

DS #:

4976

APN:

138-08-401-013

PROJECT:

All Storage @ Cheyenne & Fort Apache

SUBMITTAL:

2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		May 15, 2018
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	
	All Storage @ Cheyenne & Fort Apache	
Cross Streets:	NWC of Cheyenne Blvd. & Dapple Grey Av.	
File Number:	F:\Depot\DSMemos\DS4976B.doc	
Parcel Number:	138-08-401-013	
Zoning Action:	SDR-71559	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X
COPIES TO:		Horrocks Engineers
		Cheyenne Investors, LLC
		Bart Anderson, P.E., DevCo

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	4/10/2018	4/25/2018	Not Approved	\$400.00	495062: \$400
2 nd Submittal	5/3/2018	5/15/2018	See Comments Below	\$400.00	495624: \$400
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 Clark County Public Works Department concurrence.

1. The proposed Public drainage easement along the northern boundary must be recorded by separate document prior to the final acceptance of the improvement plans unless they are recorded by parcel map or final map.

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.

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

END OF REMARKS

ays

T/R/S: T20S/R60E/08
AREA L-08

Albert Sung

From: Albert Sung
Sent: Monday, April 30, 2018 5:51 PM
To: 'Larry Bitton'
Cc: 'David Clark'
Subject: RE: All Storage - Cheyenne and Fort Apache

I concur.

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: Larry Bitton <larryb@horrocks.com>
Sent: Monday, April 30, 2018 5:27 PM
To: David Clark <dclark@horrocks.com>; Albert Sung <YSung@LasVegasNevada.GOV>
Cc: Mike Pederson <mikep@horrocks.com>
Subject: RE: All Storage - Cheyenne and Fort Apache

David –

I just spoke with Albert... see highlighted requirements below. Albert – if I've misstated, please let us know.

Thanks,

Larry Bitton, PE
(702) 883-1300

From: David Clark
Sent: Thursday, April 26, 2018 3:50 PM
To: ysung@lasvegasnevada.gov
Cc: Larry Bitton <larryb@horrocks.com>; Mike Pederson <mikep@horrocks.com>
Subject: All Storage - Cheyenne and Fort Apache

Albert,

I have a few questions about how we can resolve a few of the comments we just received for the All Storage @ Cheyenne & Fort Apache project.

For Comment 3. "The required public drainage easement must be 10'-wide minimum and is to be privately maintained. Clearly label as such in the grading plan and the recording documents. Concrete lined the easement so as to ease the burden of future maintenance by the property owner." [Larry Bitton] Albert is OK with concrete lining just the lower area between the two walls. We still need to provide a 10' wide public drainage easement – privately maintained.

We have two sections along the north wall that the easement would comprise. See the attached screenshots. We have riprap called out for portions of the swale along the north wall. In sections 2 and 5, do we need to concrete line the area above the retaining wall? The flows conveyed through the easement won't affect this area and the grading does not concentrate flow in this area that is currently called out as landscaping?

For Comment 4. "The Proposed finished floor elevation of the new building is below the corresponding street grades in Cheyenne Boulevard. In Detail Section 10/C6.0, revise the height of the proposed berm to be 18" above the back of sidewalk at a minimum." [Larry Bitton] Because the finished floor of the building is below the curb, the condition is treated like a flood zone and the protection requirement is increased to 18" above the 100 yr water surface elevation in Cheyenne rather than twice the depth of flow.

The berm currently provides protection of up to twice the depth of flow in Cheyenne. Is 18" of protection above the curb/sidewalk standard if the finished floors are proposed below the street grades?

Regards,

David B. Clark, EIT
Engineer



1401 N Green Valley Parkway, Suite 160 | Henderson, Nevada 89074

Work 702 966 4063 | Mobile 208 680 7910

Email dclark@horrocks.com www.horrocks.com

WE HAVE MOVED – note our new address above.

ADDENDUM #1
TO THE
TECHNICAL DRAINAGE STUDY FOR
ALL STORAGE
@
CHEYENNE AND FORT APACHE
(APN 138-08-401-013)

IN
THE CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

PREPARED FOR
Cheyenne Investors LLC
530 Lomas Santa Fe, Suite C
Solano Beach, CA 92075
Ph. (702) 348 5100

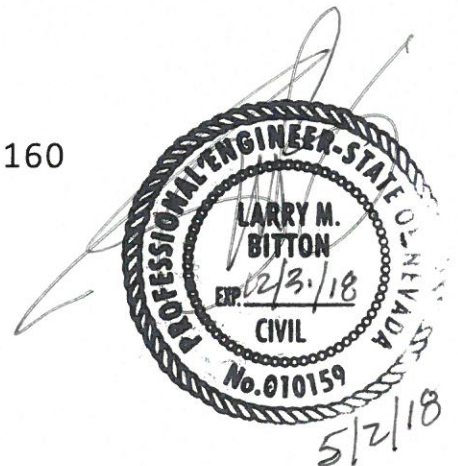
SUBMITTED TO
CITY OF LAS VEGAS

MAY 2018

HORROCKS ENGINEERS PROJECT NV-1029-1801

Horrocks Engineers
1401 N Green Valley Pkwy, Suite 160
Henderson, NV 89074
702.966.4063

HORROCKS
ENGINEERS





May 02, 2018

Albert Sung, P.E.
Flood Control
City of Las Vegas Public Works
333 N. Rancho Drive
Las Vegas, NV 89106

RE: Addendum #1 to Technical Drainage Study for Cactus Storage, DS: 4976

Dear Mr. Sung:p

Horrocks Engineers hereby submits Addendum #1 to the Technical Drainage Study Cactus Storage which responds to the City's comments dated April 25, 2018. The comments are listed below together with the associated responses.

COMMENTS AND RESPONSES

CLV COMMENT #1

Provide a copy of the zoning/planning conditions associated with this site (SDR-71559) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.

RESPONSE:

The zoning/planning conditions associated with the site have been included with this submittal and can be found in the Appendix. None of the conditions of approval revise the site drainage parameters or require that the drainage study be revised and resubmitted.

CLV COMMENT #2

The subject development accepts flows from the adjacent property through the northwest corner. Provide public drainage easement along the northern boundary of the site to perpetuate offsite flows. Public drainage easement must be recorded by separate document prior to the final acceptance of the improvement plans unless they are recorded by parcel map or final map.

RESPONSE:

A 10' Public Drainage Easement to be Privately Maintained has been included along the northern boundary of the site. The easement will be recorded by separate document. The easement has been included on the grading plans.

CLV COMMENT #3

The required public drainage easement must be 10'-wide minimum and is to be privately maintained. Clearly label as such in the grading plan and the recording documents. Concrete lined the easement so as to ease the burden of future maintenance by the property owner.

RESPONSE:

The 10' Drainage Easement will be concrete-lined as discussed with the *City of Las Vegas – Flood Control*. The portion of the easement that conveys offsite flows to the block wall openings will be concrete lined, and the portion that is not will be landscaped as proposed in the original study. The concrete lined portion of the easement is proposed from the northwest corner of the site to the 1' berm that diverts flows north into the 2nd block wall opening. The portion east of the berm will be designed as proposed in the original study. The 1' berm will be concrete lined, and will contain flow above the specific energy (0.95') as shown with the normal depth calculations. The normal depth calculations for the swale have been revised and included in the Appendix. Table 1 below includes a revised section summary. Figure 6 has been revised to show the concrete lined swale and the revised section summary table and can be found in the Appendix.

CLV COMMENT #4

The proposed finished floor elevation of the new building is below the corresponding street grades in *Cheyenne Boulevard*. In *Detail Section 10/C6.0*, revise the height of the proposed berm to be 18” above the back of sidewalk at a minimum.

RESPONSE:

The berm along Cheyenne Avenue has been revised to be at least 18” above the adjacent back of sidewalk as requested and will include a 1’ top width. The corresponding grading plan sheets and details have been revised to show the 18” berm. A retaining wall has been proposed along the onsite back of curb to allow for acceptable grading within the landscaped area. The normal depth calculations have been revised to include the 18” berm. Table 1 below shows the revised sections in Cheyenne Avenue.

TABLE 1

Cross Section Summary						
Cross Section	Description	Q (cfs)	Slope (%)	Depth (ft)	Velocity (ft/s)	DxV
Section 1 - Cheyenne 100 - YR	CD1	25	3.0	0.45	4.84	2.18
Section 1 - Cheyenne 10 - YR	CD1	14	3.0	0.39	4.23	1.65
Section 2 - Dapple Gray 100 - YR	CD2	8	0.7	0.41	2.07	0.85
Section 2 - Dapple Gray 100 - YR - Sloped	CD2	8	0.7	0.50	2.44	1.22
Section 3 - Onsite 100 - YR	OND2	2	2.0	0.32	4.13	1.32
Section 4 - Onsite 100 - YR	OND1	5	0.5	0.51	2.22	1.13
Section 5 - EASEMENT - 100 - YR - Max Slope	ON-2**	3	7.3	0.15	7.16	1.07
Section 5 - EASEMENT - 100 - YR -Min Slope	ON-2**	3	1.6	0.23	4.37	1.01
Section 6 - BMP SWALE - 100 - YR - Max Slope	OND1	4.59	3.4	0.55	3.79	2.08
Section 6 - BMP SWALE - 100 - YR - Min Slope	OND1	4.59	0.5	0.78	1.88	1.47
Section 7 - BMP SWALE - 100 - YR - Max Slope	OND2	1.41	4.4	0.34	3.11	1.06
Section 7 - BMP SWALE - 100 - YR - Min Slope	OND2	1.41	1.1	0.44	1.85	0.81
Section 8 - DOWNSTREAM ESMNT - 100 - YR	CD2 + 6/12***	20	2.5	0.30	4.72	1.42

**Referenced from the 7-11 Study HTE: 98-8063

***6/12 cfs is referenced from basin N from the Cheyenne/Campbell Study. DS4106

CLV COMMENT #5

Label an existing drainage easement in the property on the east side of *Dapple Gray Avenue* with recorded document number on the grading plan.

