD FROM "CDSB" 23+80, 204.0' LT TO "CDSB" 22+80, 228.6' LT (WIDTH = Varies). (SEE SHEET DD2)

(7) "XS1e" 137+29 — EXISTING (ABANDONED) DOUBLE 30"x235' CMP. REMOVE 30' RT (30"X205' CMP). ENSURE RT END OF ABANDONED DOUBLE 30" CMP IS A MINIMUM OF 5' FROM OUTSIDE DIAMETER OF NEW 15"X218' RCP BEING INSTALLED FROM "XS1e" 138+03 TO "XS1e" 135+85.

(8) "CDSB" 24+73 — CONSTRUCT RIPRAP DOWN DRAIN FROM "CDSB" 24+73, 32.0' LT TO "CDSB" 24+73, 45.0' LT. (SEE SHEET DD2)

(9) "XS1e" 138+03 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE) 21.6' LT (GRATE ELEV. = 2363.65', H = 2.54'). INSTALL 15"x218' RCP (UIE = 2361.11', LIE = 2359.35'). CONNECT TO TYPE 2 INLET (DOUBLE GRATE) "XS1e" 135+85, 17.3' LT. (SEE SHEET DP2)

(10) "XS1e" 140+00 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE) 25.6' LT (GRATE ELEV. = 2364.69', H = 2.50'). INSTALL 15"x197' RCP (UIE = 2362.19', LIE = 2361.21'). CONNECT TO TYPE 2 DROP INLET (DOUBLE GRATE) "XS1e" 138+03, 21.6' LT. (SEE SHEET DP2)

NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

- LEGEND -

N. DURANGO DR. · GRAND MONTECITO PRKWY. · W. AZURE DR. · N. TENAYA WAY · W. ANN RD · D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11

Project Site

Ex Dual culverts

Existing inlet

Phase 2B Contract 3583

NO.	ALG	RADIUS	DELTA	LENGTH	TANGENT
C3	CDSB	8024.00	3°28'33"	486.78	243.47
C4	CDSB	8012.00	3°28'33"	486.06	243.10
C5	CDSB	5724.00	2°34'45"	257.66	128.85
C37	WSCD	6036.00	1°52'29"	197.49	98.75

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-STP-095-2(061)	CLARK	7

"CDSB" 39+98.57 "CDSB" 41+76.24	REMOVE PORTABLE PRECAST CONCRETE BARRIER RAIL, 8.5' RT. TO 14.2' RT. REMOVE IMPACT ATTENUATOR, RT.
"XP" 147+99.96	PLANTMIXING MISCELLANEOUS AREA, 83.0' LT. (SEE SHEET SD4).
"XP" 149+44.96	PLANTMIXING MISCELLANEOUS AREA, 83.0' LT. (SEE SHEET SD4).
"XP" 150+49.96	PLANTMIXING MISCELLANEOUS AREA, 83.0' LT. (SEE SHEET SD4).
"XP" 152+11.16 "XP" 157+99.40	CONSTRUCT TYPE A BARRIER RAIL, 85.0' LT. TO 101.0' LT.
"XP" 157+99.40 "XP" 161+38.84	CONSTRUCT TYPE A BARRIER RAIL, 101.0' LT.
"XP" 161+38.84 "XP" 164+38.60	CONSTRUCT TYPE A BARRIER RAIL, 101.0' LT. TO 112.5'LT
"XP" 161+48.50 "XP" 163+26.50	REMOVE PORTABLE PRECAST CONCRETE BARRIER RAIL, 104.5' LT. AND REMOVE IMPACT ATTENUATOR, LT.
"CDSB" 41+92.86 "CDSB" 52+21.00	CONSTRUCT TYPE FA BARRIER RAIL, 32.0' LT.
"CDSB" 49+25.41 "CDSB" 62+78.25	REMOVE CHAIN LINK FENCE, 37.2' LT. TO 112.2' LT.
"CDSB" 49+25.41 "CDSB" 54+88.61	INSTALL CHAIN LINK FENCE, 49+25.41, 37.2' LT. TO 49+40.08, 134.5' LT. (RADIUS=55'), TO 49+77.06, 134.5' LT. TO 53+03.03, 125.9' LT. (RADIUS=475'), TO 54+88.61, 119.4' LT.
"CDSB" 62+11.39 "CDSB" 62+78.25	INSTALL CHAIN LINK FENCE FROM, 62+11.39, 114.2' LT. TO 62+42.08, 113.4' LT. TO 62+78.25, 112.2' LT.

5 REVISION 04-01-2016

CENTENNIAL CENTER BL VD.

SECTION 28
SECTION 27

1/16 SEC. LINE

T. 19 S. R. 60 E.

R/W

"CDSB" +77.06 134.5' LT.

"CDSB" +40.08 134.5' LT.

"WSCD" 10+00.00 P.C.

"XP" 161+46.56 P.O.T (118.5' LT.)

"CDSB" 48+71.54 P.C.

"CDSB" +25.41 37.2' LT.

"CDSB" 46+03.05 P.T.

"CDSB" 41+16.99 P.R.C.

"CDSB" +92.86 32.0' LT.

"CDSB" 36+30.20 P.C.

E.O.P.

15"X53' RCP

15"X57' RCP

15"X63' RCP

36"X42' RCP

15"X77' RCP

"XP" +11.16 85.0' LT.

"CDSB"

C4

C3

C5

"WSCD"

C37

36"X155' RCP

"XP" +99.40 101.0' LT.

"XP" +38.84 101.0' LT.

N36° 37'57"W 268.49'

"XS1e"

N36° 37'56"W 7797.68'

"XP"

N36° 37'57"W 7797.65'

"XN1e"

N36° 37'56"W 7797.63'

36" RCP

18" RCP

18"X15' RCP

36"X141' RCP

36"X17' RCP

36"X13.3' CMP

18"X135' RCP

15"X20' RCP

ABANDON 36"X228' CMP

36"X162' RCP

36"X8' RCP

30"X207' RCP

D.I.

CUT

FILL

FAST

SKY POINTE DR.

1/16 SEC. LINE

1/4 SEC. LINE

	+00		+50		+50		+75	+25		+00	+50
"CDSB" D.N. LT.		6:1 F.S.~3.0' Ditch~2:1 B.S.		Trans.		2:1 F.S.~1.0' Ditch~2:1 B.S. Or 2:1 F.S.			2:1 B.S.		Trans.
"CDSB" D.N. RT.											

EXCAVATION	(1)	1920 yd³
BORROW		1065 yd³
EMBANKMENT		1065 yd³

(1) 1,920 CUYD OF UNSUITABLE MATERIAL TO BE REMOVED FROM THE PROJECT AND DISPOSED OF PER SECTION 107.14.

Phase 2B Contract 3583

APPENDIX F

Ann Road Plan Sheets

CITY OF LAS VEGAS

Mayor:
OSCAR B. GOODMAN

City Council:
GARY REESE, MAYOR PRO-TEM
MICHAEL J. McDONALD
LARRY BROWN
LYNETTE B. McDONALD
LAWRENCE WEEKLY
MICHAEL MACK

City Manager:
VIRGINIA VALENTINE

Director of Public Works:
RICHARD D. GOECKE

City Engineer:
CHARLES KAJKOWSKI, JR., P.E.

66103

DEPARTMENT OF PUBLIC WORKS

ANN ROAD IMPROVEMENTS

US 95 TO FERRELL STREET

BID NUMBER: 02.1730.01

FUNDED BY:
REGIONAL TRANSPORTATION COMMISSION
CLARK COUNTY PUBLIC WORKS SID #129
CITY OF LAS VEGAS PUBLIC WORKS SID #1473
CITY OF LAS VEGAS SANITATION FUNDS
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

REVIEWED

City Engineer Date

Traffic Engineer Date

Design Superintendent Date

Regional Transportation Commission Date

Clark County Public Works Date

City of North Las Vegas Date

Nevada Department of Transportation Date

Clark County Regional Flood Control District Date

Las Vegas Valley Water District Date

COX Communications Las Vegas Inc. Date

Sprint Central Telephone Date

Nevada Power Company Date

Nevada Power Company - Transmission Date

Southwest Gas Corporation Date

Southern Nevada Water Authority Date

ORIGINAL CONSTRUCTION DRAWINGS ARE ON FILE WITH THE CITY OF LAS VEGAS. THE DOCUMENTS WERE SEALED ON 04/04/01 BY KEN D. GILBRETH UNDER LICENSE NO. 9177

SCALE (H) | DRAWN BY: LMW | SCALE (V) | DATE: APRIL 2001 | W.A. # | DESIGN BY: KDG

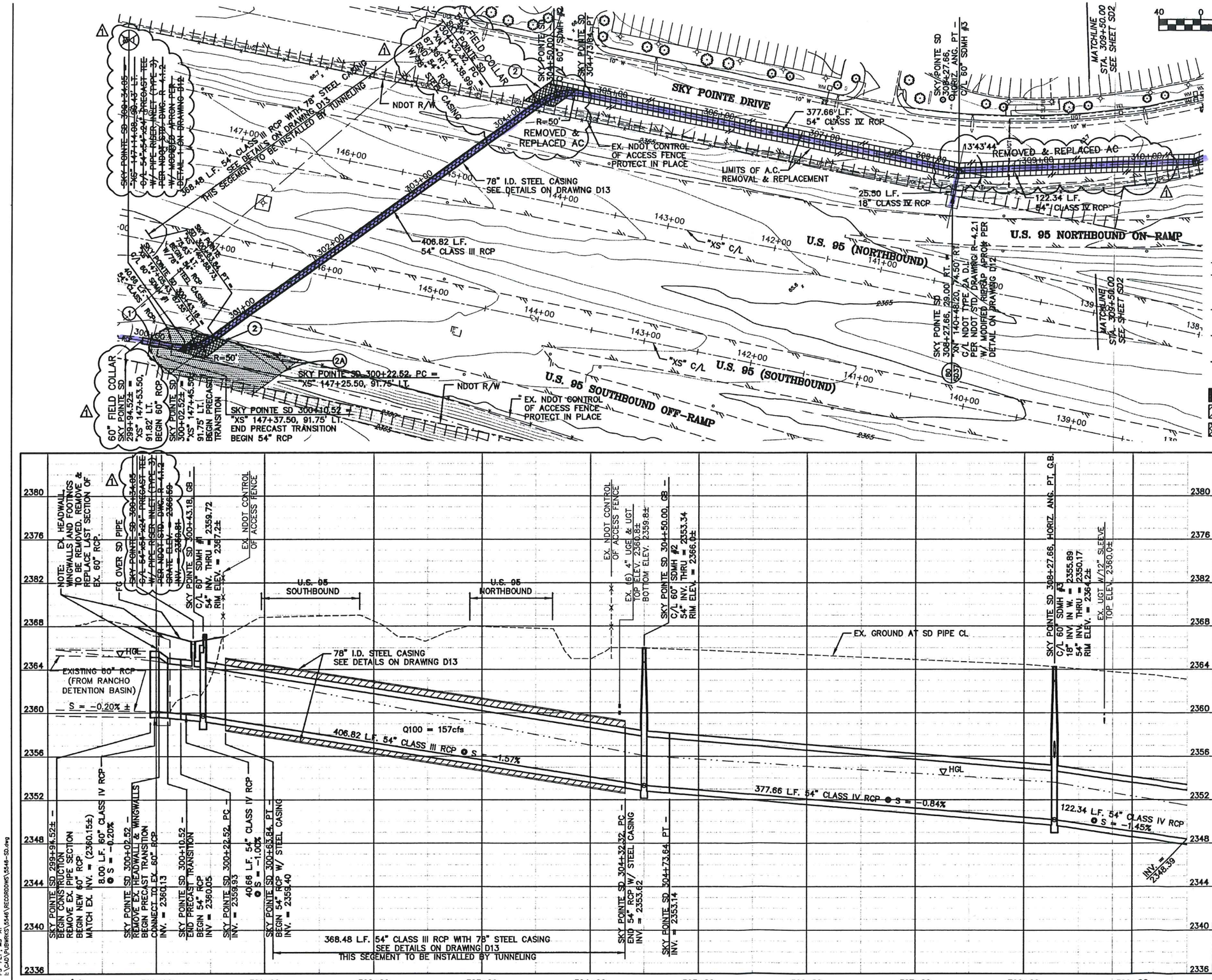
REVISIONS | DATE
⚠ RECORD DRAWING INFORMATION PROVIDED BY CONTRACTOR | 7/15/04

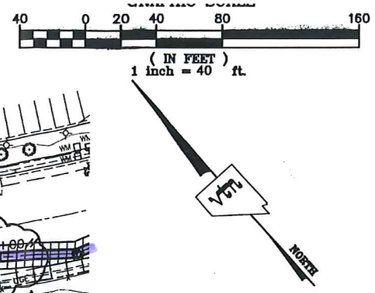
vtn nevada
• CONSULTING ENGINEERS
• PLANNERS
• LAND SURVEYORS
2727 S. RAINBOW BLVD.
LAS VEGAS, NEVADA 89146-5148
PHONE (702) 873-7550
FAX (702) 362-2597

DEPARTMENT OF PUBLIC WORKS
PROJECT: ANN ROAD
SHEET: COVER SHEET

RECORD DRAWINGS INFORMATION SUPPLIED BY CONTRACTOR — NOVEMBER 2003

DRAWING NO. 107-V3383 | 1/180





NOTES:

- SEE DRAWING D7 FOR STORM DRAIN MANHOLE SCHEDULE AND DROP INLET SCHEDULE.
- SEE DRAWINGS D8 & D9 FOR DROP INLET DETAILS.
- SEE NOTE 2 ON DRAWING I2 FOR EXISTING UTILITY RELOCATION.
- SEE DRAWING D11 FOR TRENCH DETAILS.

LEGEND

- NEW STORM DRAIN MAIN LINE
- EXISTING A.C. PAVEMENT TO BE REMOVED AND REPLACED
- TUNNELING PIT

CONSTRUCTION NOTES

1. EX. HEADWALL, WINGWALLS AND FOOTINGS TO BE REMOVED. REMOVE & REPLACE LAST SECTION OF EX. 60" RCP.
2. 20'x20' TUNNELING PIT LOCATION
2A. FILL EXISTING OPEN CHANNEL OVER NEW RCP, MATCH EXISTING TOP OF CHANNEL FG WITH 5:1 SLOPE TO EXISTING CHANNEL BOTTOM.

REV	DATE	BY	REVISION
3	02/14/04	DRF	RECORD DRAWING INFORMATION PROVIDED
2		BY FREHNER CONSTRUCTION	
1			

DEPARTMENT OF PUBLIC WORKS
CITY OF LAS VEGAS

CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148 PHONE (702) 873-7550 FAX (702) 362-2597

TITLE: STORM DRAIN PLAN & PROFILE STA. 299+94.52± TO STA. 309+50.00 SKY POINTE DRIVE

PROJECT: ANN ROAD IMPROVEMENTS US 95 TO FERRELL STREET

SEAL

ORIGINAL CONSTRUCTION DRAWINGS ARE ON FILE WITH THE CITY OF LAS VEGAS. THE DOCUMENTS WERE SEALED ON 10/14/01 BY KEN D. GILBRETH UNDER LICENSE NO. 9177

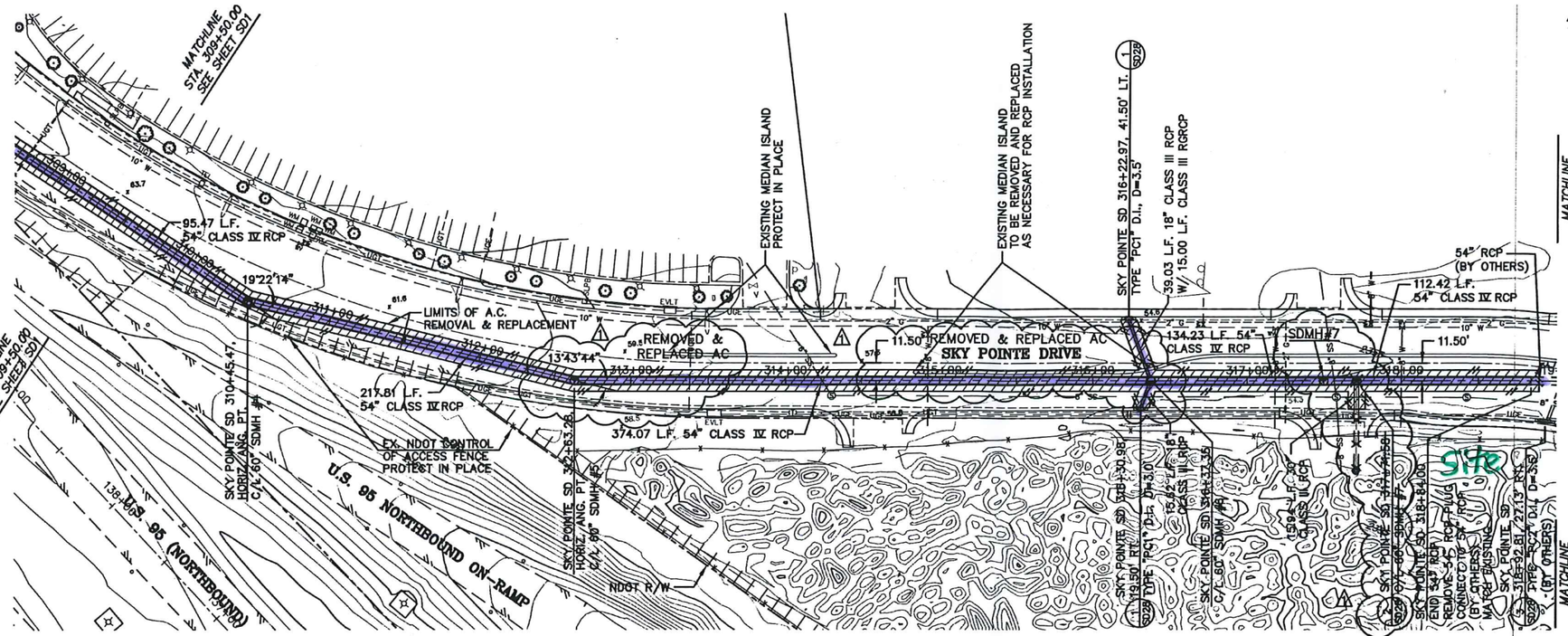
Avoid cutting underground utility lines. It's costly. 2 working days **Call** before you **Dig** 1-800-227-2600 Underground Service Alert (U.S.A.)

Avoid overhead power line contact. 2 working days **Call** before you **Overhead** 1-702-593-6111 Nevada Power Environment and Safety Services Department

WO. NO.	5546
BY	LS
BY	TMM
DATE	10/05/01
SCALE	HORIZ. 1"=40' VERT. 1"=4'
DRAWING	SD1
SHEET	91 OF 163 SHEETS

RECORD DRAWINGS INFORMATION SUPPLIED BY CONTRACTOR - NOVEMBER 2003

PS "PLT" MS "A1"
I:\CAD\PUBWRKS\5546\RECORDING\5546-SD.dwg



40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

NOTES:

- SEE DRAWING D7 FOR STORM DRAIN MANHOLE SCHEDULE AND DROP INLET SCHEDULE.
- SEE DRAWINGS D8 & D9 FOR DROP INLET DETAILS.
- SEE NOTE 2 ON DRAWING I2 FOR EXISTING UTILITY RELOCATION.
- SEE DRAWING D11 FOR TRENCH DETAILS.

LEGEND

NEW STORM DRAIN MAIN LINE

EXISTING A.C. PAVEMENT TO BE REMOVED AND REPLACED

REV	DATE	BY	REVISION
	02/14/04	DRF	RECORD DRAWING INFORMATION PROVIDED
		BY TREIBNER CONSTRUCTION	

DEPARTMENT OF PUBLIC WORKS
CITY OF LAS VEGAS

CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148 PHONE (702) 873-7550 FAX (702) 362-2597

APPROVED

LAS VEGAS VALLEY WATER DISTRICT DATE

Avoid cutting underground utility lines. It's costly.
2 working days Call before you Dig
1-800-227-2600
Underground Service Alert (U.S.A.)

Avoid overhead power line contact.
2 working days Call before you Overhead
1-702-593-6111
Nevada Power Environment and Safety Services Department

TITLE
STORM DRAIN PLAN & PROFILE
STA. 309+50.00 TO STA. 391+00.00
SKY POINTE DRIVE

PROJECT
ANN ROAD IMPROVEMENTS
US 95 TO FERRELL STREET

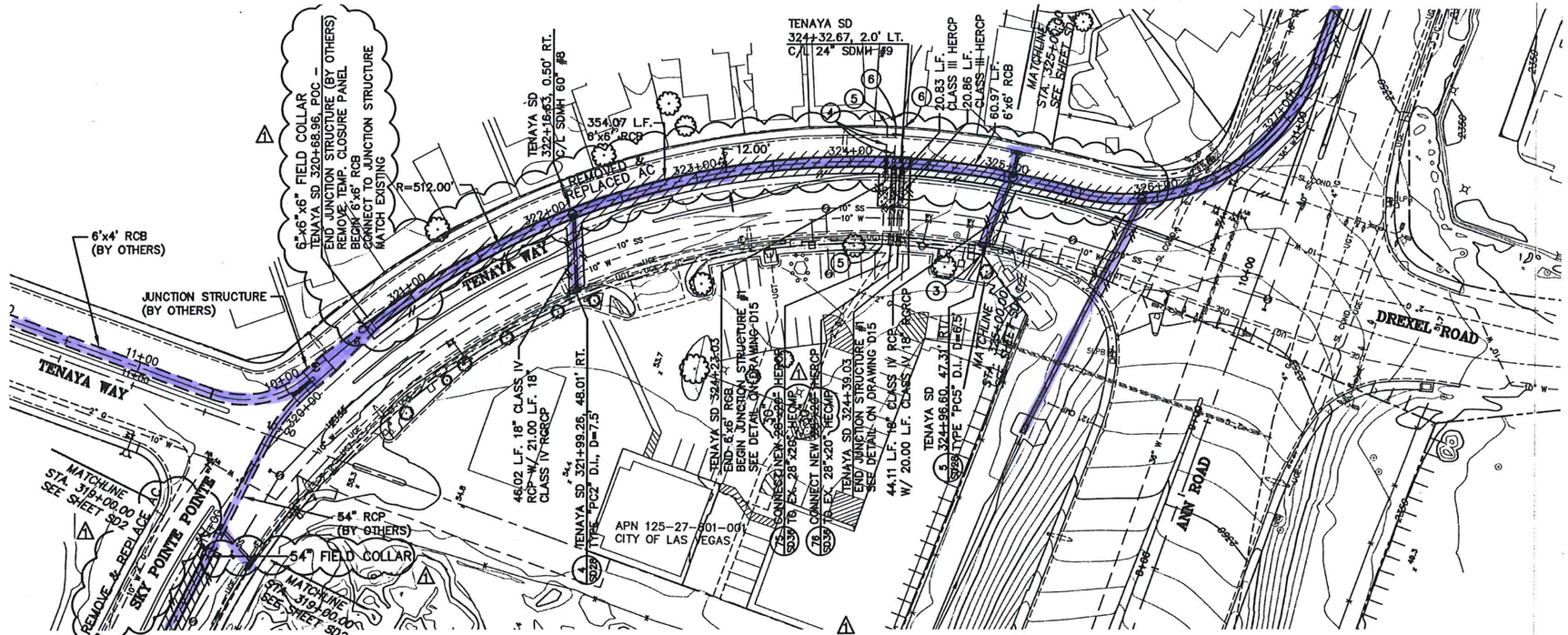
SEAL
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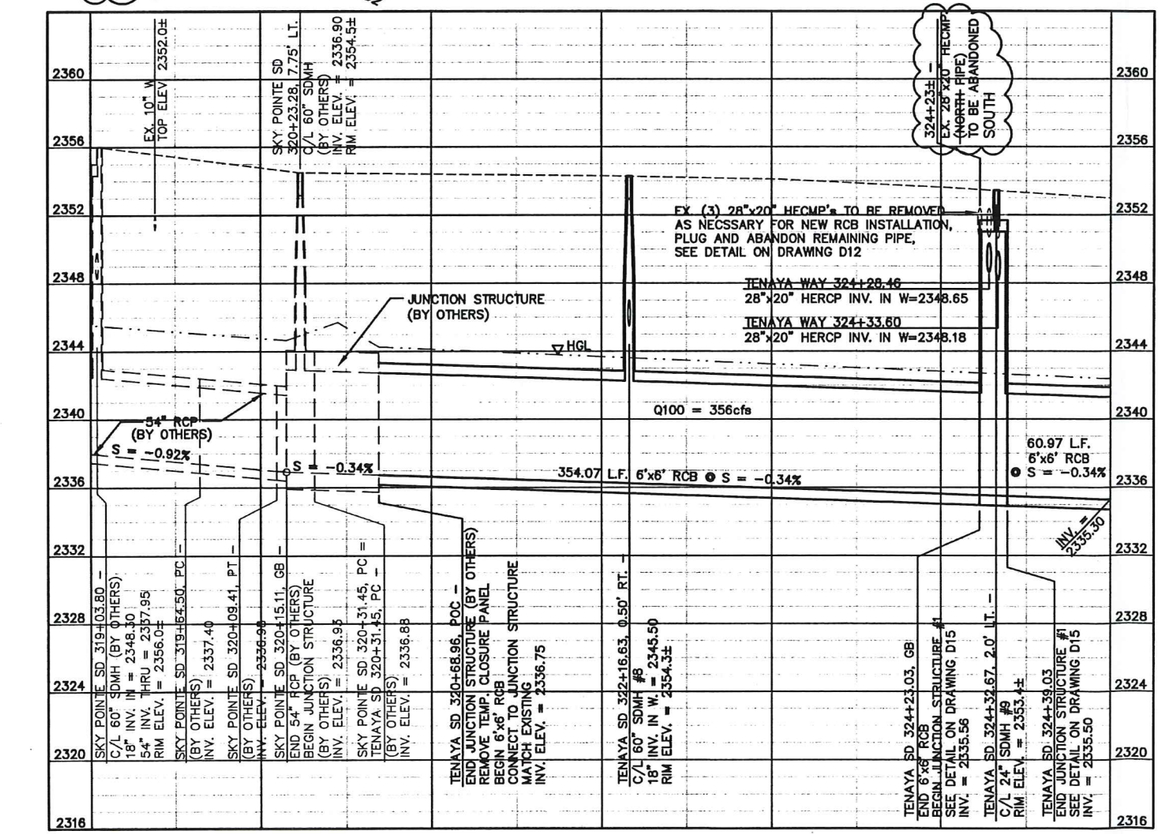
WO. NO.	5546
BY	LS
DATE	TMM
SCALE HORIZ.	10/05/01
VERT.	1"=40' 1"=4'
DRAWING	SD2
SHEET	92 OF 163 SHEETS

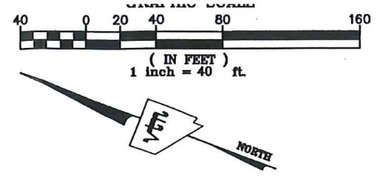
RECORD DRAWINGS INFORMATION SUPPLIED BY CONTRACTOR - NOVEMBER 2003

PS: 7"h:1", VS: 1"=2"
L:\CAD\PUBWRKS\5546\RECORDWG\5546-SD.dwg

66311







NOTES:

- SEE DRAWING D7 FOR STORM DRAIN MANHOLE SCHEDULE AND DROP INLET SCHEDULE.
- SEE DRAWINGS D8 & D9 FOR DROP INLET DETAILS.
- SEE NOTE 2 ON DRAWING I2 FOR EXISTING UTILITY RELOCATION.
- SEE DRAWING D11 FOR TRENCH DETAILS.