RESPONSE:

The existing drainage easement east of the project site has been labeled on the grading plan and includes the recorded document number.

CLV COMMENT #6

Label the street names of the perimeter roadways in both of the Existing and Developed Conditions Basin Maps.

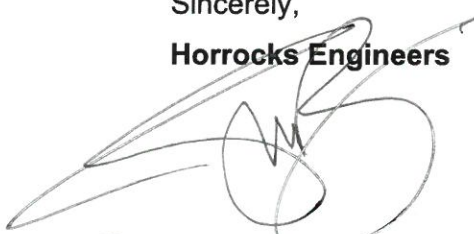
RESPONSE:

The street names of the perimeter roadways have been labeled on the Existing and Developed Conditions Basin Maps. The maps can be found in the Appendix.

It is anticipated that the responses above and the attached Addendum #1 fully address the City comments. We respectfully request City approval of the Technical Drainage Study. Please don't hesitate to contact us with any questions.

Sincerely,

Horrocks Engineers



Larry M. Bitton, PE

Land Development Manager



David B. Clark, EIT

Drainage

Appendix A – Revised and Additional Calculations

CLV Comment Letter

Notice of Final Action

Figure 5 – Existing Conditions Basin Map

Figure 6 – Developed Conditions Basin Map

Normal Depth Calculations

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		April 25, 2018
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	COPIES TO:	
Drainage Study for:	Horrocks Engineers	
All Storage @ Cheyenne & Fort Apache		
Cross Streets:	NWC of Cheyenne Blvd. & Dapple Grey Av.	Cheyenne Investors, LLC
File Number:	F:\Depot\DSMemos\DS4976A.doc	Bart Anderson, P.E., DevCo
Parcel Number:	138-08-401-013	
Zoning Action:	SDR-71559	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	4/10/2018	4/25/2018	See Comments Below	\$400.00	495062: \$400
			TOTAL FEES (LDDRS):	\$400.00	----

REMARKS:

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

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

1. Provide a copy of the zoning/planning conditions associated with this site (**SDR-71559**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. The subject development accepts flows from the adjacent property through the northwest corner. Provide public drainage easement along the northern boundary of the site to perpetuate offsite flows. Public drainage easement must be recorded by separate document prior to the final acceptance of the improvement plans unless they are recorded by parcel map or final map.
3. The required public drainage easement must be 10'-wide minimum and is to be privately maintained. Clearly label as such in the grading plan and the recording documents. Concrete lined the easement so as to ease the burden of future maintenance by the property owner.
4. The proposed finished floor elevation of the new building is below the corresponding street grades in *Cheyenne Boulevard*. In *Detail Section 10/C6.0*, revise the height of the proposed berm to be 18" above the back of sidewalk at a minimum.

5. Label an existing drainage easement in the property on the east side of *Dapple Grey Avenue* with recorded document number on the grading plan.
6. Label the street names of the perimeter roadways in both of the Existing and Developed Conditions Basin Maps.

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: T20S/R60E/08
AREA L-08



**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 16, 2017

Mr. Roger Foster
Foster Day I LLC
2660 Red Arrow Drive
Las Vegas, Nevada 89135

**RE: GPA-71555 [PRJ-71408] - GENERAL PLAN AMENDMENT
RELATED TO ZON-71556, SUP-71557 AND SDR-71559
CITY COUNCIL MEETING OF NOVEMBER 15, 2017**

Dear Mr. Foster:

The City Council at a regular meeting held on November 15, 2017 voted to **APPROVE** a request for a General Plan Amendment FROM: ML (MEDIUM-LOW DENSITY RESIDENTIAL) TO: SC (SERVICE COMMERCIAL) on 2.50 acres at the northwest corner of Cheyenne Avenue and Dapple Gray Road (APN 138-08-401-013), Ward 4 (Anthony) [PRJ-71408].

The Notice of Final Action was filed with the Las Vegas City Clerk on November 16, 2017.

Sincerely,

Peter Lowenstein, AICP
Acting Director
Department of Planning

PL:RTS:clb

cc: Mr. John Carroll
Shurley Design Studio, LLC
1980 Festival Plaza Drive, Suite #450
Las Vegas, Nevada 89135

**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



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**LAS VEGAS
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STEVEN G. SEROKA
MICHELE FIORE

SCOTT D. ADAMS
City Manager

November 16, 2017

Mr. Roger Foster
Foster Day I LLC
2660 Red Arrow Drive
Las Vegas, Nevada 89135

**RE: ZON-71556 [PRJ-71408] - REZONING RELATED TO GPA-71555,
SUP-71557 AND SDR-71559
CITY COUNCIL MEETING OF NOVEMBER 15, 2017**

Dear Mr. Foster:

The City Council at a regular meeting held on November 15, 2017 voted to **APPROVE** a request for a Rezoning FROM: U (UNDEVELOPED) [ML (MEDIUM LOW DENSITY RESIDENTIAL) GENERAL PLAN DESIGNATION] TO: C-1 (LIMITED COMMERCIAL) on 2.50 acres at the northwest corner of Cheyenne Avenue and Dapple Gray Road (APN 138-08-401-013), Ward 4 (Anthony) [PRJ-71408].

The Notice of Final Action was filed with the Las Vegas City Clerk on November 16, 2017.

Sincerely,

Peter Lowenstein, AICP
Acting Director
Department of Planning

PL:RTS:clb

cc: Mr. John Carroll
Shurley Design Studio, LLC
1980 Festival Plaza Drive, Suite #450
Las Vegas, Nevada 89135

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MICHELE FIORE

SCOTT D. ADAMS
City Manager

November 16, 2017

Mr. Roger Foster
Foster Day I, LLC
2660 Red Arrow Drive
Las Vegas, Nevada 89135

**RE: SUP-71557 [PRJ-71408] – SPECIAL USE PERMIT RELATED TO
GPA-71555, ZON-71556 AND SDR-71559
CITY COUNCIL MEETING OF NOVEMBER 15, 2017**

Dear Mr. Foster:

The City Council at a regular meeting held on November 15, 2017 voted to **APPROVE** a request for a Special Use Permit FOR A MINI-STORAGE FACILITY USE at the northwest corner of Cheyenne Avenue and Dapple Gray Road (APN 138-08-401-013), U (Undeveloped) Zone [ML (Medium-Low Density Residential) General Plan Designation] [PROPOSED: C-1 (Limited Commercial)], Ward 4 (Anthony) [PRJ-71408].

This approval is subject to the following conditions:

Planning

1. Conformance to all Minimum Requirements under LVMC Title 19.12 for a Mini-Storage Facility use.
2. Approval of a General Plan Amendment (GPA-71555) and Rezoning (ZON-71556) and approval of and conformance to the Conditions of Approval for a Site Development Plan Review (SDR-71559) shall be required.
3. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
4. 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.

**DEVELOPMENT
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DEPARTMENT OF PLANNING

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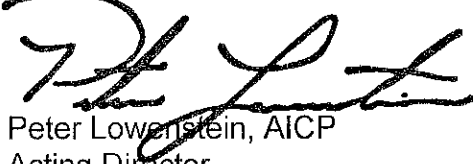
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Mr. Roger Foster
Foster Day I, LLC
SUP-71557 [PRJ-71408] – Page Two
November 16, 2017

5. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit, as well as submitted as part of any business license application.
6. All City Code requirements and design standards of all City departments must be satisfied, except as modified herein.

The Notice of Final Action was filed with the Las Vegas City Clerk on November 16, 2017.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Lowenstein", written over a horizontal line.

Peter Lowenstein, AICP
Acting Director
Department of Planning

PL:RTS:clb

cc: Mr. John Carroll
Shurley Design Studio, LLC
1980 Festival Plaza Drive, Suite #450
Las Vegas, Nevada 89135



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November 16, 2017

Mr. Roger Foster
Foster Day I, LLC
2660 Red Arrow Drive
Las Vegas, Nevada 89135

**RE: SDR-71559 [PRJ-71408] – SITE DEVELOPMENT PLAN REVIEW
RELATED TO GPA-71555, ZON-71556 AND SUP-71557
CITY COUNCIL MEETING OF NOVEMBER 15, 2017**

Dear Mr. Foster:

The City Council at a regular meeting held on November 15, 2017 voted to **APPROVE** a request for a Site Development Plan Review FOR A PROPOSED THREE STORY, 659-UNIT MINI-STORAGE FACILITY WITH A WAIVER TO ALLOW THE BUILDING TO NOT BE ORIENTED TO THE CORNER AND STREET FRONTAGE WHERE SUCH IS REQUIRED on 2.50 acres at the northwest corner of Cheyenne Avenue and Dapple Gray Road (APN 138-08-401-013), U (Undeveloped) Zone [ML (Medium Low Density Residential) General Plan Designation] [PROPOSED: C-1 (Limited Commercial)], Ward 4 (Anthony) [PRJ-71408].

This approval is subject to the following conditions:

Planning

1. Approval of and conformance to the Conditions of Approval for Special Use Permit (SUP-71557) shall be required, if approved.
2. This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
3. All development shall be in conformance with the site plan and landscape plan, date stamped 09/26/17 and building elevations, date stamped 08/28/17, except as amended by conditions herein.

4. A Waiver from LVMC Title 19.08.040(B)(6) is hereby approved, to allow the proposed building to be set back from minimum setback lines and oriented away from the corner and street frontages where such is required.
5. An Exception from LVMC Title 19.08.040(F) is hereby approved, to allow no trees within the required eight-foot perimeter landscape buffer along the north property line where 13 trees are required.
6. An Exception from LVMC Title 19.08.110 is hereby approved, to allow five parking lot trees where nine trees are required.
7. 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.
8. These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
9. A technical landscape plan, signed and sealed by a Registered Architect, Landscape Architect, Residential Designer or Civil Engineer, must be submitted prior to or at the same time application is made for a building permit. A permanent underground sprinkler system is required, and shall be permanently maintained in a satisfactory manner; the landscape plan shall include irrigation specifications. Installed landscaping shall not impede visibility of any traffic control device. The technical landscape plan shall include the following change from the conceptual landscape plan: provide at least 13 24-inch box trees spaced no more than 20 feet on center within the landscape buffer along the south property line.
9. 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.
10. All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

Public Works

11. Dedicate 50-feet of right-of-way on Cheyenne Avenue and 30-feet of right-of-way on Dapple Gray Road adjacent to this site and dedicate a 30-foot radius on the northwest corner of Cheyenne Avenue and Dapple Gray Road prior to issuance of permits for this site.

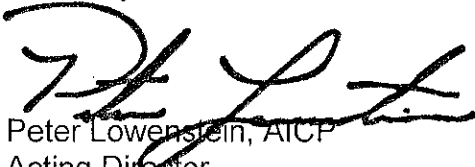
12. Construct half-street improvements on Dapple Gray Road concurrent with development of this site.
13. In accordance with code requirements of Title 13.56, remove all substandard offsite improvements on Cheyenne Avenue, if any, and replace with new improvements meeting Current City Standards concurrent with development of this site. All existing paving damaged or removed by this development shall be restored at its original location and to its original width concurrent with development of this site.
14. Landscape and maintain all unimproved rights-of-way on Cheyenne Avenue and Dapple Gray Road adjacent to this site. All landscaping and private improvements installed with this project shall be situated and maintained so as to not create sight visibility obstructions for vehicular traffic at all development access drives and abutting street intersections.
15. Grant a five-foot Public Sewer Easement adjacent to the existing 15-foot Public Sewer Easement prior to the issuance of any permits. No structures and no trees or vegetation taller than three feet shall be allowed within the Public Sewer Easements.
16. Submit a License Agreement for landscaping and private improvements in the Cheyenne Avenue and Dapple Gray Road public rights-of-way prior to this issuance of permits for these improvements. The applicant must carry an insurance policy for the term of the License Agreement and add the City of Las Vegas as an additionally insured entity on this insurance policy. If requested by the City, the applicant shall remove property encroaching in the public right-of-way at the applicant's expense pursuant to the terms of the City's License Agreement. The installation and maintenance of all private improvements in the public right-of-way shall be the responsibility of the applicant and any successors in interest to the property and assigns pursuant to the terms of the License Agreement. Coordinate all requirements for the License Agreement with the Land Development Section of the Department of Building and Safety (702-229-4836).
17. A Drainage Plan and Technical Drainage Study must be submitted to and approved by the Department of Public Works prior to the issuance of any building or grading permits, submittal of any construction drawings or the submittal of a Map subdividing this site, whichever may occur first. Provide and improve all drainageways recommended in the approved drainage plan/study. The developer of this site shall be responsible to construct such neighborhood or local drainage

Mr. Roger Foster
Foster Day I, LLC
SDR-71559 [PRJ-71408] – Page Four
November 16, 2017

facility improvements as are recommended by the City of Las Vegas Neighborhood Drainage Studies and approved Drainage Plan/Study concurrent with development of this site. In lieu of constructing improvements, in whole or in part, the developer may agree to contribute monies for the construction of neighborhood or local drainage improvements, the amount of such monies shall be determined by the approved Drainage Plan/Study and shall be contributed prior to the issuance of any building or grading permits, or the recordation of a Map subdividing this site, whichever may occur first, if allowed by the City Engineer.

The Notice of Final Action was filed with the Las Vegas City Clerk on November 16, 2017.

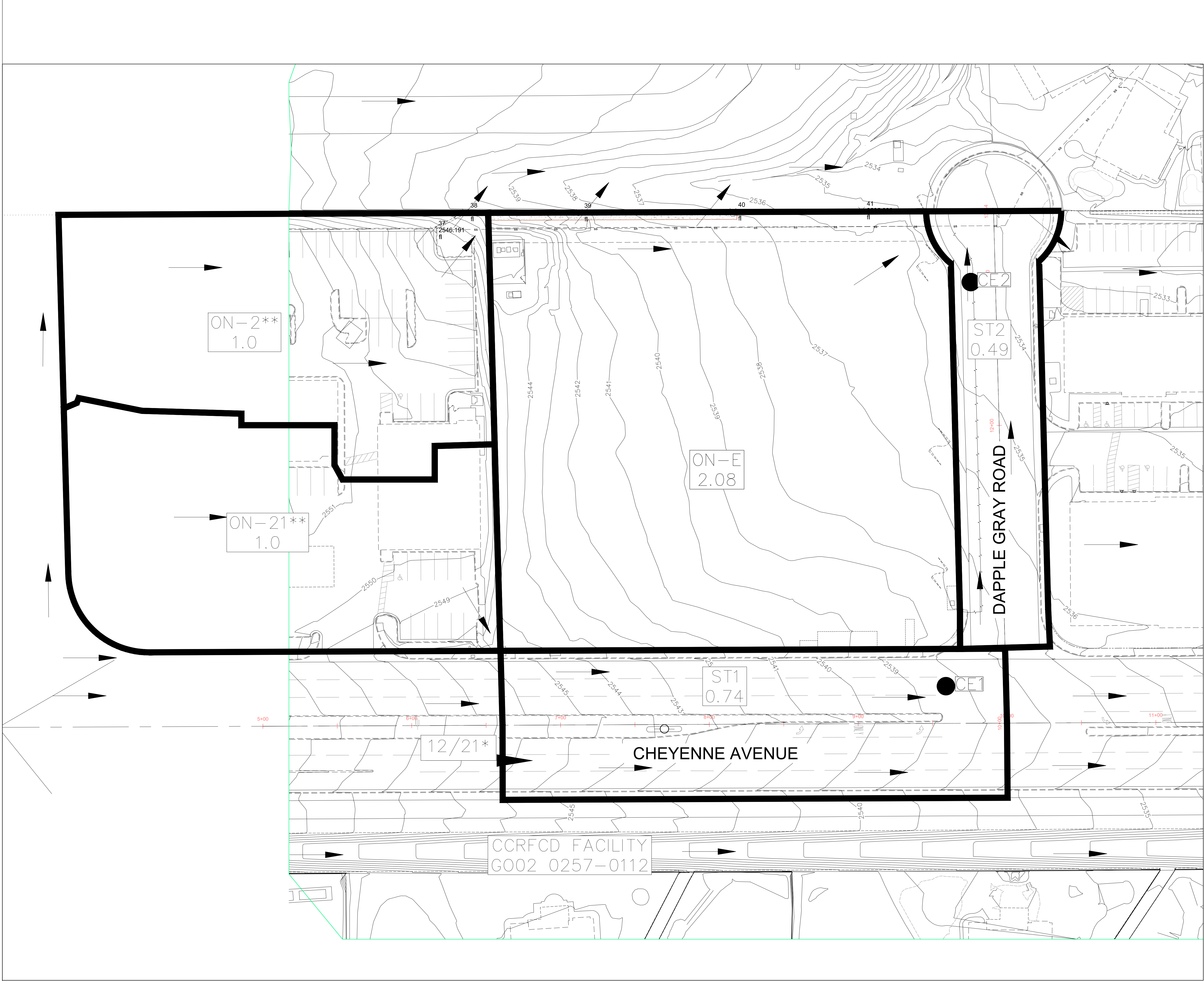
Sincerely,

A handwritten signature in black ink, appearing to read 'P. Lowenstein', is written over the printed name and title.

Peter Lowenstein, AICP
Acting Director
Department of Planning

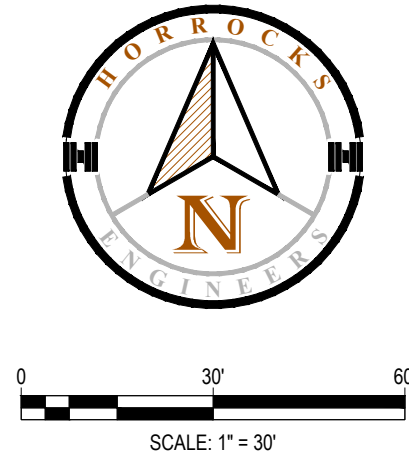
PL:RTS:clb

cc: Mr. John Carroll
Shurley Design Studio, LLC
1980 Festival Plaza Drive, Suite #450
Las Vegas, Nevada 89135



Existing Condition			
Basin	Area (acres)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
CE1	-	14	25
CE2	-	1	3
CHEY*	7.0	12	21
ON-1**	1.0	1	3
ON-2**	1.0	1	3
ON-E	2.1	0	1
ST1	0.7	2	3
ST2	0.5	1	2

*HEC-1 parameters taken from referenced rational method calculations and referenced figures.
**Basins referenced from the 7-11 Study



* BASIN PARAMETERS REFERENCED FROM THE CHEYENNE/CAMPBELL STUDY. DS# 3971
** REFERENCED FROM THE 7-11 CHEYENNE STUDY. HTE: 98-8063

KEY:

- ST1 0.74 BASIN NAME/AREA
- OND2 0.49 PRORATE BASIN NAME/AREA
- CE1 CONCENTRATION POINT
- Flow arrow FLOW DIRECTION
- 4 4 CROSS SECTION
- BASIN BOUNDARY
- - PRORATE BASIN BOUNDARY