LEGEND

NEW STORM DRAIN MAIN LINE

EXISTING A.C. PAVEMENT TO BE REMOVED AND REPLACED

CONSTRUCTION NOTES

(3) EXISTING SIDEWALK DRIAN TO BE REMOVED

(4) EXISTING (3) 28"x20" HECMP's

(5) EXISTING 28"x20" HECMP (NORTH PIPE) TO BE REMOVED AS NECESSARY FOR JUNCTION STRUCTURE #1 INSTALLATION. ABANDON AND PLUG REMAINING PIPE WITH CONCRETE.

(6) EXISTING 28"x20" HECMP TO BE CONNECTED TO NEW 28"x20" HERCP, SEE LATERAL PROFILES 75 AND 76 ON DRAWING SD36.

VTN PROJECT BENCHMARK

PROJECT DATUM: NAVD88

CITY OF LAS VEGAS BENCHMARK 1LV90–36NES
NAVD88 ELEVATION: 681.303 METERS (2235.24 FEET)
(PRIMAS AND ASSOCIATES – 2234.95 FEET)

RIVET AND PLATE IN TOP OF CURB, SW CORNER OF ANN ROAD AND DECATUR BLVD.

PRIMAS AND ASSOCIATES PROJECT BENCHMARK

#1LV90/27W4, CLV, PLS 2050 AL CAP W1/4 SEC.27
ELEV. 2381.17 NAVD 88

#1LV90/27N4, CLV, AL CAP, PLS 2984
CENTENNIAL PKWY. & TENAYA WAY
ELEV. 2356.41 NAVD 88
(VTN NEVADA = 2356.695 FEET)

APPROVED

LAS VEGAS VALLEY WATER DISTRICT DATE

Avoid cutting underground utility lines. Dig safely.
2 working days **Call** before you **Dig**
1-800-227-2600
Underground Service Alert (USA)

Avoid overhead power line contact.
2 working days **Call** before you **Overhead**
1-702-593-6111
Nevada Power Environmental and Safety Services Department

REV	DATE	BY	REVISION
1	02/14/04	DRF	RECORD DRAWING INFORMATION PROVIDED
2			BY PREHNER CONSTRUCTION

DEPARTMENT OF PUBLIC WORKS
CITY OF LAS VEGAS

CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146–5148 PHONE (702) 873–7550 FAX (702) 362–2597

TITLE: STORM DRAIN PLAN & PROFILE
STA. 319+00.00 TO STA. 325+00.00
SKY POINTE DRIVE / TENAYA WAY

PROJECT: ANN ROAD IMPROVEMENTS
US 95 TO FERRELL STREET

SEAL
ORIGINAL CONSTRUCTION DRAWINGS ARE ON FILE WITH THE CITY OF LAS VEGAS. THE DOCUMENTS WERE SEALED ON 10/14/01 BY KEN D. GILBRETH UNDER LICENSE NO. 9177

WO. NO.	5546
BY	LS / TMM
DATE	10/05/01
SCALE HORIZ.	1"=40'
SCALE VERT.	1"=4'
DRAWING	SD3
SHEET	93 OF 163 SHEETS

RECORD DRAWINGS INFORMATION SUPPLIED BY CONTRACTOR – NOVEMBER 2003

PS "N.T", MS "D"
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66312

APPENDIX G

Zoning and Planning Conditions

LAS VEGAS
CITY COUNCIL

CAROLYN G. GOODMAN
Mayor

LOIS TARKANIAN
Mayor Pro Tem

RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE

SCOTT D. ADAMS
City Manager

November 13, 2017

Sky Pointe Hotel Group LLC
9115 W. Russell Road, Ste. 210
Las Vegas, Nevada 89148

RE: SDR-71658 [PRJ-71344] – ADMINISTRATIVE SITE DEVELOPMENT PLAN REVIEW - ADMINISTRATIVE CYCLE – OCTOBER 2017

Dear Applicant:

Your request for a Minor Site Development Plan Review FOR AN APPROVED 87-UNIT HOTEL ALLOWING EXTERIOR FAÇADE CHANGES AND A 482 SQUARE-FOOT DECREASE IN SIZE on 1.83 acres at 5701 Sky Pointe Drive (APN 125-27-410-004), T-C (Town Center) Zone [SC-TC (Service Commercial - Town Center) Special Land Use Designation], Ward 6 (Fiore)[PRJ-71344], has been considered administratively by the Department of Planning staff.

The Department of Planning has administratively ***APPROVED*** your request subject to the following:

Planning

1. Conformance to the Conditions of Approval for Variance (VAR-45114), Special Use Permit (SUP-45116) and Site Development Plan Review (SDR-45115) shall be required, except as amended herein.

2. This approval is a minor amendment to, and shall run concurrently with, the approval for Site Development Plan Review (SDR-45115). No further action is needed, as this approval is extended, exercised or expired with Site Development Plan Review (SDR-45115).

3. All development shall be in conformance with the site plan, and landscape plan, date stamped 11/08/17; and building elevations, date stamped 09/14/17, except as amended by conditions herein.

4. 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.

5. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.

DEVELOPMENT SERVICES CENTER
DEPARTMENT OF PLANNING
333 N. RANCHO DRIVE
3RD FLOOR
LAS VEGAS, NV 89106
702.229.6301 | VOICE
702.474.7463 | FAX
711 | TTY

cityoflasvegas
lasvegasnevada.gov

6. 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.

7. 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.

8. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

9. The onsite sewer shall be private and per Title 19.16.060.W. 2, sewer service for this commercial site shall be shown in accordance with one of the following two alternatives, and the appropriate note shall appear on the civil improvement drawings:
    I. Onsite sewers are a common element privately owned and maintained per the Conditions, Covenants, and Restrictions (CC&Rs) of this commercial subdivision.
    II. Onsite sewers are a common element privately owned and maintained per the Joint Use Agreement of this commercial subdivision.

10. Comply with all applicable conditions of approval for Site Development Plan Review (SDR-45115) and any other site related actions.

This action by the Department of Planning staff on **November 13, 2017** is final unless a written appeal is filed with the Director of the Department of Planning within ten days of the date of this letter.

Sincerely,

Steve Gebeke, AICP
Planning Supervisor
Case Planning Division

SG:nl

APPENDIX H

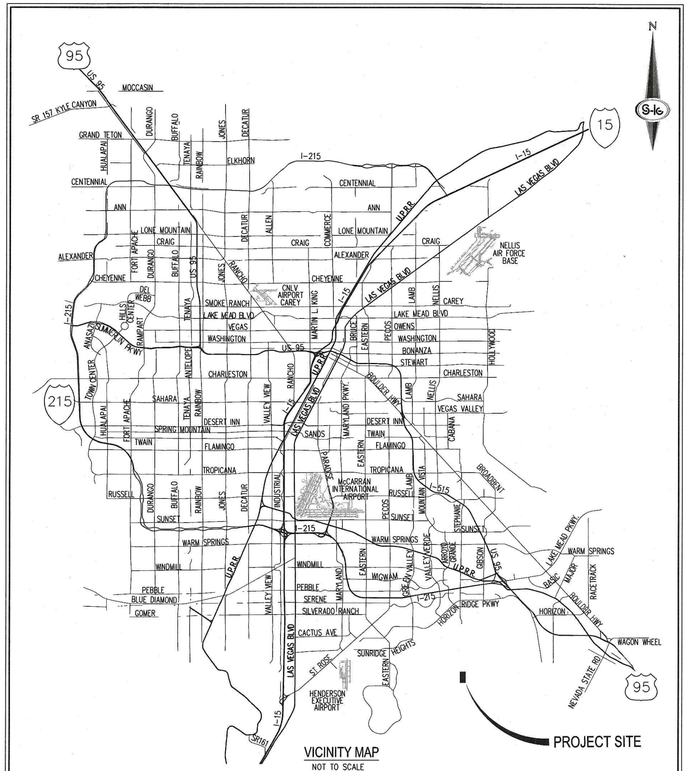
Revised Grading & Detail Sheets

NIGRO DEVELOPMENT

IMPROVEMENT PLANS FOR SKY POINTE PLAZA

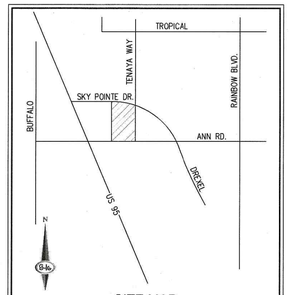
CITY OF LAS VEGAS, NEVADA

APN: 125-27-410-004



VICINITY MAP

NOT TO SCALE



SITE MAP

NOT TO SCALE

LEGAL DESCRIPTION

BEING A PORTION OF LOT 2, BLOCK 2 OF THAT COMMERCIAL SUBDIVISION KNOWN AS "ANN/TENAYA", RECORDED FEBRUARY 26, 1999 AT THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA, IN BOOK 88 OF PLATS, AT PAGE 55, LOCATED WITHIN THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 2; THENCE SOUTH 89°12'30" WEST, ALONG THE SOUTH LINE OF SAID LOT 2, A DISTANCE OF 229.58 FEET; THENCE NORTH 00°00'00" EAST, DEPARTING SAID SOUTH LINE, 352.61 FEET; THENCE SOUTH 90°00'00" WEST, 5.00 FEET RADIALLY TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 20.00 FEET; THENCE NORTHWESTERLY, 29.05 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 83°14'05" TO THE SOUTHERLY RIGHT-OF-WAY OF SKY POINTE DRIVE; THENCE SOUTH 83°14'05" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY, 44.86 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 300.00 FEET; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 300.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS SOUTH 14°10'02". WEST; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 459.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS NORTH 06°45'55" EAST; THENCE EASTERLY, 136.07 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 16°59'08" TO THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 27; THENCE SOUTH 00°07'30" EAST, DEPARTING SAID SOUTHERLY RIGHT-OF-WAY AND ALONG SAID EAST LINE, 314.27 FEET TO THE POINT OF BEGINNING.

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION	SHEET TITLE
1	C-1	COVER SHEET
2	C-2	NOTES SHEET
3	C-3	ABBREVIATION AND QUANTITY SHEET
4	G-1	GRADING PLAN I
5	D-1	DETAIL SHEET I
6	D-2	DETAIL SHEET II
7	U-1	UTILITY PLAN I
8	T-1	TRAFFIC PLAN I

APPROVALS

CITY ENGINEER–ALLEN PAVELKA PE, #9029 DATE

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED OF RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIALLY LISTED UNDER DEVIATIONS FORM STANDARDS. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA.

LAS VEGAS FIRE AND RESCUE DATE

CITY OF LAS VEGAS – PLANNING DEPARTMENT DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

CENTRAL TELEPHONE CO. DBA CENTURYLINK 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 STATUES AND / OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: PROJECT NO. 400 FIELD
LVVWD APPROVED FIRE FLOW 3,000 GPM AT 20 PSI RESIDUAL
SHEETS: C-1, C-2, C-3, U-1

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LAS VEGAS VALLEY WATER DISTRICT.

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.

SOUTHWEST GAS CORPORATION DATE

COX COMMUNICATIONS LAS VEGAS, INC. DATE

OWNER	DEVELOPER	ENGINEER
SKY POINTE HOTEL GROUP LLC 9115 W. RUSSELL ROAD #215 LAS VEGAS, NV 89148 PH: 702-247-1920 FX: 702-247-1916 CONTACT: MIKE NIGRO	NIGRO CONSTRUCTION 9115 W. RUSSELL ROAD #215 LAS VEGAS, NV 89148 PH: 702-247-1920 FX: 702-247-1916 CONTACT: MIKE NIGRO	SLATER HANIFAN GROUP, INC. 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 FX: (702) 284-5399 CONTACT: BRENT PARRISH

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. BLV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

ELEVATION – 708.825 (METERS) / 2325.54 (U.S. SURVEY FEET)
NORTH AMERICAN VERTICAL DATUM OF 1988

BASIS OF BEARINGS

NORTH 00°07'30" WEST, BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PLAT MAP, BOOK 88, PAGE 55 ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (AREA OUTSIDE THE 500 YEAR FLOODPLAIN), PER THE FEMA FIRM PANEL 32003C1745E DATED SEPTEMBER 27, 2002

DEVIATIONS FROM STANDARDS

SUP-19100: HOTEL WITH A WAIVER TO ALLOW A DISTANCE OF SEPARATION OF 80 FEET FROM A RESIDENTIAL.
SDR-19097: FOUR-STORY HOTEL WITH A WAIVER TO ALLOW A PERIMETER LANDSCAPE BUFFER OF 14 FEET FOR A THREE FOOT SECTION.
VAR-19447: TO ALLOW A FOUR STORY HOTEL.

SWPPP NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: HTTP://WWW.STATE.NV.US/BMPC/STORM01.HTM PROJECTS THAT DISTURB MORE THEN ONE ACRE OF LAND MUST SUBMIT TO NDEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH THE APPROPRIATE FILLING FEE.

PROJECT INFORMATION

ACREAGE: = 1.83 AC
ZONING: = SC-TC

EARTHWORK SUMMARY (UNADJUSTED)

CUT	151 CY.
FILL	4,583 CY.
NET	4,432 CY.