WARNING

0 1 2

IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

DRAWING INFO		REVISIONS	
DATE	03/27/2018	REV #	DATE
DESIGNED			
DRAWN			
CHECKED			
PROJECT	NV-1029-1801		

PRELIMINARY

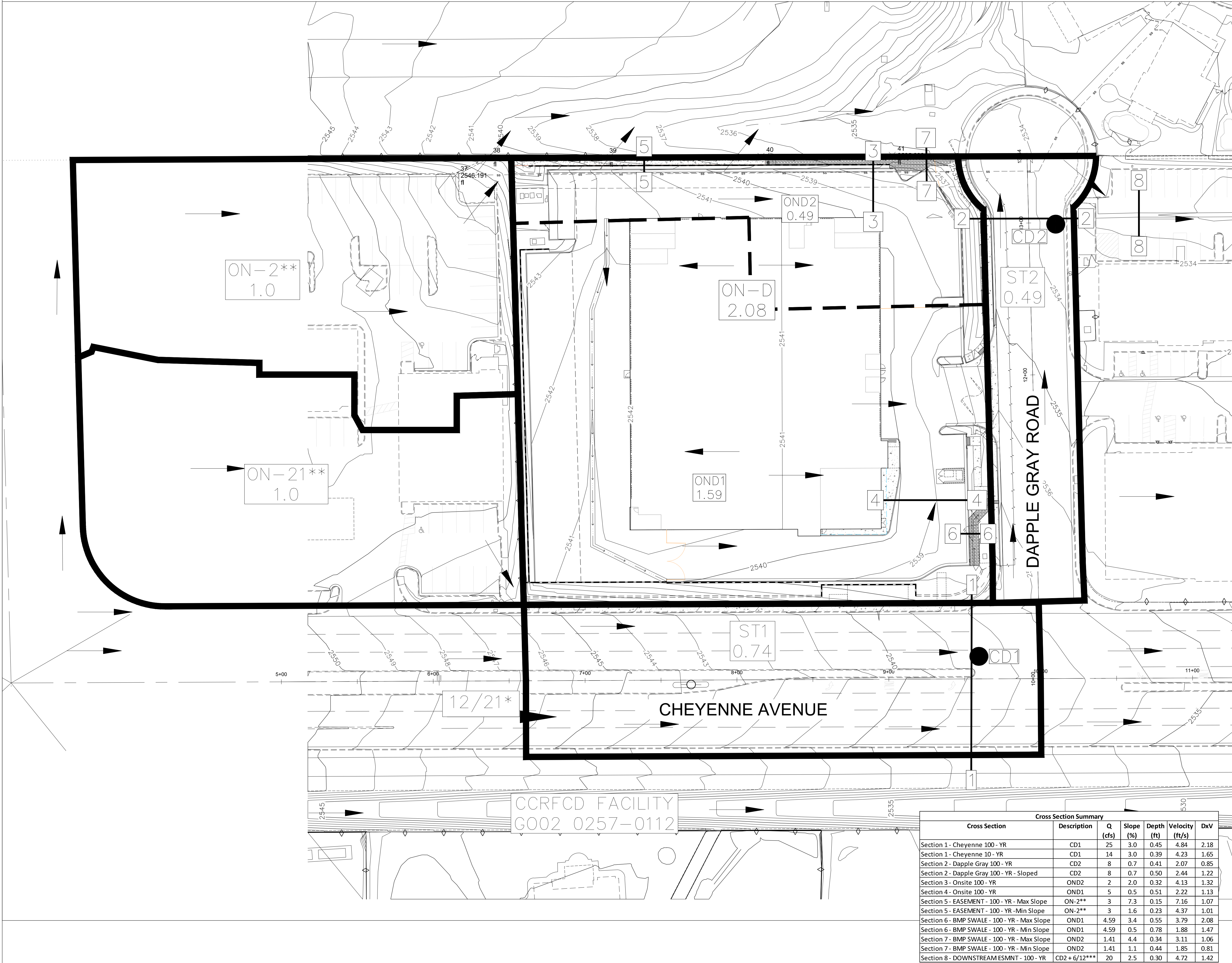
NOT FOR CONSTRUCTION

ALL-STORAGE

@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA

EXISTING CONDITIONS BASIN MAP

138-08-401-013



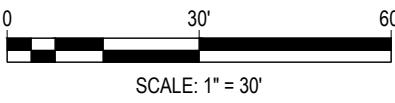
Cross Section Summary					
Cross Section	Description	Q (cfs)	Slope (%)	Depth (ft)	Velocity (ft/s)
Section 1 - Cheyenne 100 - YR	CD1	25	3.0	0.45	4.84
Section 1 - Cheyenne 10 - YR	CD1	14	3.0	0.39	4.23
Section 2 - Dapple Gray 100 - YR	CD2	8	0.7	0.41	2.07
Section 2 - Dapple Gray 100 - YR - Sloped	CD2	8	0.7	0.50	2.44
Section 3 - Onsite 100 - YR	OND2	2	2.0	0.32	4.13
Section 4 - Onsite 100 - YR	OND1	5	0.5	0.51	2.22
Section 5 - EASEMENT - 100 - YR - Max Slope	ON-2**	3	7.3	0.15	7.16
Section 5 - EASEMENT - 100 - YR - Min Slope	ON-2**	3	1.6	0.23	4.37
Section 6 - BMP SWALE - 100 - YR - Max Slope	OND1	4.59	3.4	0.55	3.79
Section 6 - BMP SWALE - 100 - YR - Min Slope	OND1	4.59	0.5	0.78	1.88
Section 7 - BMP SWALE - 100 - YR - Max Slope	OND2	1.41	4.4	0.34	3.11
Section 7 - BMP SWALE - 100 - YR - Min Slope	OND2	1.41	1.1	0.44	1.85
Section 8 - DOWNSTREAM ESMNT - 100 - YR	CD2 + 6/12***	20	2.5	0.30	4.72

***Referenced from the 7-11 Study HTE: 98-8063
***6/12 cfs is referenced from basin N from the Cheyenne/Campbell Study. DS4106

Developed Condition			
Basin	Area (acres)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
CD1	-	14	25
CD2	-	4	8
CHEY*	7.0	12	21
ON-1**	1.0	1	3
ON-2**	1.0	1	3
ON-D	2.1	2	6
ST1	0.7	2	3
ST2	0.5	1	2

*HEC-1 parameters taken from referenced rational method calculations and referenced figures.
**Basins referenced from the 7-11 Study

Prorate Calculations			
Basin	Area (acres)	Q ₁₀₀ (cfs)	CFS/AC
ON-D	2.08	6	2.88
OND1	1.59	4.59	2.88
OND2	0.49	1.41	2.88
Parking	2.08	6.00	N/A



* BASIN PARAMETERS REFERENCED FROM THE CHEYENNE/CAMPBELL STUDY. DS# 3971
* *REFERENCED FROM THE 7-11 CHEYENNE STUDY. HTE: 98-8063

KEY:

ST1
0.74

BASIN NAME/AREA

OND2
0.49

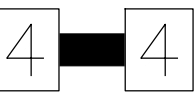
PROROATE BASIN
NAME/AREA



CONCENTRATION POINT



FLOW DIRECTION



CROSS SECTION



BASIN BOUNDARY



PRORATE BASIN
BOUNDARY

WARNING

0 1 2
IF THIS BAR DOES NOT
MEASURE 2" THEN
DRAWING IS NOT TO SCALE

REVISIONS

REV #

DATE

03/27/2018

DESIGNED

DRAWN

CHECKED

PROJECT

NV-1029-1801

*SEE GENERAL NOTES SHEET

PRELIMINARY
NOT FOR
CONSTRUCTION

ALL-STORAGE

@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA

DEVELOPED CONDITIONS BASIN MAP

138-08-401-013



6

PAGE #

Worksheet for Section 1 - Cheyenne 10 - YR

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	3.00	%
Discharge	14.00	ft ³ /s
Section Definitions		

Station (ft)	Elevation (ft)
0+00.0	0.60
0+05.0	0.50
0+05.5	0.50
0+05.5	0.00
0+07.0	0.13
0+07.0	0.17
0+43.0	0.89
0+43.0	1.39
0+57.0	1.39
0+57.0	0.89
0+93.0	0.17
0+93.0	0.13
0+94.5	0.00
0+94.5	0.50
0+95.0	0.50
1+00.0	0.60
1+04.5	2.10
1+05.5	2.10

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.0, 0.60)	(0+07.0, 0.17)	0.013
(0+07.0, 0.17)	(0+43.0, 0.89)	0.016
(0+43.0, 0.89)	(0+57.0, 0.89)	0.013

Worksheet for Section 1 - Cheyenne 10 - YR

Input Data

Start Station	Ending Station	Roughness Coefficient
(0+57.0, 0.89)	(0+93.0, 0.17)	0.016
(0+93.0, 0.17)	(1+00.0, 0.60)	0.013
(1+00.0, 0.60)	(1+05.5, 2.10)	0.025

Options

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

Results

Normal Depth	0.39	ft
Elevation Range	0.00 to 2.10 ft	
Flow Area	3.31	ft ²
Wetted Perimeter	25.52	ft
Hydraulic Radius	0.13	ft
Top Width	24.66	ft
Normal Depth	0.39	ft
Critical Depth	0.48	ft
Critical Slope	0.00658	ft/ft
Velocity	4.23	ft/s
Velocity Head	0.28	ft
Specific Energy	0.66	ft
Froude Number	2.04	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		

Worksheet for Section 1 - Cheyenne 10 - YR

GVF Output Data

Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.39	ft
Critical Depth	0.48	ft
Channel Slope	3.00	%
Critical Slope	0.00658	ft/ft

Cross Section for Section 1 - Cheyenne 10 - YR

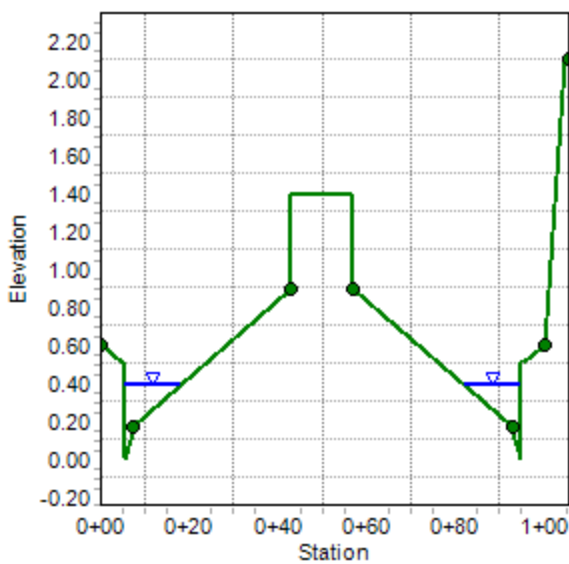
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	3.00	%
Normal Depth	0.39	ft
Discharge	14.00	ft ³ /s

Cross Section Image



Worksheet for Section 1 - Cheyenne 100 - YR

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	3.00	%
Discharge	25.00	ft ³ /s
Section Definitions		

Station (ft)	Elevation (ft)
0+00.0	0.60
0+05.0	0.50
0+05.5	0.50
0+05.5	0.00
0+07.0	0.13
0+07.0	0.17
0+43.0	0.89
0+43.0	1.39
0+57.0	1.39
0+57.0	0.89
0+93.0	0.17
0+93.0	0.13
0+94.5	0.00
0+94.5	0.50
0+95.0	0.50
1+00.0	0.60
1+04.5	2.10
1+05.5	2.10

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.0, 0.60)	(0+07.0, 0.17)	0.013
(0+07.0, 0.17)	(0+43.0, 0.89)	0.016
(0+43.0, 0.89)	(0+57.0, 0.89)	0.013

Worksheet for Section 1 - Cheyenne 100 - YR

Input Data

Start Station	Ending Station	Roughness Coefficient
(0+57.0, 0.89)	(0+93.0, 0.17)	0.016
(0+93.0, 0.17)	(1+00.0, 0.60)	0.013
(1+00.0, 0.60)	(1+05.5, 2.10)	0.025

Options

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

Results

Normal Depth	0.45	ft
Elevation Range	0.00 to 2.10 ft	
Flow Area	5.16	ft²
Wetted Perimeter	32.28	ft
Hydraulic Radius	0.16	ft
Top Width	31.27	ft
Normal Depth	0.45	ft
Critical Depth	0.57	ft
Critical Slope	0.00635	ft/ft
Velocity	4.84	ft/s
Velocity Head	0.36	ft
Specific Energy	0.82	ft
Froude Number	2.10	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		

Worksheet for Section 1 - Cheyenne 100 - YR

GVF Output Data

Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.45	ft
Critical Depth	0.57	ft
Channel Slope	3.00	%
Critical Slope	0.00635	ft/ft

Cross Section for Section 1 - Cheyenne 100 - YR

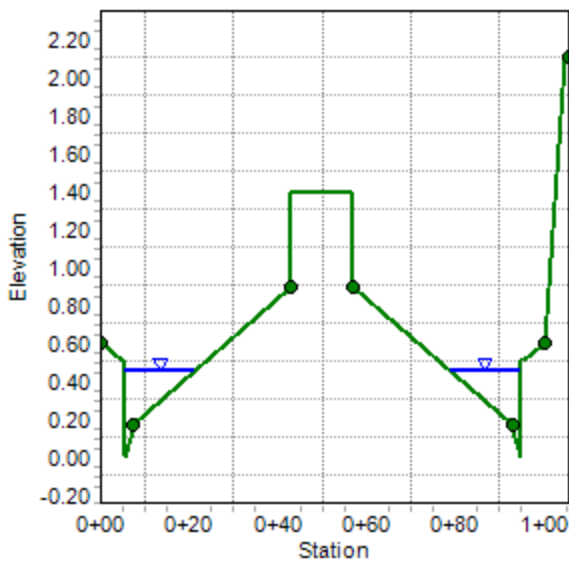
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	3.00	%
Normal Depth	0.45	ft
Discharge	25.00	ft ³ /s

Cross Section Image



Project Description

Input Data

Station (ft)	Elevation (ft)
0+00.0	2.00
0+00.0	0.50
0+02.0	0.00
0+05.0	0.06
0+05.0	2.00

Start Station	Ending Station	Roughness Coefficient
(0+00.0, 2.00)	(0+00.0, 0.50)	0.013
(0+00.0, 0.50)	(0+05.0, 0.06)	0.013
(0+05.0, 0.06)	(0+05.0, 2.00)	0.013

Results

5/1/2018 10:38:46 AM Bentley Systems, Inc. Haestad Methods Soild Engineering Master V8i (SELECTseries 1) [08.11.01.03] 27 Siemens Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 1 of 2

Worksheet for Section 5 - EASEMENT - 100 - YR - Max Slope

Results

Normal Depth	0.15	ft
Critical Depth	0.32	ft
Critical Slope	0.00428	ft/ft
Velocity	7.16	ft/s
Velocity Head	0.80	ft
Specific Energy	0.95	ft
Froude Number	3.71	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.15	ft
Critical Depth	0.32	ft
Channel Slope	7.26	%
Critical Slope	0.00428	ft/ft

Cross Section for Section 5 - EASEMENT - 100 - YR - Max Slope

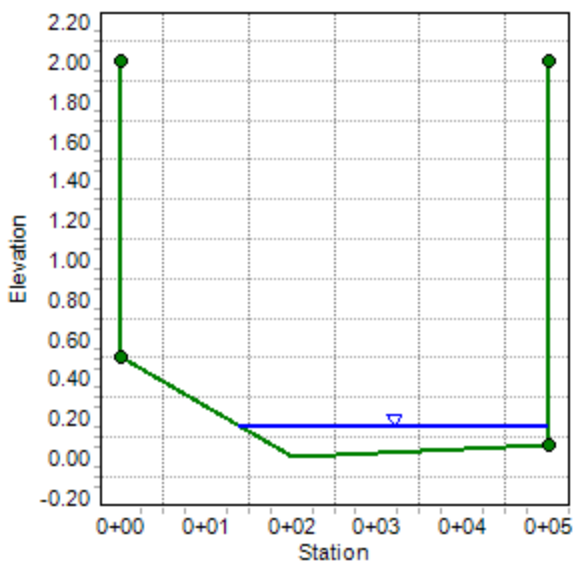
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	7.26	%
Normal Depth	0.15	ft
Discharge	3.00	ft ³ /s

Cross Section Image



Project Description

Input Data

0+00.0	2.00
0+00.0	0.50
0+02.0	0.00
0+05.0	0.06
0+05.0	2.00

(0+00.0, 2.00)	(0+00.0, 0.50)	0.013
(0+00.0, 0.50)	(0+05.0, 0.06)	0.013
(0+05.0, 0.06)	(0+05.0, 2.00)	0.013

Results

5/1/2018 10:42:56 AM 27 Siemens Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 1 of 2

Worksheet for Section 5 - EASEMENT - 100 - YR -Min Slope

Results

Normal Depth	0.23	ft
Critical Depth	0.32	ft
Critical Slope	0.00428	ft/ft
Velocity	4.37	ft/s
Velocity Head	0.30	ft
Specific Energy	0.52	ft
Froude Number	1.84	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.23	ft
Critical Depth	0.32	ft
Channel Slope	1.58	%
Critical Slope	0.00428	ft/ft

Cross Section for Section 5 - EASEMENT - 100 - YR -Min Slope

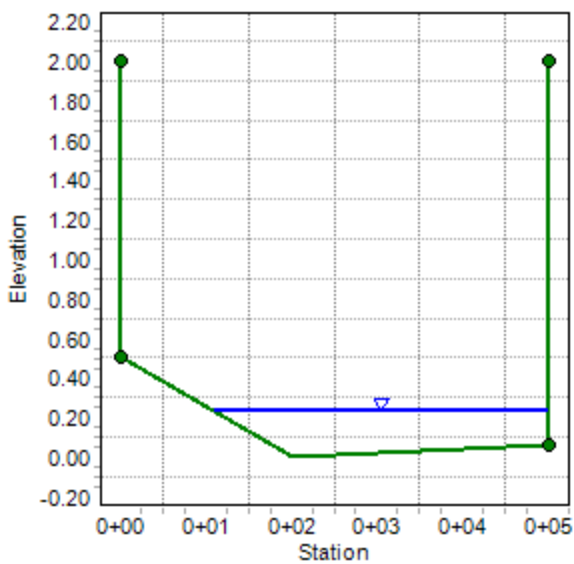
Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