GEOTECHNICAL ENGINEER

PREPARED BY: WESTERN TECHNOLOGIES INC.
ADDRESS: 6633 WEST POST ROAD LAS VEGAS, NV 89118
PHONE: 702-798-8050
PROJECT No. ORIGINAL: 4127.J0057, UPDATED: 4127.J0074
DATED: ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017

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

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

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

SKY POINTE PLAZA

COVER SHEET

S8 T23 R61

DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

DERICK D. YORO — No. 16396 — CIVIL — Exp: 06/30/2018 — STATE OF NEVADA — PROFESSIONAL ENGINEER
4/16/17

C-1
SHEET 1 OF 10

J:\nig1701-000 sky pointe plaza\dwg\smprov\nig1701-000-cvr.dwg 11/15/2017 10:55 PM Jane Cretty

STORMWATER RUNOFF MANAGEMENT

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT ,MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND BMPS WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. 8LV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

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2.2 CITY OF LAS VEGAS SEWER NOTES

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

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # ADD FIELD (REVISED 01/09/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE 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 REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

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

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY WESTERN TECHNOLOGIES INC, PROJECT NO. ORIGINAL: 4127.JD057, UPDATED: 4127.JD074, DATED ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017.
6. EARTHWORK QUANTITIES (RAW):
    -CUT = 151 CUBIC YARDS.
    -FILL = 4,583 CUBIC YARDS

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

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 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 AND RESCUE FOR ALL INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FROM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK [IFC 105.7.12]
4. ON ANT 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 THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC 507.5.5.7.3]
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 PANTED RED. [IFC 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC C102]
    - RESIDENTIAL- 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    - COMMERCIAL- 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1,000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET 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 ARE 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 ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET 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 FEET OUTSIDE AND 28 FEET 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 ONLY 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. CURVES THROUGH PARKING AREAS SHALL BE NOT LESS THAN 24 FT. [IFC 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THE 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 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET 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 FEET ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG ORON ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC 503.6 AND IFC APPENDIX M.

2.5 CITY OF LAS VEGAS GRADING NOTES

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

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

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

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

2.1 CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS DAMAGED OR DISTURBED 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 AT 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL P

ABBREVIATIONS

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

SPECIAL NOTE

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

NOTICE TO CONTRACTOR

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

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

LEGEND

EXISTING	PROPOSED	DESCRIPTION
(1900)	1900	5' CONTOUR
		1' CONTOUR
		STRIPING
		SEWER MANHOLE
		CURB AND GUTTER
EX 8" PVC SS	8" PVC SS	SANITARY SEWER PIPE AND FLOW ARROW
EX 8" PVC WTR	8" PVC WTR	WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
PAD=XXX.X FF=XXX.X	PAD=XXX.X FF=XXX.X	PAD ELEVATION FINISHED FLOOR ELEVATION
(XX.XX) TC	(XX.XX) TC	ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE

	EXISTING GAS GATE VALVE
@MH	EXISTING UNKNOWN MANHOLE
GAS	EXISTING GAS, SIZE PER PLAN
	EXISTING POWER POLE
	EXISTING TRAFFIC SIGNAL
	EXISTING WALL
	WATER PIPE FITTING
POC	WATER POINT OF CONNECTION
POC	SEWER POINT OF CONNECTION
	DAYLIGHT LINE
	STREET CENTERLINE
	RIGHT-OF-WAY
	MATCHLINE
	BOUNDARY LINE
	PHASE LINE
℄	PROPERTY LINE
	FLOWLINE
	SAWCUT
FILL / CUT	CUT/FILL TRANSITION LINE
	SIDEWALK
	EX STRIPING TO BE OBLITERATED
	GRADE BREAK LINE
	REFLECTIVE RAISED PAVEMENT MARKERS
BWV	BACK WATER VALVE
	WROUGHT IRON FENCE
	PONY WALL
	DECORATIVE PERIMETER WALL
	DECORATIVE PERIMETER RETAINING WALL
	PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	PROPOSED SCARP AREA
	DRIVEWAY
	PROPOSED RIP RAP
	SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
	HANDICAP RAMP

QUANTITIES

			PRIVATE	PUBLIC
DRAINAGE				
1.	12" PVC PIPE	EA	20	–
2.	MODIFIED TYPE 'C' DROP INLET	EA	–	1
SEWER SYSTEM				
1.	6" PVC SEWER LATERAL (PRIVATE)	LF	112	–
2.	STANDARD 48" SEWER MANHOLE (PRIVATE)	EA	1	–
WATER SYSTEM				
1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	1	–
2.	6" PVC WATER PIPE (CLASS 150)	LF	21	–
3.	8" PVC WATER PIPE (CLASS 150)	LF	145	–
4.	1" COPPER SERVICE W/ 1" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	–	1
5.	2" COPPER SERVICE W/ 2" METER & 2" RPPA PER UDACS PLATE NO. 4 & 8	EA	–	1
6.	8" RPDA	EA	–	1
STREET IMPROVEMENTS				
1.	2" A.C. PAVEMENT OVER 6" TYPE II	SY	1,612	–
2.	3" A.C. PAVEMENT OVER 6" TYPE II	SY	3,177	–
3.	4" THICK CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	90	–
4.	STANDARD 24" TYPE "L" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	197	18
5.	6" TYPE "A" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	1,477	–
6.	3' WIDE CONCRETE VALLEY GUTTER W/10" TYPE II AGGREGATE BASE	SF	1,130	–
TRAFFIC IMPROVEMENTS				
1.	12"X18" NO PARKING SIGN WITH POST	EA	6	–
2.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	1	–

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE _____ PROJECT No. ADD FIELD
LVVWD APPROVED FIRE FLOW 3,000 GPM AT 20 PSI RESIDUAL







SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

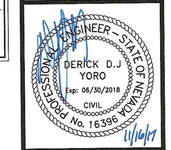
SKY POINTE PLAZA

ABBREVIATION AND QUANTITY SHEET

S8 T23 R61

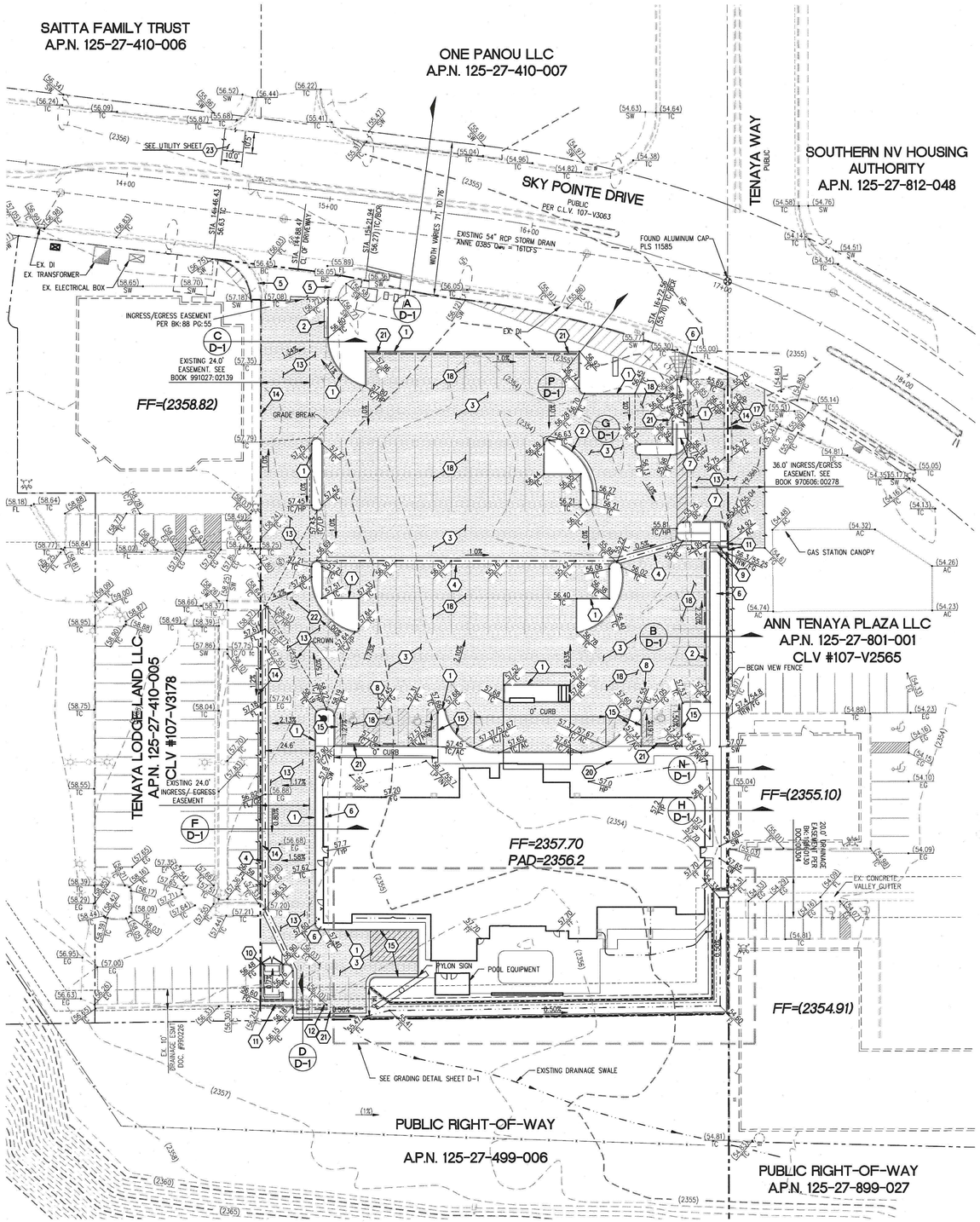
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DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

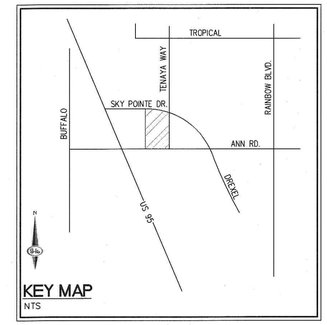
PROJECT NO.
NIG1701-000



C-3
SHEET 3 OF 10

J:\nig\1701-000 sky pointe plaza\dwg\improv\nig1701-000-cvr.dwg 11/15/2017 10:55 PM Jane Cretty





BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. BLV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

ELEVATION – 708.825 (METERS) / 2325.54 (U.S. SURVEY FEET)
NORTH AMERICAN VERTICAL DATUM OF 1988

BASIS OF BEARINGS

NORTH 00°07'30" WEST, BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PLAT MAP, BOOK 88, PAGE 55 ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (AREA OUTSIDE THE 500 YEAR FLOODPLAIN), PER THE FEMA FIRM PANEL 32003C1745E DATED SEPTEMBER 27, 2002

GEOTECHNICAL ENGINEER

PREPARED BY: WESTERN TECHNOLOGIES INC.
ADDRESS: 6633 WEST POST ROAD LAS VEGAS, NV 89118
PHONE: 702-798-8050
PROJECT No. ORIGINAL:4127J0057, UPDATED: 4127J0074
DATED: ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017

STORMWATER RUNOFF MANAGEMENT

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT ,MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.

3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.

4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

GENERAL NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2006, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEETS FOR CROSS SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL.
8. EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.
10. ADD 2300 TO PLAN GRADES, EXCLUDING PAD ELEVATIONS, FF ELEVATIONS, AND EXISTING & PROPOSED CONTOURS'.
11. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND TO BE MAINTAINED.
12. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
13. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2012
14. THE SAWCUT LINES AND LIMITS OF A.C. REMOVAL AND REPLACEMENT SHALL BE DETERMINED BY A CNLV CONSTRUCTION SERVICES INSPECTOR. A.C. SHALL BE REPLACED BY MECHANICAL MEANS. TRENCH BACKFILL MATERIAL SHALL BE SAMPLED, DESIGNED, TESTED AND CERTIFIED PER CNLV TRENCH BACKFILL POLICY.
15. ALL AREAS, AS INDICATED ON THIS SET OF PLANS, SHOWN TO BE PAVED OR HARDSCAPE SHALL REMAIN NATURAL DESERT OR LANDSCAPING.

CONSTRUCTION NOTES

1. CONSTRUCT 6" "A" TYPE CURB PER DETAIL "E" ON SHEET D-1
2. CONSTRUCT "L" CURB GUTTER PER CCAUSD #216
3. CONSTRUCT 3" AC OVER 6" TYPE II AGGREGATE BASE, SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS
4. CONSTRUCT 3' VALLEY GUTTER PER DETAIL 'J' ON SHEET D-1
5. EXISTING CURB, GUTTER & SIDEWALK TO REMAIN
6. CONSTRUCT SIDEWALK PER CCAUSD #234
7. CONSTRUCT SIDEWALK RAMP PER DETAIL 'M' ON SHEET D-1
8. HANDICAP LOADING AREA AND ACCESS PATH
9. CONSTRUCT SIDEWALK UNDERDRAIN PER CCAUSD 236
10. TRASH ENCLOSURE PER ARCHITECTURAL PLANS
11. CONSTRUCT 2' WIDE CONC. FLUME PER DETAIL 'K' ON D-1
12. REMOVE AND REPLACE CURB AND GUTTER, AS SHOWN
13. SAWCUT EXISTING AC PAVEMENT, LIMITS & THICKNESS OF PATCH TO BE DETERMINED IN THE FIELD BY A CLV INSPECTOR.
14. FIELD ADJUST TO MATCH EXSTING AC PAVEMENT
15. TRANSITION A-CURB FROM 6" FACE TO 0" FACE
16. INVERT GUTTER PAN
17. RECONSTRUCT MEDIAN ISLAND CURB PER CCAUSD #219
18. CONSTRUCT 2" AC OVER 6" TYPE II AGGREGATE BASE, SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS
19. INSTALL AREA DRAIN, NEENAH R-4373-6 ON 6" PVC OR EQUIVALENT
20. NOT USED
21. INSTALL BUMPER BLOCKS
22. ADJUST TO GRADE
23. SAWCUT, REMOVE AND REPLACE AC. AND STRIPING (IF APPLICABLE) PER CCAUSD #504
24. PVC DRAIN STUB FOR ROOF DRAIN, 1.0% MIN SLOPE. SEE PLAN FOR SIZE. SEE PLUMBING PLAN FOR CONNECTION.

NOTES:

1. ALL ONSITE STORM DRAIN FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED.
2. NDOT ENCROACHMENT PERMIT REQUIRED BY CONTRACTOR ONLY IF WORK IS DONE IN NDOT ROW. NO WORK IN NDOT ROW IS PROPOSED ON THIS PLAN SET.

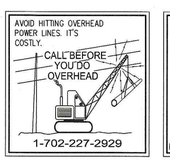
FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4214 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

11/16/17
DERICK D.J. YORO, P.E. #16396 DATE

N

0 30 60
SCALE – 1"=30' FEET





SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT
SKY POINTE PLAZA
GRADING PLAN I

S8 T23 R61

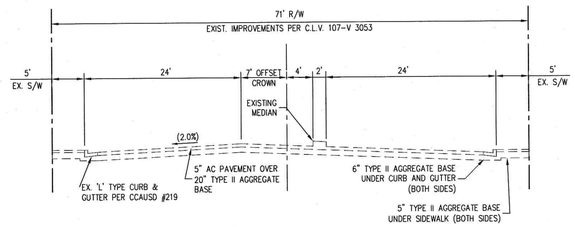
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DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

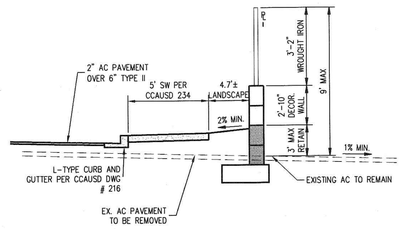
PROFESSIONAL ENGINEER – STATE OF NEVADA
DERICK D.J. YORO
Exp: 06/30/2018
CIVIL
No. 16396
11/16/17

G-1
SHEET 4 OF 10

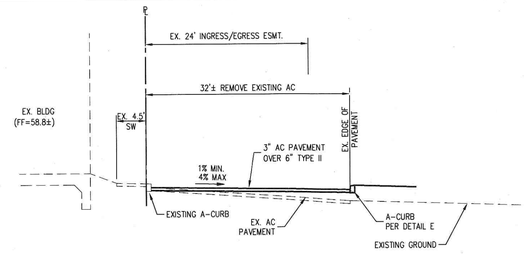
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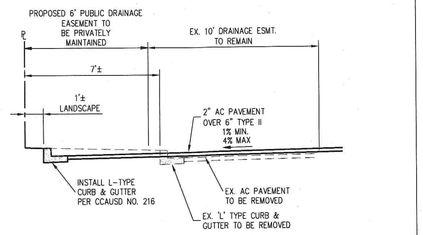
71' EXSTING ROW SKY POINTE DRIVE (A)
NOT TO SCALE



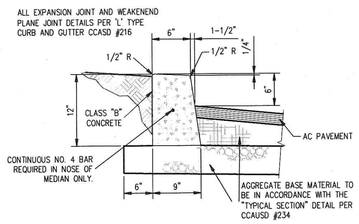
EAST SIDE PROPERTY LINE SECTION (B)
NOT TO SCALE



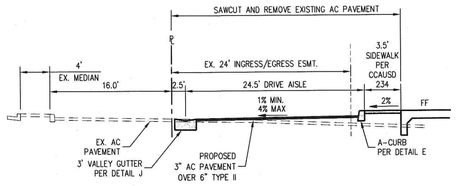
WEST SIDE PROPERTY LINE SECTION (C)
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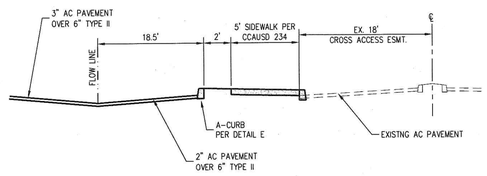
REAR PROPERTY LINE SECTION (D)
NOT TO SCALE



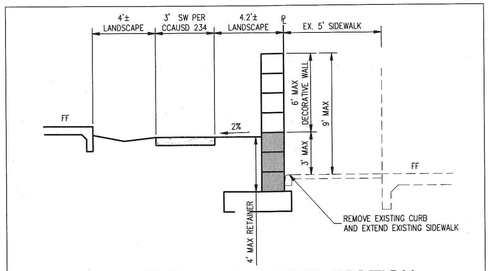
6" TYPE "A" CURB (E)
NOT TO SCALE



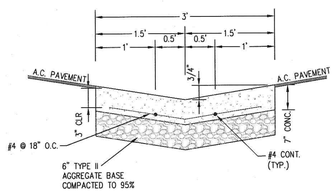
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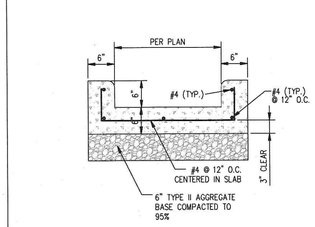
EAST SIDE PROPERTY LINE SECTION (G)
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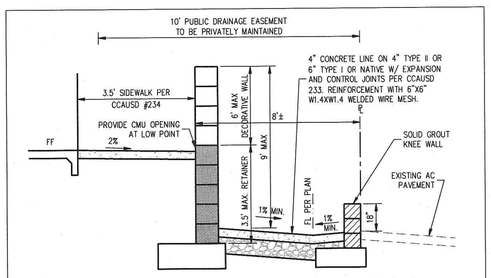
EAST SIDE PROPERTY LINE SECTION (H)
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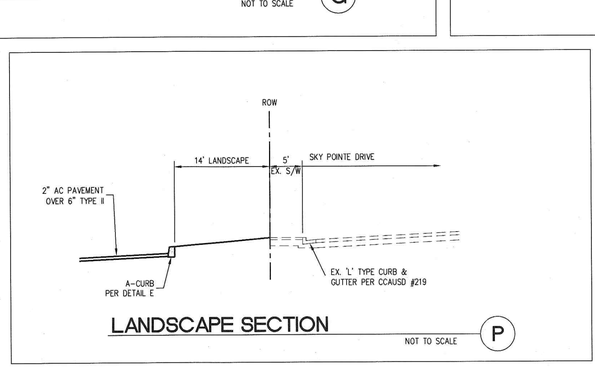
3' VALLEY GUTTER (J)
NOT TO SCALE



CONCRETE FLUME (K)
NOT TO SCALE

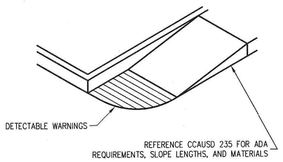


EAST SIDE PROPERTY LINE SECTION (L)
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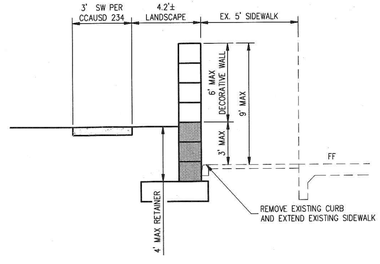


LANDSCAPE SECTION (P)
NOT TO SCALE

NOTE:
THE DETAILS ON THIS SHEET ARE MINIMUM ADA STANDARDS THAT MUST BE COMPLIED WITH. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY DETAILS ON THE CIVIL PLANS THAT DO NOT COMPLY WITH THE MINIMUM ADA AND CLV STANDARDS SHOWN HEREON.



ONSITE SIDEWALK RAMP (M)
NOT TO SCALE



EAST SIDE PROPERTY LINE SECTION (N)
NOT TO SCALE

CONSTRUCTION NOTES

(A) POOL AREA GRADING AND DRAINAGE SYSTEM TO BE DESIGNED BY OTHERS PER NRS STATUTES AND THE SOUTHERN NEVADA POOL CODE.

(B) CONSTRUCT 2' WIDE CONC. FLUME PER DETAIL 'K' ON D-1

(C) INSTALL 12" PVC DRAINAGE PIPE, 0.5% MINIMUM SLOPE, MAINTAIN MIN 12" COVER

(D) INSTALL BEEHIVE DROP INLET CCAUSD #416

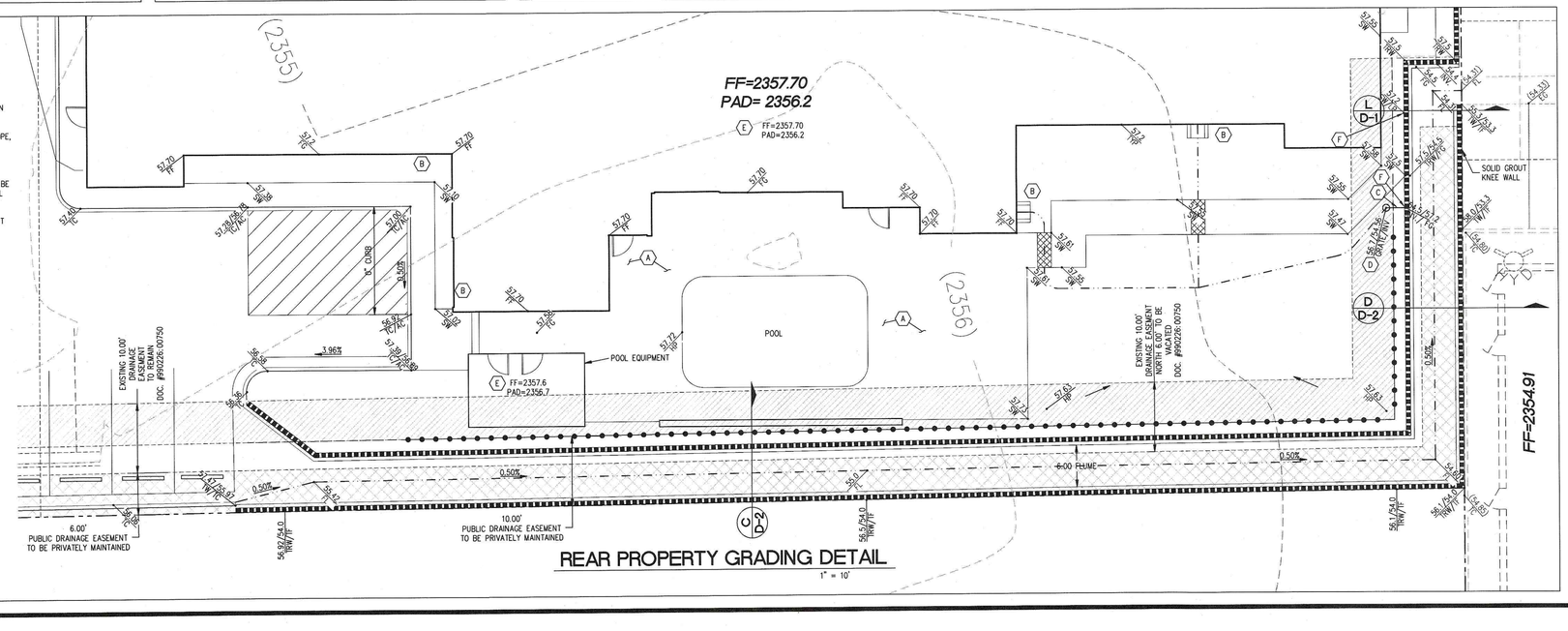
(E) FINISHED FLOOR TO PAD ELEVATION DIFFERENCE TO BE VERIFIED WITH STRUCTURAL SECTION BY STRUCTURAL ENGINEER

(F) INSTALL CMU WALL OPENING PER DETAIL 1 ON SHEET D-2

LEGEND

PUBLIC DRAINAGE EASEMENT TO BE VACATED

PUBLIC DRAINAGE EASEMENT TO BE DEDICATED



REAR PROPERTY GRADING DETAIL
1" = 10'

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

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

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

LAS VEGAS, NV

NIGRO DEVELOPMENT
SKY POINTE PLAZA
DETAIL SHEET I

S8 T23 R61

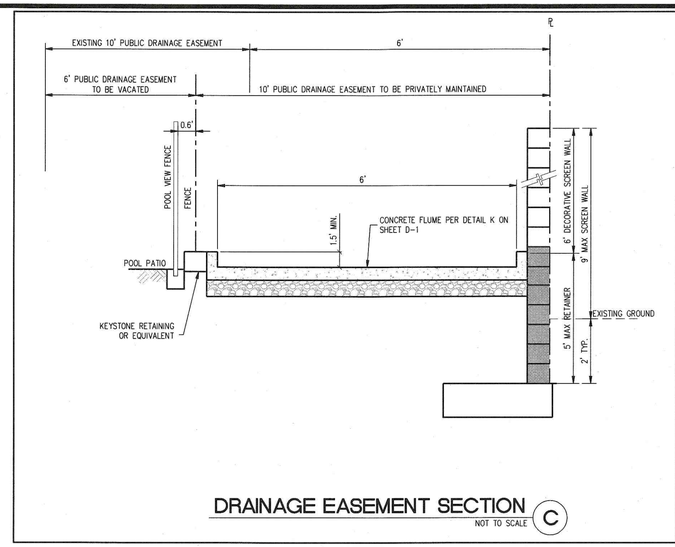
DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
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PROJECT NO.
NIG1701-000

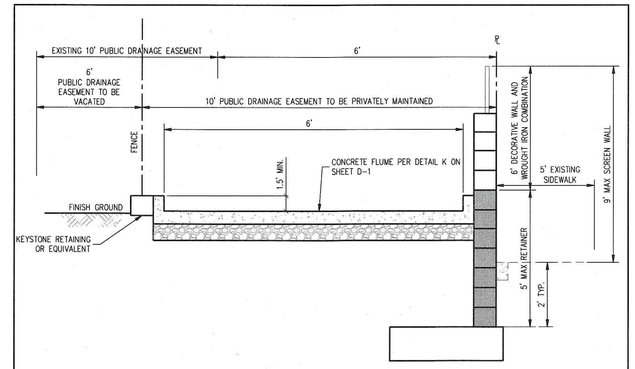


D-1
SHEET 5 OF 10

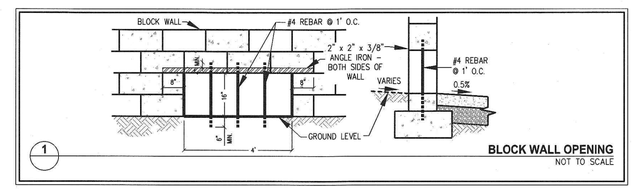
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DRAINAGE EASEMENT SECTION (C)
NOT TO SCALE



DRAINAGE EASEMENT SECTION (D)
NOT TO SCALE



BLOCK WALL OPENING
NOT TO SCALE

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

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
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NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