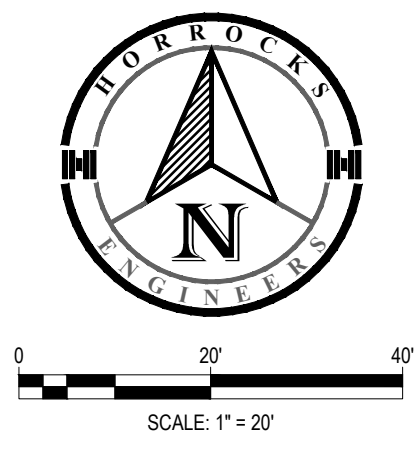
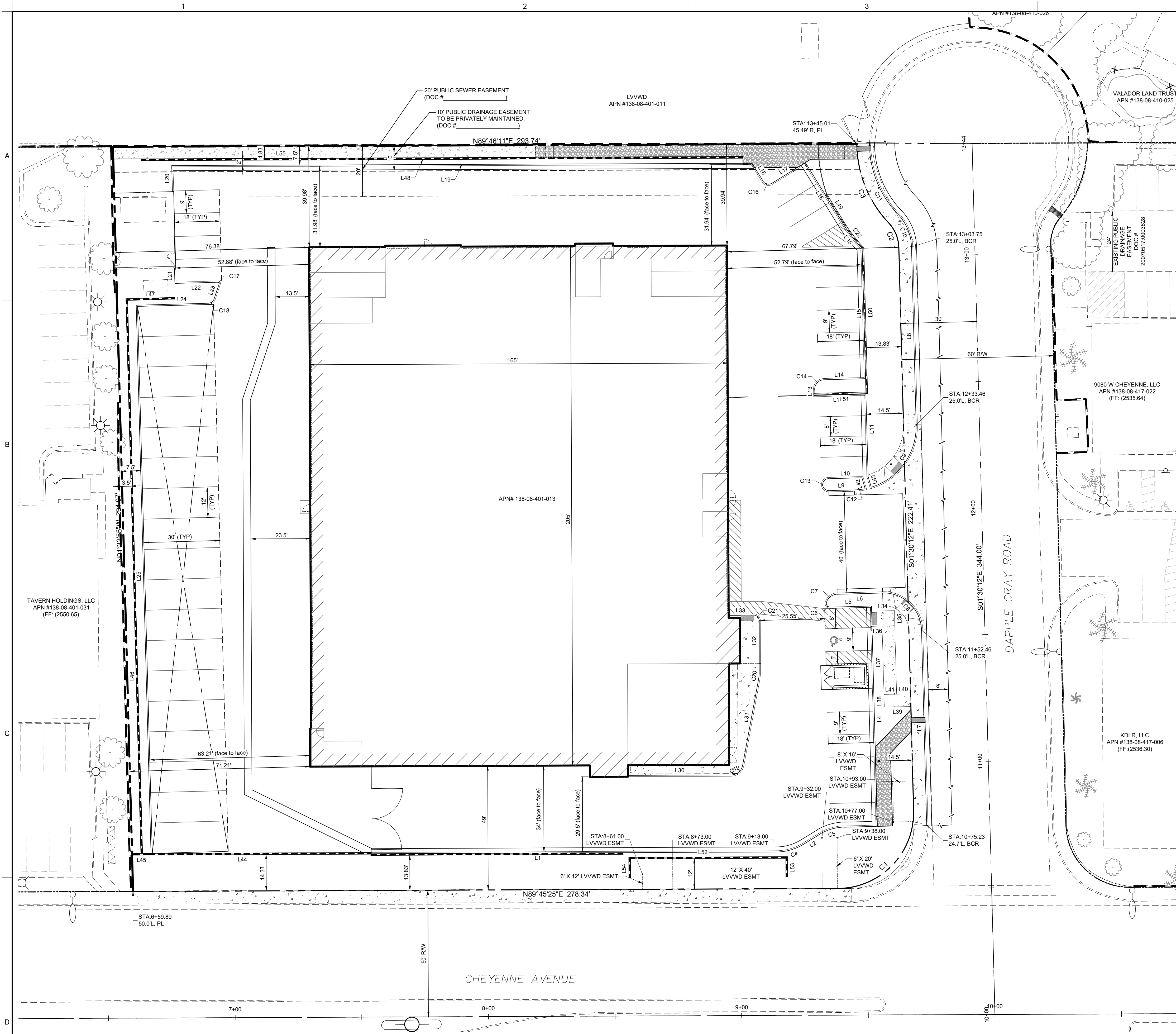
Input Data

Channel Slope	1.58	%
Normal Depth	0.23	ft
Discharge	3.00	ft ³ /s

Cross Section Image



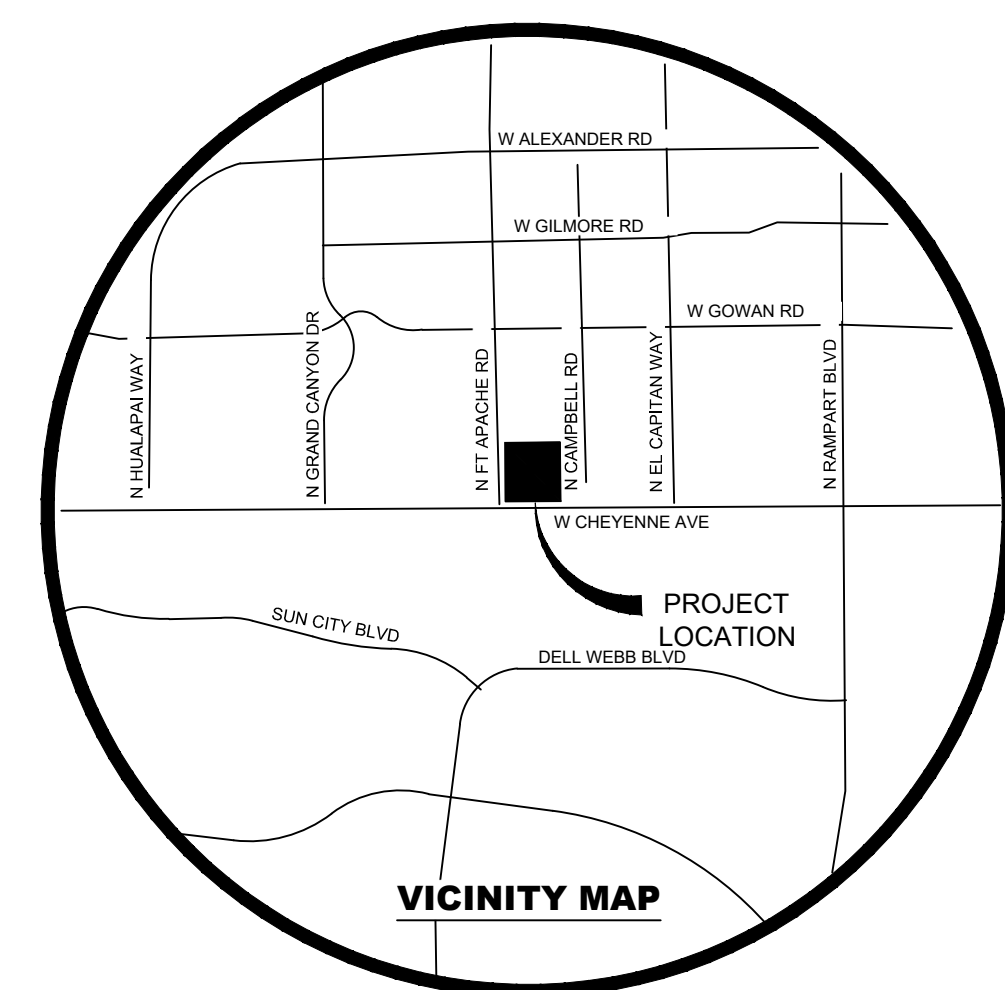
Grading Plans



LINE AND CURVE DATA TABLES

Line Table			Line Table			Line Table			Curve Table			
Line #	Length	Direction	Line #	Length	Direction	Line #	Length	Direction	Curve #	Length	Radius	Delta
L1	160.15	N89° 45' 25"E	L21	6.07	N01° 32' 55"W	L41	5.00	N88° 29' 48"E	C1	47.78	30.00	091.26
L2	7.47	N58° 29' 48"E	L22	16.98	S88° 27' 05"W	L42	4.49	S16° 05' 08"E	C2	10.66	14.50	042.13
L3	13.01	N88° 29' 48"E	L23	6.26	S18° 39' 20"W	L43	4.44	S16° 05' 08"E	C3	34.46	45.50	043.40
L4	67.00	N01° 30' 12"W	L24	28.44	N88° 27' 05"E	L44	86.94	N89° 45' 25"E	C4	10.91	20.00	031.26
L5	16.27	N88° 29' 48"E	L25	216.49	N01° 32' 55"W	L45	7.35	N89° 45' 25"E	C5	10.47	20.00	030.00
L6	17.93	N88° 29' 48"E	L26	54.10	S63° 54' 37"E	L46	218.65	N01° 32' 55"W	C6	2.88	1.50	110.02
L7	77.20	S01° 30' 12"E	L27	155.00	S00° 14' 35"E	L47	19.00	N88° 27' 05"E	C7	5.54	4.50	070.53
L8	70.29	S01° 30' 12"E	L28	31.62	S18° 11' 31"W	L48	237.58	N89° 46' 11"E	C8	23.56	15.00	090.00
L9	10.15	N88° 29' 48"E	L29	30.00	S00° 14' 35"E	L49	12.72	N31° 40' 06"W	C9	32.55	25.00	074.61
L10	13.22	S88° 29' 48"W	L30	40.84	N89° 45' 25"E	L50	57.69	N01° 30' 12"W	C10	14.34	19.50	042.13
L11	32.50	S01° 30' 12"E	L31	34.77	N10° 30' 10"E	L51	21.34	N88° 29' 48"E	C11	31.18	40.50	044.11
L12	20.67	N88° 29' 48"E	L32	20.47	S00° 14' 35"E	L52	62.67	S89° 45' 25"W	C12	4.21	25.00	009.66
L13	1.50	N01° 30' 12"W	L33	10.00	N89° 45' 25"E	L53	8.00	N00° 14' 35"W	C13	7.38	2.35	180.00
L14	16.42	N88° 29' 48"E	L34	9.00	N88° 29' 48"E	L54	8.00	S00° 14' 35"E	C14	5.89	3.75	090.00
L15	51.51	S01° 30' 12"E	L35	6.00	N01° 30' 12"W	L55	167.10	S89° 46' 11"W	C15	12.63	60.00	012.06
L16	28.00	N31° 40' 06"W	L36	4.00	N88° 29' 48"E				C16	3.92	2.50	089.83
L17	15.57	S58° 19' 54"W	L37	27.00	N01° 30' 12"W				C17	0.96	0.50	110.20
L18	8.35	S31° 50' 04"E	L38	5.00	N01° 30' 12"W				C18	3.05	2.50	069.80
L19	229.13	S89° 46' 11"W	L39	10.50	N88° 29' 48"E				C19	6.22	4.50	079.25
L20	10.33	N01° 32' 55"W	L40	5.50	N88° 29' 48"E				C20	2.72	14.50	010.75
									C21	3.14	2.00	090.00
									C22	12.75	59.33	012.31