SKY POINTE PLAZA

DETAIL SHEET II

S8 T23 R61

DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

PROFESSIONAL ENGINEER - STATE OF NEVADA
DERICK D.J. YORO
Exp: 06/30/2018
CIVIL
No. 16396
11/16/17

D-2
SHEET 6 OF 10

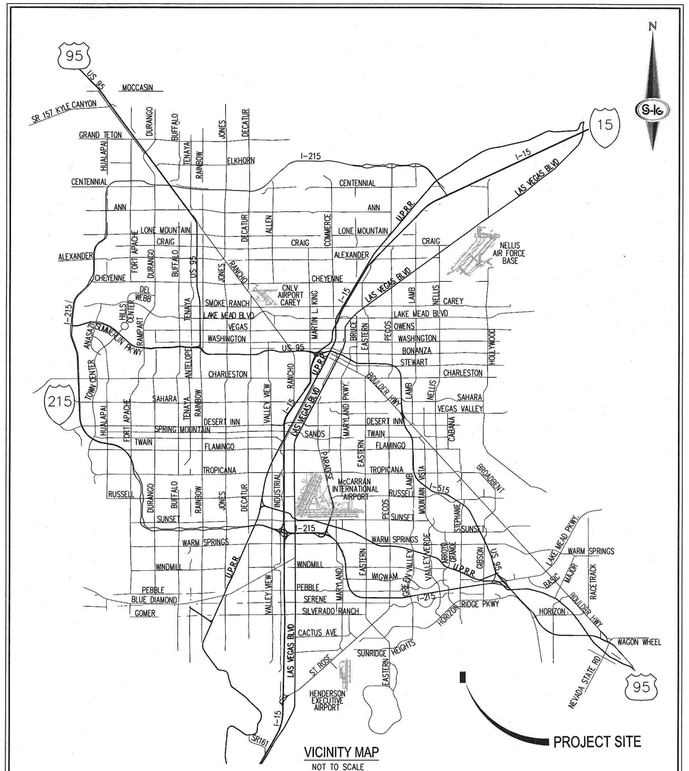
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NIGRO DEVELOPMENT

IMPROVEMENT PLANS FOR SKY POINTE PLAZA

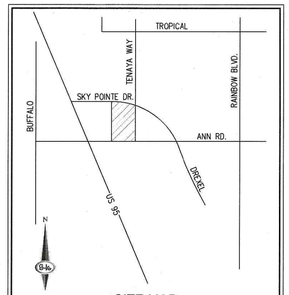
CITY OF LAS VEGAS, NEVADA

APN: 125-27-410-004



VICINITY MAP

NOT TO SCALE



SITE MAP

NOT TO SCALE

LEGAL DESCRIPTION

BEING A PORTION OF LOT 2, BLOCK 2 OF THAT COMMERCIAL SUBDIVISION KNOWN AS "ANN/TENAYA", RECORDED FEBRUARY 26, 1999 AT THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA, IN BOOK 88 OF PLATS, AT PAGE 55, LOCATED WITHIN THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 2; THENCE SOUTH 89°12'30" WEST, ALONG THE SOUTH LINE OF SAID LOT 2, A DISTANCE OF 229.58 FEET; THENCE NORTH 00°00'00" EAST, DEPARTING SAID SOUTH LINE, 352.61 FEET; THENCE SOUTH 90°00'00" WEST, 5.00 FEET RADIALLY TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 20.00 FEET; THENCE NORTHWESTERLY, 29.05 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 83°14'05" TO THE SOUTHERLY RIGHT-OF-WAY OF SKY POINTE DRIVE; THENCE SOUTH 83°14'05" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY, 44.86 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 300.00 FEET; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 300.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS SOUTH 14°10'02". WEST; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 459.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS NORTH 06°45'55" EAST; THENCE EASTERLY, 136.07 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 16°59'08" TO THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 27; THENCE SOUTH 00°07'30" EAST, DEPARTING SAID SOUTHERLY RIGHT-OF-WAY AND ALONG SAID EAST LINE, 314.27 FEET TO THE POINT OF BEGINNING.

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION	SHEET TITLE
1	C-1	COVER SHEET
2	C-2	NOTES SHEET
3	C-3	ABBREVIATION AND QUANTITY SHEET
4	G-1	GRADING PLAN I
5	D-1	DETAIL SHEET I
6	D-2	DETAIL SHEET II
7	U-1	UTILITY PLAN I
8	T-1	TRAFFIC PLAN I

APPROVALS

CITY ENGINEER–ALLEN PAVELKA PE, #9029 DATE

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED OF RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIALLY LISTED UNDER DEVIATIONS FORM STANDARDS. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA.

LAS VEGAS FIRE AND RESCUE DATE

CITY OF LAS VEGAS – PLANNING DEPARTMENT DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

CENTRAL TELEPHONE CO. DBA CENTURYLINK 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 STATUES AND / OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE: PROJECT NO. 400 FIELD
LVVWD APPROVED FIRE FLOW 3,000 GPM AT 20 PSI RESIDUAL
SHEETS: C-1, C-2, C-3, U-1

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM LAS VEGAS VALLEY WATER DISTRICT.

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.

SOUTHWEST GAS CORPORATION DATE

COX COMMUNICATIONS LAS VEGAS, INC. DATE

OWNER	DEVELOPER	ENGINEER
SKY POINTE HOTEL GROUP LLC 9115 W. RUSSELL ROAD #215 LAS VEGAS, NV 89148 PH: 702-247-1920 FX: 702-247-1916 CONTACT: MIKE NIGRO	NIGRO CONSTRUCTION 9115 W. RUSSELL ROAD #215 LAS VEGAS, NV 89148 PH: 702-247-1920 FX: 702-247-1916 CONTACT: MIKE NIGRO	SLATER HANIFAN GROUP, INC. 5740 S. ARVILLE STREET, SUITE 216 LAS VEGAS, NV 89118 PH: (702) 284-5300 FX: (702) 284-5399 CONTACT: BRENT PARRISH

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. BLV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

ELEVATION – 708.825 (METERS) / 2325.54 (U.S. SURVEY FEET)
NORTH AMERICAN VERTICAL DATUM OF 1988

BASIS OF BEARINGS

NORTH 00°07'30" WEST, BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PLAT MAP, BOOK 88, PAGE 55 ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (AREA OUTSIDE THE 500 YEAR FLOODPLAIN), PER THE FEMA FIRM PANEL 32003C1745E DATED SEPTEMBER 27, 2002

DEVIATIONS FROM STANDARDS

SUP-19100: HOTEL WITH A WAIVER TO ALLOW A DISTANCE OF SEPARATION OF 80 FEET FROM A RESIDENTIAL.
SDR-19097: FOUR-STORY HOTEL WITH A WAIVER TO ALLOW A PERIMETER LANDSCAPE BUFFER OF 14 FEET FOR A THREE FOOT SECTION.
VAR-19447: TO ALLOW A FOUR STORY HOTEL.

SWPPP NOTE

NOTE: ALL LAND SURFACE AREA DISTURBANCES OVER 1 ACRE REQUIRE A STORMWATER DISCHARGE PERMIT ISSUED BY THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP). A PHASED CONSTRUCTION UNIT IN A CONTIGUOUS SUBDIVISION IS CONSIDERED UNDER CONSTRUCTION UNTIL ALL STRIPPED SURFACE AREAS HAVE BEEN COVERED BY PAVING, BUILDING CONSTRUCTION OR PLANTING. A STORMWATER DISCHARGE PERMIT APPLICATION AND ASSOCIATED INFORMATION MAY BE DOWNLOADED FROM THE WEB SITE: HTTP://WWW.STATE.NV.US/BMPC/STORM01.HTM PROJECTS THAT DISTURB MORE THEN ONE ACRE OF LAND MUST SUBMIT TO NDEP A "NOTICE OF INTENT" FOR INCLUSION UNDER STORMWATER PERMIT NO. NVR100000 ALONG WITH THE APPROPRIATE FILLING FEE.

PROJECT INFORMATION

ACREAGE: = 1.83 AC
ZONING: = SC-TC

EARTHWORK SUMMARY (UNADJUSTED)

CUT	151 CY.
FILL	4,583 CY.
NET	4,432 CY.

GEOTECHNICAL ENGINEER

PREPARED BY: WESTERN TECHNOLOGIES INC.
ADDRESS: 6633 WEST POST ROAD LAS VEGAS, NV 89118
PHONE: 702-798-8050
PROJECT No. ORIGINAL: 4127.J0057, UPDATED: 4127.J0074
DATED: ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017

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

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

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

SKY POINTE PLAZA

COVER SHEET

S8 T23 R61

DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

DERICK D. YORO — No. 16396 — CIVIL — Exp: 06/30/2018 — STATE OF NEVADA — PROFESSIONAL ENGINEER
4/16/17

C-1
SHEET 1 OF 10

J:\nig1701-000 sky pointe plaza\dwg\smprov\nig1701-000-cvr.dwg 11/15/2017 10:55 PM Jane Cretty

STORMWATER RUNOFF MANAGEMENT

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT ,MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND BMPS WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. 8LV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

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LEGAL DESCRIPTION

BEING A PORTION OF LOT 2, BLOCK 2 OF THAT COMMERCIAL SUBDIVISION KNOWN AS "ANN/TENAYA", RECORDED FEBRUARY 26, 1999 AT THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA, IN BOOK 88 OF PLATS, AT PAGE 55, LOCATED WITHIN THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID LOT 2; THENCE SOUTH 89°12'30" WEST, ALONG THE SOUTH LINE OF SAID LOT 2, A DISTANCE OF 229.58 FEET; THENCE NORTH 00°00'00" EAST, DEPARTING SAID SOUTH LINE, 352.61 FEET; THENCE SOUTH 90°00'00" WEST, 5.00 FEET RADIALLY TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 20.00 FEET; THENCE NORTHWESTERLY, 29.05 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 83°14'05" TO THE SOUTHERLY RIGHT-OF-WAY OF SKY POINTE DRIVE; THENCE SOUTH 83°14'05" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY, 44.86 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 300.00 FEET; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE NORTHERLY HAVING A RADIUS OF 300.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS SOUTH 14°10'02" WEST; THENCE EASTERLY, 38.76 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 07°24'07" TO THE BEGINNING OF A REVERSE CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 459.00 FEET, A RADIAL LINE TO SAID BEGINNING BEARS NORTH 06°45'55" EAST; THENCE EASTERLY, 136.07 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 16°59'08" TO THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 27; THENCE SOUTH 00°07'30" EAST, DEPARTING SAID SOUTHERLY RIGHT-OF-WAY AND ALONG SAID EAST LINE, 314.27 FEET TO THE POINT OF BEGINNING.

2.2 CITY OF LAS VEGAS SEWER NOTES

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

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # ADD FIELD (REVISED 01/09/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE 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 REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

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

GRADING NOTES

1. INDICATED GRADES OTHER THAN T.C., F.G. & GUTTER F.L. ARE ROUGH GRADES.
2. THE ROUGH GRADING PLANS SHALL BE ON THE JOB SITE AT ALL TIMES. THE ROUGH GRADING SHALL BE FINISHED IN CONFORMANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE GRADING QUANTITIES ARE BASED ON THE ELEVATION AND DETAILS SHOWN ON THE PLANS. ANY DEVIATIONS FROM THE PLANS WILL RESULT IN QUANTITY CHANGES.
3. CARE SHALL BE EXERCISED IN GRADING CORNER LOTS.
4. ROUGH PAD ELEVATIONS SHALL BE GRADED TO WITHIN 0.1' OF THE PAD ELEVATIONS SHOWN ON THE PLANS. WHEN GRADING IS COMPLETE PER THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE LOTS CAN BE INSPECTED. AT THAT TIME THE ENGINEER SHALL ALSO DECIDE IF ANY ADDITIONAL DITCHES OR BERMS ARE REQUIRED. THE CONTRACTOR IS REQUESTED NOT TO REMOVE ANY OF HIS ROUGH GRADING EQUIPMENT UNTIL HE RECEIVES GRADING APPROVAL FROM THE ENGINEER.
5. SOILS REPORT PREPARED BY WESTERN TECHNOLOGIES INC, PROJECT NO. ORIGINAL: 4127.JD057, UPDATED: 4127.JD074, DATED ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017.
6. EARTHWORK QUANTITIES (RAW):
    -CUT = 151 CUBIC YARDS.
    -FILL = 4,583 CUBIC YARDS

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

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE # 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 AND RESCUE FOR ALL INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FROM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK [IFC 105.7.12]
4. ON ANT 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 THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC 507.5.5.7.3]
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 PANTED RED. [IFC 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC C102]
    - RESIDENTIAL- 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    - COMMERCIAL- 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1,000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET 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 ARE 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 ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FEET 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 FEET OUTSIDE AND 28 FEET 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 ONLY 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. CURVES THROUGH PARKING AREAS SHALL BE NOT LESS THAN 24 FT. [IFC 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THE 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 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET 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 FEET ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG ORON ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC 503.6 AND IFC APPENDIX M.

2.5 CITY OF LAS VEGAS GRADING NOTES

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

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

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

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

2.1 CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS DAMAGED OR DISTURBED 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 AT 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL P

ABBREVIATIONS

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

SPECIAL NOTE

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

NOTICE TO CONTRACTOR

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

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

LEGEND

EXISTING	PROPOSED	DESCRIPTION
(1900)	1900	5' CONTOUR
		1' CONTOUR
		STRIPING
		SEWER MANHOLE
		CURB AND GUTTER
EX 8" PVC SS	8" PVC SS	SANITARY SEWER PIPE AND FLOW ARROW
EX 8" PVC WTR	8" PVC WTR	WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
PAD=XXX.X FF=XXX.X	PAD=XXX.X FF=XXX.X	PAD ELEVATION FINISHED FLOOR ELEVATION
(XX.XX) TC	(XX.XX) TC	ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE

	EXISTING GAS GATE VALVE
@MH	EXISTING UNKNOWN MANHOLE
GAS	EXISTING GAS, SIZE PER PLAN
	EXISTING POWER POLE
	EXISTING TRAFFIC SIGNAL
	EXISTING WALL
	WATER PIPE FITTING
POC	WATER POINT OF CONNECTION
POC	SEWER POINT OF CONNECTION
	DAYLIGHT LINE
	STREET CENTERLINE
	RIGHT-OF-WAY
	MATCHLINE
	BOUNDARY LINE
	PHASE LINE
℄	PROPERTY LINE
	FLOWLINE
	SAWCUT
FILL / CUT	CUT/FILL TRANSITION LINE
	SIDEWALK
	EX STRIPING TO BE OBLITERATED
	GRADE BREAK LINE
	REFLECTIVE RAISED PAVEMENT MARKERS
BWV	BACK WATER VALVE
	WROUGHT IRON FENCE
	PONY WALL
	DECORATIVE PERIMETER WALL
	DECORATIVE PERIMETER RETAINING WALL
	PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
	PROPOSED SCARP AREA
	DRIVEWAY
	PROPOSED RIP RAP
	SIGHT VISIBILITY ZONE PER STD DWG NO. 201.2
	HANDICAP RAMP

QUANTITIES

			PRIVATE	PUBLIC
DRAINAGE				
1.	12" PVC PIPE	EA	20	–
2.	MODIFIED TYPE 'C' DROP INLET	EA	–	1
SEWER SYSTEM				
1.	6" PVC SEWER LATERAL (PRIVATE)	LF	112	–
2.	STANDARD 48" SEWER MANHOLE (PRIVATE)	EA	1	–
WATER SYSTEM				
1.	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	1	–
2.	6" PVC WATER PIPE (CLASS 150)	LF	21	–
3.	8" PVC WATER PIPE (CLASS 150)	LF	145	–
4.	1" COPPER SERVICE W/ 1" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	–	1
5.	2" COPPER SERVICE W/ 2" METER & 2" RPPA PER UDACS PLATE NO. 4 & 8	EA	–	1
6.	8" RPDA	EA	–	1
STREET IMPROVEMENTS				
1.	2" A.C. PAVEMENT OVER 6" TYPE II	SY	1,612	–
2.	3" A.C. PAVEMENT OVER 6" TYPE II	SY	3,177	–
3.	4" THICK CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	90	–
4.	STANDARD 24" TYPE "L" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	197	18
5.	6" TYPE "A" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	1,477	–
6.	3' WIDE CONCRETE VALLEY GUTTER W/10" TYPE II AGGREGATE BASE	SF	1,130	–
TRAFFIC IMPROVEMENTS				
1.	12"X18" NO PARKING SIGN WITH POST	EA	6	–
2.	BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	1	–

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE _____ PROJECT No. ADD FIELD
LVVWD APPROVED FIRE FLOW 3,000 GPM AT 20 PSI RESIDUAL







SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

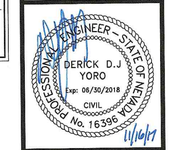
SKY POINTE PLAZA

ABBREVIATION AND QUANTITY SHEET

S8 T23 R61

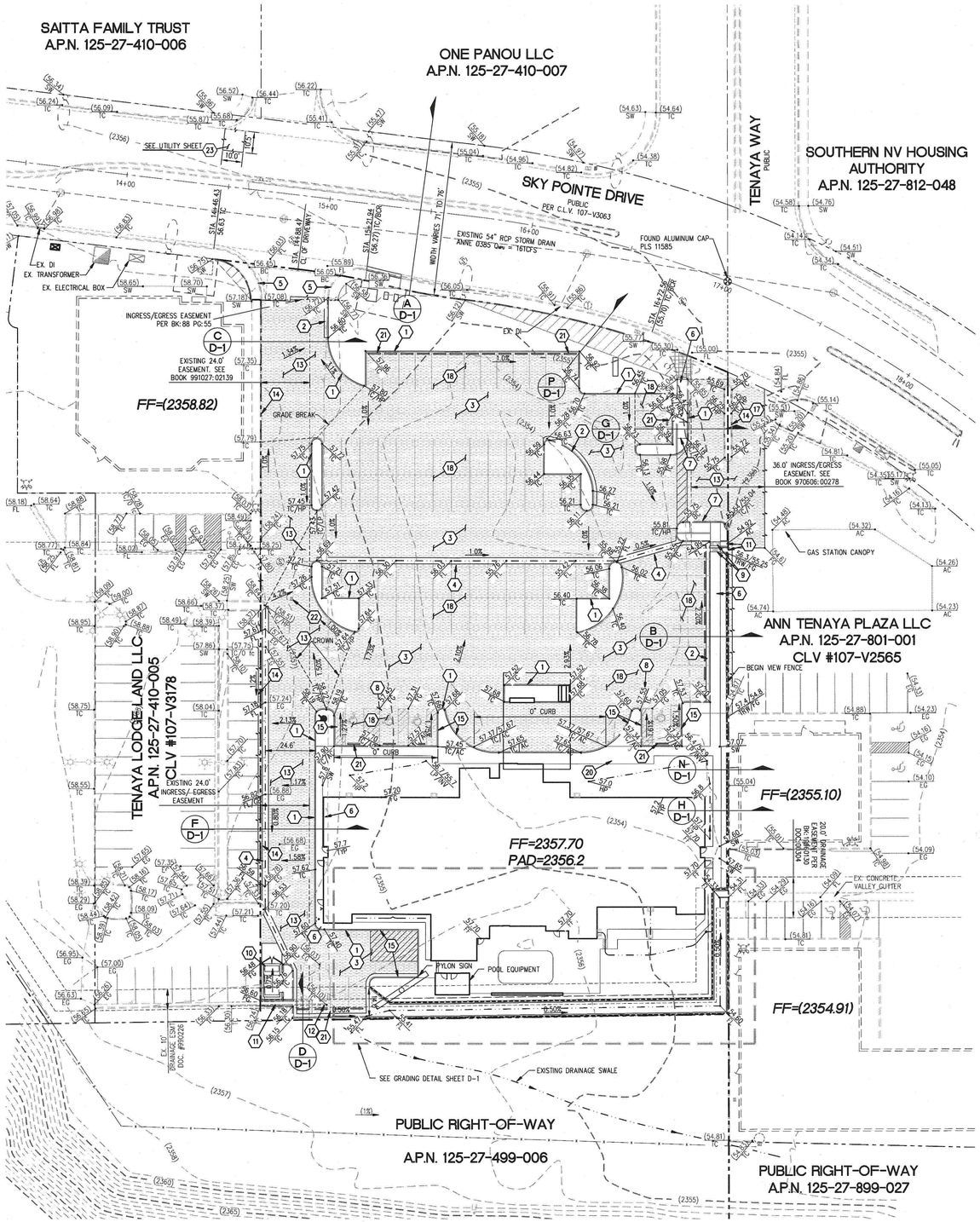
DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

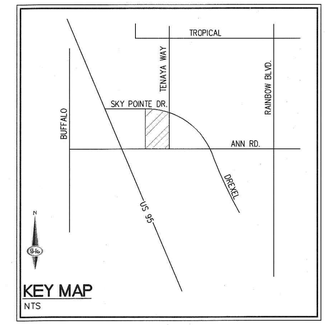
PROJECT NO.
NIG1701-000



C-3
SHEET 3 OF 10

J:\nig\1701-000 sky pointe plaza\dwg\improv\nig1701-000-cvr.dwg 11/15/2017 10:55 PM Jane Cretty





BENCHMARK

CITY OF LAS VEGAS VERTICAL CONTROL (v.2002) No. BLV90 34NES

BEING A RIVET AND PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF ANN ROAD AND RAINBOW.

ELEVATION – 708.825 (METERS) / 2325.54 (U.S. SURVEY FEET)
NORTH AMERICAN VERTICAL DATUM OF 1988

BASIS OF BEARINGS

NORTH 00°07'30" WEST, BEING THE WEST LINE OF THE WEST HALF (W 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN ON PLAT MAP, BOOK 88, PAGE 55 ON FILE IN THE OFFICE OF THE COUNTY RECORDER, CLARK COUNTY, NEVADA.

FEMA FLOOD ZONE INFORMATION

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (AREA OUTSIDE THE 500 YEAR FLOODPLAIN), PER THE FEMA FIRM PANEL 32003C1745E DATED SEPTEMBER 27, 2002

GEOTECHNICAL ENGINEER

PREPARED BY: WESTERN TECHNOLOGIES INC.
ADDRESS: 6633 WEST POST ROAD LAS VEGAS, NV 89118
PHONE: 702-798-8050
PROJECT No. ORIGINAL:4127J0057, UPDATED: 4127J0074
DATED: ORIGINAL: SEPTEMBER 12, 2007, UPDATED: JULY 6, 2017

STORMWATER RUNOFF MANAGEMENT

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

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT ,MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.

3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.

4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.

5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

GENERAL NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2006, SECTION 2304.11.2.2.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
4. MAXIMUM/MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
5. SEE DETAIL SHEETS FOR CROSS SECTIONS AND DETAILS.
6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL.
8. EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLACING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.
10. ADD 2300 TO PLAN GRADES, EXCLUDING PAD ELEVATIONS, FF ELEVATIONS, AND EXISTING & PROPOSED CONTOURS'.
11. ALL ON-SITE STORM DRAINS AND THE ASSOCIATED FACILITIES ARE PRIVATELY OWNED AND TO BE MAINTAINED.
12. CONTRACTOR TO VERIFY ALL HANDICAP ACCESSIBLE ROUTES AND PARKING STALLS ARE IN CONFORMANCE WITH A.D.A ACCESSIBILITY GUIDELINES AND DO NOT EXCEED MAXIMUM SLOPES IN ANY DIRECTION PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES.
13. CONSTRUCT A.D.A. ROUTE, HAND RAILS, PARKING, SIGNAGE & RAMPS TO COMPLY WITH ICC/ANSI A117.1-2012
14. THE SAWCUT LINES AND LIMITS OF A.C. REMOVAL AND REPLACEMENT SHALL BE DETERMINED BY A CNLV CONSTRUCTION SERVICES INSPECTOR. A.C. SHALL BE REPLACED BY MECHANICAL MEANS. TRENCH BACKFILL MATERIAL SHALL BE SAMPLED, DESIGNED, TESTED AND CERTIFIED PER CNLV TRENCH BACKFILL POLICY.
15. ALL AREAS, AS INDICATED ON THIS SET OF PLANS, SHOWN TO BE PAVED OR HARDSCAPE SHALL REMAIN NATURAL DESERT OR LANDSCAPING.

CONSTRUCTION NOTES

1. CONSTRUCT 6" "A" TYPE CURB PER DETAIL "E" ON SHEET D-1
2. CONSTRUCT "L" CURB GUTTER PER CCAUSD #216
3. CONSTRUCT 3" AC OVER 6" TYPE II AGGREGATE BASE, SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS
4. CONSTRUCT 3' VALLEY GUTTER PER DETAIL 'J' ON SHEET D-1
5. EXISTING CURB, GUTTER & SIDEWALK TO REMAIN
6. CONSTRUCT SIDEWALK PER CCAUSD #234
7. CONSTRUCT SIDEWALK RAMP PER DETAIL 'M' ON SHEET D-1
8. HANDICAP LOADING AREA AND ACCESS PATH
9. CONSTRUCT SIDEWALK UNDERDRAIN PER CCAUSD 236
10. TRASH ENCLOSURE PER ARCHITECTURAL PLANS
11. CONSTRUCT 2' WIDE CONC. FLUME PER DETAIL 'K' ON D-1
12. REMOVE AND REPLACE CURB AND GUTTER, AS SHOWN
13. SAWCUT EXISTING AC PAVEMENT, LIMITS & THICKNESS OF PATCH TO BE DETERMINED IN THE FIELD BY A CLV INSPECTOR.
14. FIELD ADJUST TO MATCH EXSTING AC PAVEMENT
15. TRANSITION A-CURB FROM 6" FACE TO 0" FACE
16. INVERT GUTTER PAN
17. RECONSTRUCT MEDIAN ISLAND CURB PER CCAUSD #219
18. CONSTRUCT 2" AC OVER 6" TYPE II AGGREGATE BASE, SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS
19. INSTALL AREA DRAIN, NEENAH R-4373-6 ON 6" PVC OR EQUIVALENT
20. NOT USED
21. INSTALL BUMPER BLOCKS
22. ADJUST TO GRADE
23. SAWCUT, REMOVE AND REPLACE AC. AND STRIPING (IF APPLICABLE) PER CCAUSD #504
24. PVC DRAIN STUB FOR ROOF DRAIN, 1.0% MIN SLOPE. SEE PLAN FOR SIZE. SEE PLUMBING PLAN FOR CONNECTION.

NOTES:

1. ALL ONSITE STORM DRAIN FACILITIES ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED.
2. NDOT ENCROACHMENT PERMIT REQUIRED BY CONTRACTOR ONLY IF WORK IS DONE IN NDOT ROW. NO WORK IN NDOT ROW IS PROPOSED ON THIS PLAN SET.