NOTE: ALL CURB DIMENSIONS ARE TO BACK OF CURB



HORROCKS
ENGINEERS

1401 N. Green Valley Pkwy., Suite 160
Henderson, NV 89074
(702) 966-4063
www.horrock.com

WARNING

IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

REVISIONS

REV #	DATE	DESCRIPTION
1	5/2/2018	MDP
2		SS
3		LMB

DRAWING INFO

DATE	5/2/2018
DESIGNED	MDP
DRAWN	SS
CHECKED	LMB
PROJECT	NV-1029-1801

PROFESSIONAL SEAL

LARRY W. BITTON
P.E. 12-31-18
CIVIL
No. 00193

ALL-STORAGE

@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA

HORIZONTAL CONTROL PLAN

138-08-401-013

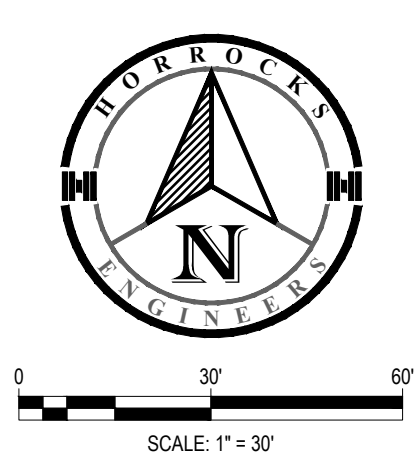
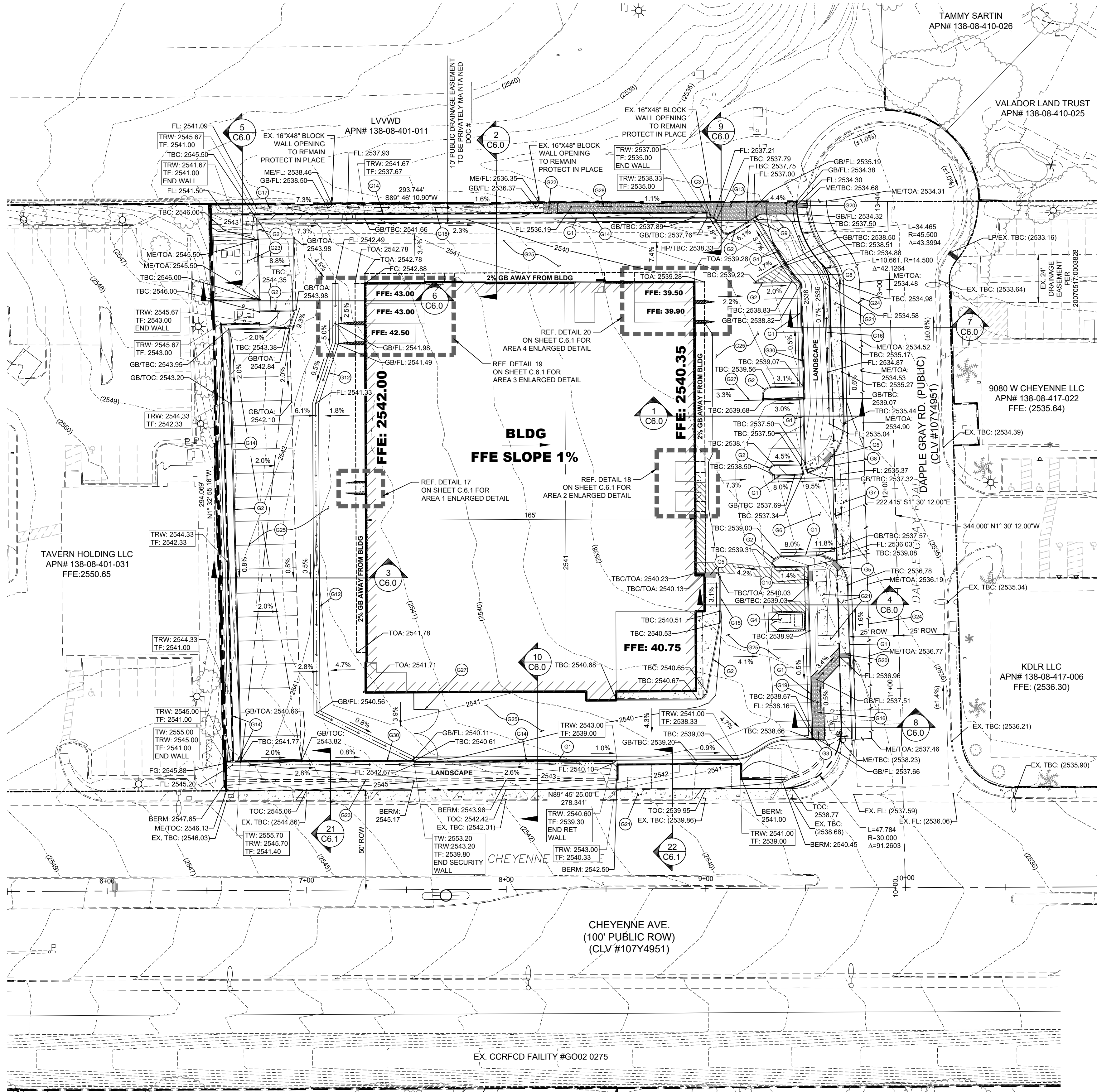
Call before you dig
811
1-800-227-2600

CALL BEFORE YOU DIG
OVERHEAD
1-702-227-2929

FAST
Call before you UnderGround
1-702-432-5300

C.1.0

PAGE 04



- TOC: 00.00 TOP OF CONCRETE
TOC DEP: 00.00 TOP OF CONCRETE DEPRESSED
TOA: 00.00 TOP OF ASPHALT
TBC: 00.00 TOP BACK CURB
FG: 00.00 FINISH GRADE
FL: 00.00 FLOW LINE
EX TBC: (00.00) EXISTING TOP BACK CURB
EX TOA: (00.00) EXISTING TOP OF ASPHALT

- 4000 EXISTING MAJOR CONTOURS
4002 EXISTING MINOR CONTOURS
4000 MAJOR CONTOURS
4002 MINOR CONTOURS
CURB & GUTTER
EXISTING CURB & GUTTER
EXISTING ASPHALT
RIGHT OF WAY
FLOW LINE
RETAINING OR SCREEN WALL
EXISTING RETAINING OR SCREEN WALL

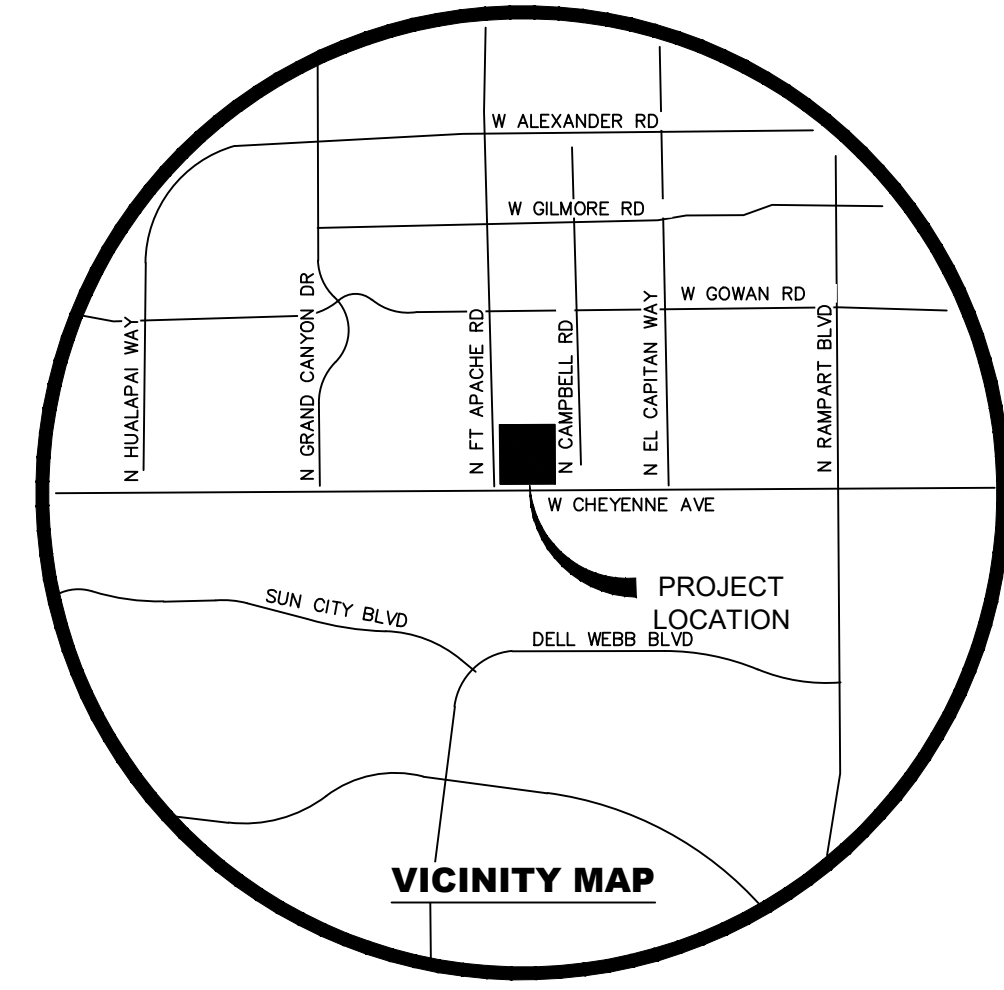
FLOOD ZONE:
THIS SITE IS LOCATED IN A ZONE "X". AREAS OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL 3203C2135F, CLARK COUNTY, NEVADA DATED NOVEMBER 16, 2011.