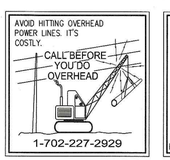
FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY DS-4214 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

11/16/17
DERICK D.J. YORO, P.E. #16396 DATE

N

0 30 60
SCALE – 1"=30' FEET





SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT
SKY POINTE PLAZA
GRADING PLAN I

S8 T23 R61

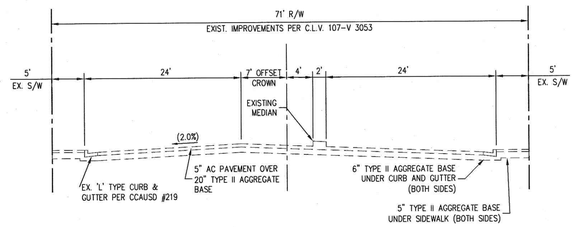
DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

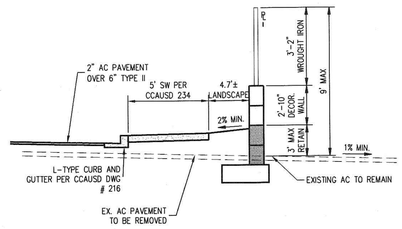
PROFESSIONAL ENGINEER – STATE OF NEVADA
DERICK D.J. YORO
Exp: 06/30/2018
CIVIL
No. 16396
11/16/17

G-1
SHEET 4 OF 10

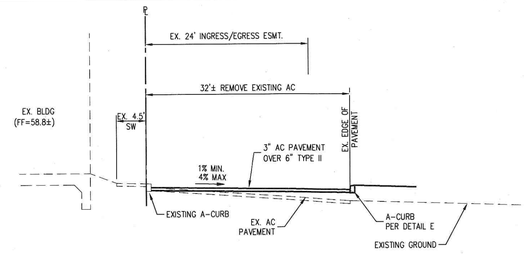
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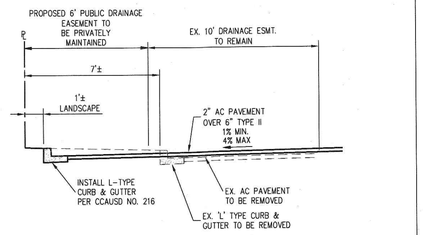
71' EXSTING ROW SKY POINTE DRIVE (A)
NOT TO SCALE



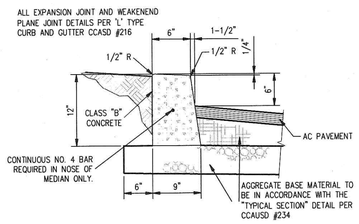
EAST SIDE PROPERTY LINE SECTION (B)
NOT TO SCALE



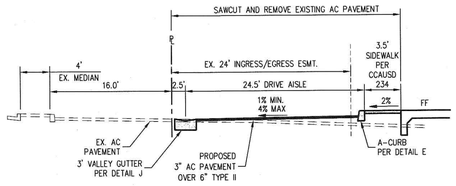
WEST SIDE PROPERTY LINE SECTION (C)
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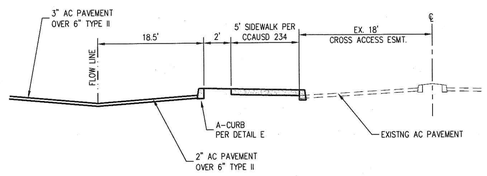
REAR PROPERTY LINE SECTION (D)
NOT TO SCALE



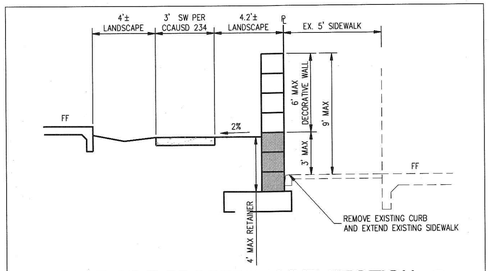
6" TYPE "A" CURB (E)
NOT TO SCALE



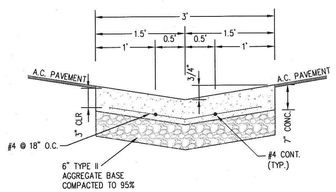
WEST SIDE PROPERTY LINE SECTION (F)
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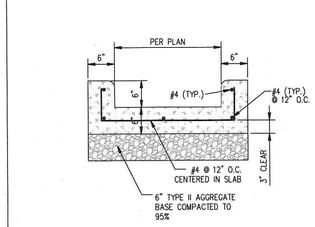
EAST SIDE PROPERTY LINE SECTION (G)
NOT TO SCALE



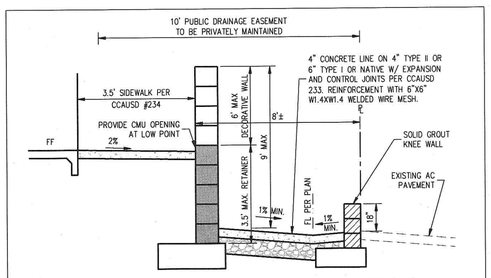
EAST SIDE PROPERTY LINE SECTION (H)
NOT TO SCALE



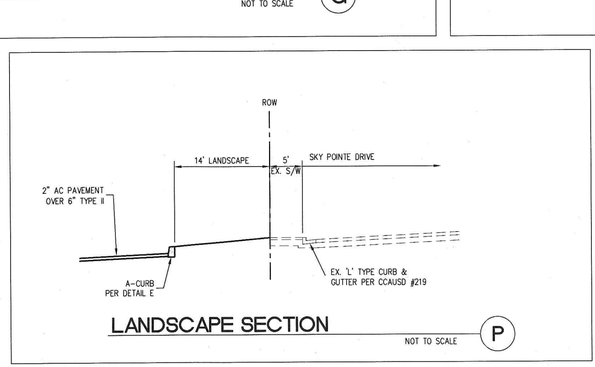
3' VALLEY GUTTER (J)
NOT TO SCALE



CONCRETE FLUME (K)
NOT TO SCALE

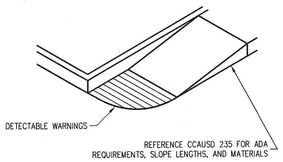


EAST SIDE PROPERTY LINE SECTION (L)
NOT TO SCALE

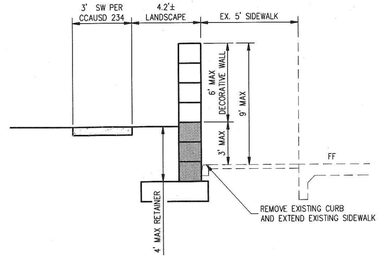


LANDSCAPE SECTION (P)
NOT TO SCALE

NOTE:
THE DETAILS ON THIS SHEET ARE MINIMUM ADA STANDARDS THAT MUST BE COMPLIED WITH. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY DETAILS ON THE CIVIL PLANS THAT DO NOT COMPLY WITH THE MINIMUM ADA AND CLV STANDARDS SHOWN HEREON.



ONSITE SIDEWALK RAMP (M)
NOT TO SCALE



EAST SIDE PROPERTY LINE SECTION (N)
NOT TO SCALE

CONSTRUCTION NOTES

(A) POOL AREA GRADING AND DRAINAGE SYSTEM TO BE DESIGNED BY OTHERS PER NRS STATUTES AND THE SOUTHERN NEVADA POOL CODE.

(B) CONSTRUCT 2' WIDE CONC. FLUME PER DETAIL 'K' ON D-1

(C) INSTALL 12" PVC DRAINAGE PIPE, 0.5% MINIMUM SLOPE, MAINTAIN MIN 12" COVER

(D) INSTALL BEEHIVE DROP INLET CCAUSD #416

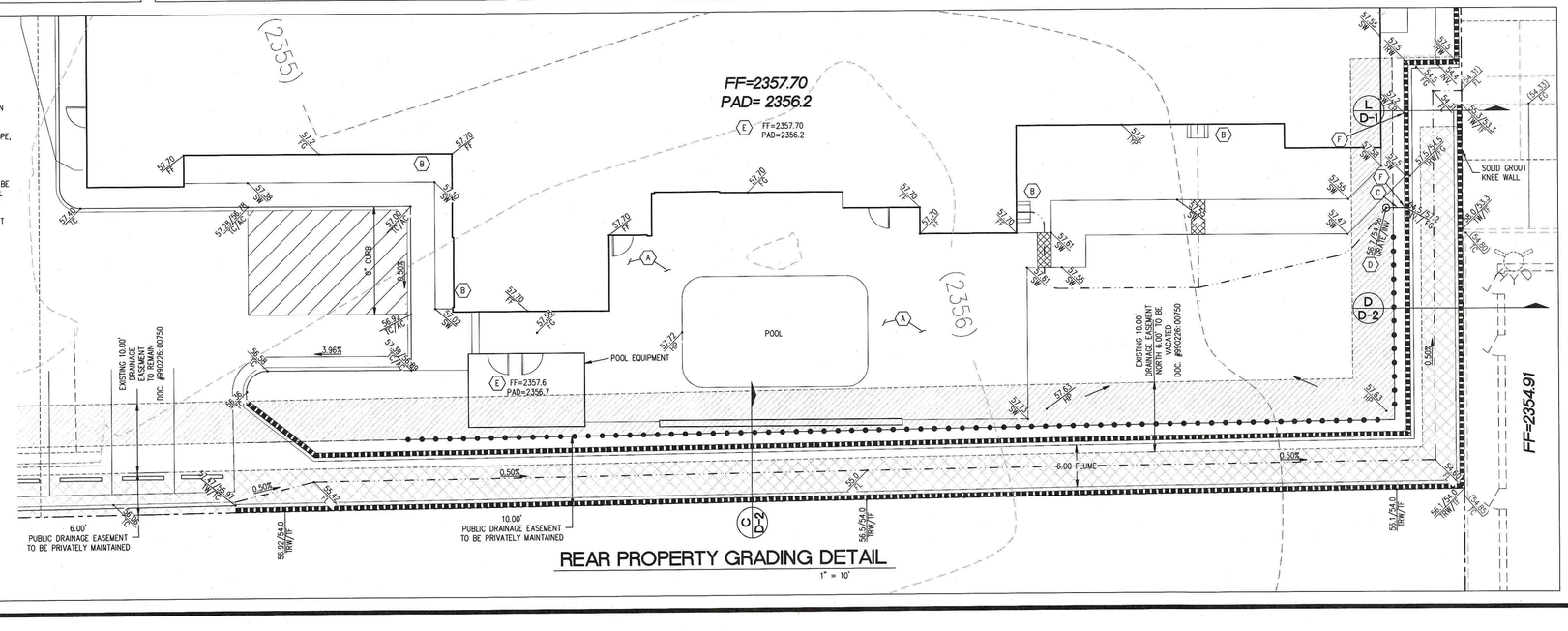
(E) FINISHED FLOOR TO PAD ELEVATION DIFFERENCE TO BE VERIFIED WITH STRUCTURAL SECTION BY STRUCTURAL ENGINEER

(F) INSTALL CMU WALL OPENING PER DETAIL 1 ON SHEET D-2

LEGEND

PUBLIC DRAINAGE EASEMENT TO BE VACATED

PUBLIC DRAINAGE EASEMENT TO BE DEDICATED



REAR PROPERTY GRADING DETAIL
1" = 10'

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

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

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP.	APP. DATE

LAS VEGAS, NV

NIGRO DEVELOPMENT
SKY POINTE PLAZA
DETAIL SHEET I

S8 T23 R61

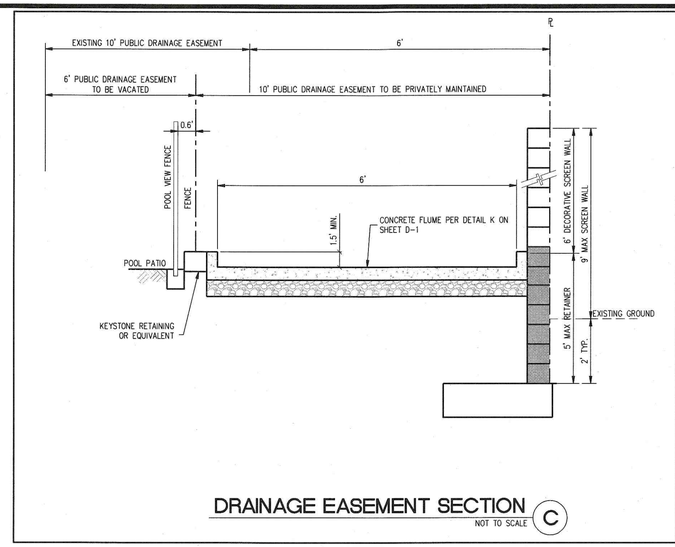
DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

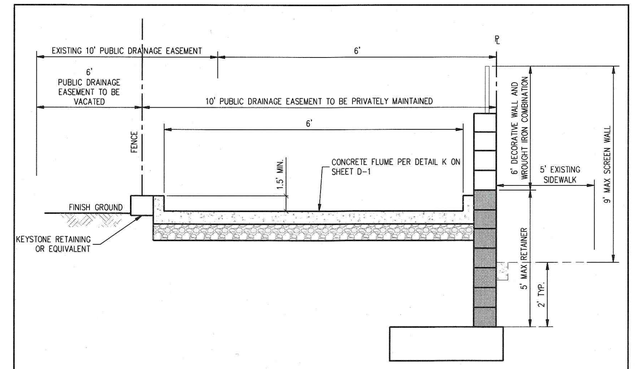


D-1
SHEET 5 OF 10

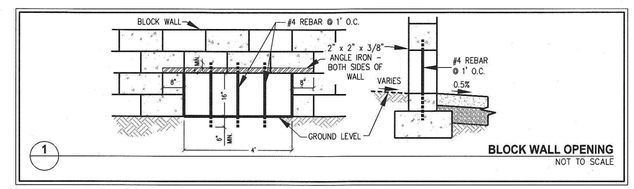
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DRAINAGE EASEMENT SECTION (C)
NOT TO SCALE



DRAINAGE EASEMENT SECTION (D)
NOT TO SCALE



BLOCK WALL OPENING
NOT TO SCALE

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

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE (USA)

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

NIGRO DEVELOPMENT

SKY POINTE PLAZA

DETAIL SHEET II

S8 T23 R61

DATE: 7/31/2017
DRAFTER: NKZ
DESIGNER: RG
CHECKED: BP

PROJECT NO.
NIG1701-000

PROFESSIONAL ENGINEER - STATE OF NEVADA
DERICK D.J. YORO
Exp: 06/30/2018
CIVIL
No. 16396
11/16/17

D-2
SHEET 6 OF 10

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NO	DESCRIPTION	DATE	BY	APP. DATE	APP.

LAS VEGAS, NV

SKY POINTE HOTEL GROUP, LLC

SKY POINTE PLAZA

US95 BASIN

S 27
T 19 S
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DATE:	NOV 2017
DRAFTER:	GNS
DESIGNER:	GNS
CHECKED:	ARP
PROJECT NO.	NIG1701.000

EXHIBIT G

SHEET 1 OF 1

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