BENCHMARK:
RIVET AND PLATE IN TOPO OF CURB AT THE SOUTHEAST CORNER OF CHEYENNE AND FORT APACHE
ELEVATIONS: 778.771 METERS
2555.02 FEET

BASIS OF BEARING:
S89°45'25"W
BEING THE CENTERLINE OF CHEYENNE AVENUE AS SHOWN ON THE FINAL MAP OF CHEYENNE/CAMBELL PLAT BOOK 139 PAGE 19 O.R.

- GRADING KEY NOTES:**
- G1 CONSTRUCT "L" CURB AND GUTTER PER CCAUSD #216
 - G2 CONSTRUCT "A" CURB PER CCAUSD #219
 - G3 CONSTRUCT 2.0' WIDE CURB OPENING PER DETAIL 15 SHEET C.6.0
 - G4 CONSTRUCT TRASH ENCLOSURE (SEE ARCHITECTURAL PLANS FOR DETAILS)
 - G5 CONSTRUCT SIDEWALK RAMP "CASE 1" PER CCAUSD #235
 - G6 CONSTRUCT HEAVY DUTY COMMERCIAL DRIVEWAY PER CCAUSD #226.S3
 - G7 CONSTRUCT CROSS GUTTER PER CCAUSD #228
 - G8 CONSTRUCT CONCRETE 1.5' WIDE FLUME PER DETAIL 12 SHEET C.6.0
 - G9 CONSTRUCT 4.0' WIDE CURB OPENING PER DETAIL 15 SHEET C.6.0
 - G10 CONSTRUCT ONSITE SIDEWALK RAMP PER DETAIL 13 SHEET C.6.0
 - G11 ALL EX. NVE FACILITIES TO REMAIN. PROTECT IN PLACE.
 - G12 CONSTRUCT 3.0' VALLEY GUTTER PER DETAIL 11 SHEET C.6.0
 - G13 CONSTRUCT BMP SWALE PER DETAIL 9 SHEET C.6.0.
 - G14 CONSTRUCT RETAINING WALL (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS)
 - G15 CONSTRUCT CURB/SIDEWALK TRANSITION PER DETAIL 14 SHEET C.6.0
 - G16 CONSTRUCT LANDSCAPE SWALE PER DETAIL 1 SHEET C.6.0. REF. PLANS FOR DETAILS
 - G17 CONSTRUCT LANDSCAPE SWALE PER DETAIL 2 SHEET C.6.0. WITH 6" CONCRETE OVER 4" MIN. TYPE II AGG BASE
 - G18 CONSTRUCT LANDSCAPE SWALE PER DETAIL 2 SHEET C.6.0. WITH 6" CONCRETE OVER 4" MIN. TYPE II AGG BASE
 - G19 CONSTRUCT BMP SWALE PER DETAIL 8 SHEET C.6.0.
 - G20 CONSTRUCT SIDEWALK DRAIN PER CCAUSD #236
 - G21 CONSTRUCT 5.0' SIDEWALK PER CCAUSD #234
 - G22 CONSTRUCT LANDSCAPE BERM PER DETAIL 16 SHEET C.6.0
 - G23 CONSTRUCT LANDSCAPE BERM PER DETAIL 10 SHEET C.6.0
 - G24 SAW CUT & MATCH EXISTING PER CCAUSD 500.4. PROVIDE SMOOTH TRANSITION TO PROPOSED IMPROVEMENTS.
 - G25 CONSTRUCT 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE PER GEO HTE #XX-XXXXX
 - G26 CONSTRUCT 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE PER GEO HTE #XX-XXXXX. SEE STREET SECTIONS FOR DETAILS
 - G27 INSTALL GATE (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS)
 - G28 CONSTRUCT LANDSCAPE SWALE PER DETAIL 9 SHEET C.6.0.
 - G29 EXISTING TO REMAIN. ADJUST COMPONENTS TO NEW FINISHED GRADE.
 - G30 CONSTRUCT PERIMETER SECURITY WALL (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS) ON TOP OF RETAINING WALL. SEE DETAIL 21 ON SHEET C.6.1

- ENGINEER'S NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR EROSION AND DUST CONTROL, AND STORMWATER MANAGEMENT DURING CONSTRUCTION.
 - SEE HORIZONTAL CONTROL PLAN FOR EXACT PROPERTY LINE DIMENSIONS
 - ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THESE PLANS AND FIELD CONDITIONS.
 - THESE PLANS SHALL NOT IN PART, OR IN WHOLE, BE USED FOR CONSTRUCTION UNTIL APPROVED AND SIGNED BY GOVERNING AGENCIES.
 - ALL GRADING SHALL CONFORM TO SOILS REPORT RECOMMENDATIONS. DURING CONSTRUCTION, SURVEYORS AND CONTRACTORS MUST VERIFY THAT ALL STREETS AND LOTS HAVE POSITIVE DRAINAGE SAME MUST UTILIZE AT LEAST THREE GRADES ON VERTICAL TANGENTS TO VERIFY SLOPES.
 - SOILS REPORT NOTE:
GRADING SHALL BE IN ACCORDANCE WITH SOILS REPORT PREPARED BY: SOUTHWEST GEOTECHNICAL
PROJECT NAME: ALL STORAGE - 9172 W CHEYENNE AVE
PROJECT NO.: 175430
DATE: JAN 15, 2018
 - CUT/FILL ESTIMATES:
FROM EXISTING TO FINISH GRADE ELEVATIONS
CUT: 1,154 CY
FILL: 4,561 CY
NET: 3,497 CY
 - FLOOR SECTION ASSUMES 5" SLAB OVER MIN. 4" TYPE II CONTRACTOR TO VERIFY WITH STRUCTURAL PLANS AND GEOTECHNICAL ENGINEER.



DRAINAGE CERTIFICATION
I CERTIFY THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE WITH THE CITY OF LAS VEGAS FOR THIS PROJECT. (DS)
LARRY M. BITTON 01059 P.E. NO. DATE

HORROCKS ENGINEERS
1401 N. Green Valley Pkwy., Suite 160
Henderson, NV 89074
(702) 966-4063
www.horrocksb.com

DRAWING INFO		REVISIONS	
DATE	5/2/2018	REV #	DATE
DESIGNED	MDP		
DRAWN	SS		
CHECKED	LMB		
PROJECT	NV-1029-1801		

IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

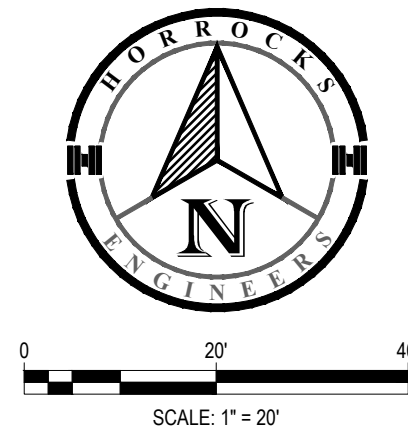
ALL-STORAGE
@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA
GRADING PLAN
138-08-401-013

Call before you dig
1-800-227-2600

Call before you dig
1-702-227-2929

FAST
Call before you dig
UnderGround
1-702-432-5300

C.2.0
PAGE 05



ITEM	PUBLIC	PRIVATE
1" BRASS WL	18.4 LF	
1-1/2" TYPE K Cu WL		40 LF
6" C-900 PVC WL	29.2 LF	51.6 LF
8" C-900 PVC WL	53.8 LF	898.3 LF
1" SERVICE SADDLE W / 3/4" METER	1 EA	
1" RPPA	2 EA	
1" SERVICE SADDLE W/ METER	1 EA	
CURB STOP W/10" ROUND IRR BOX	2 EA	
8" RPDA	2 EA	
8" X 6" TEE		3 EA
8" X 8" TEE	1 EA	1 EA
12" X 8" TEE	1 EA	
8" 90" BEND	2 EA	4 EA
12" X 6" TAPPING SLEEVE	1 EA	
12" X 8" TAPPING SLEEVE	1 EA	
6" TAPPING VALVE	1 EA	
8" TAPPING VALVE	1 EA	
6" GATE VALVE		3 EA
8" GATE VALVE	3 EA	2 EA
12" GATE VALVE	1 EA	
FIRE HYDRANT ASSEMBLY	1 EA	2 EA

PROJECT NO. _____ FIRST APPROVAL DATE: _____
LVVWD APPROVED FIRE FLOW _____ GPM AT 20 PSI RESIDUAL _____

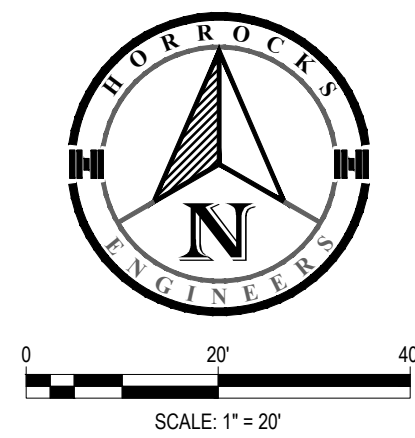
FIRE FLOW REQUIREMENT IS:		*3,375 GALLONS PER MINUTE AT 20 PSI RESIDUAL PRESSURE.
BASED ON:		
SQUARE FOOTAGE:	102,480 SF	
BUILDING HEIGHT:	42 FT	
NUMBER OF STORIES:	3	
TYPE OF CONSTRUCTION	II-B	
OCCUPANCY:	B	
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	YES	
BUILDING	<u>SQUARE FOOTAGE</u>	<u>FIRE FLOW</u>
A (3 STORY)	102,480	*3,375 GPM
(*WITH 50% REDUCTION FOR FIRE SPRINKLERS)		

WARNING

138-08-401-013

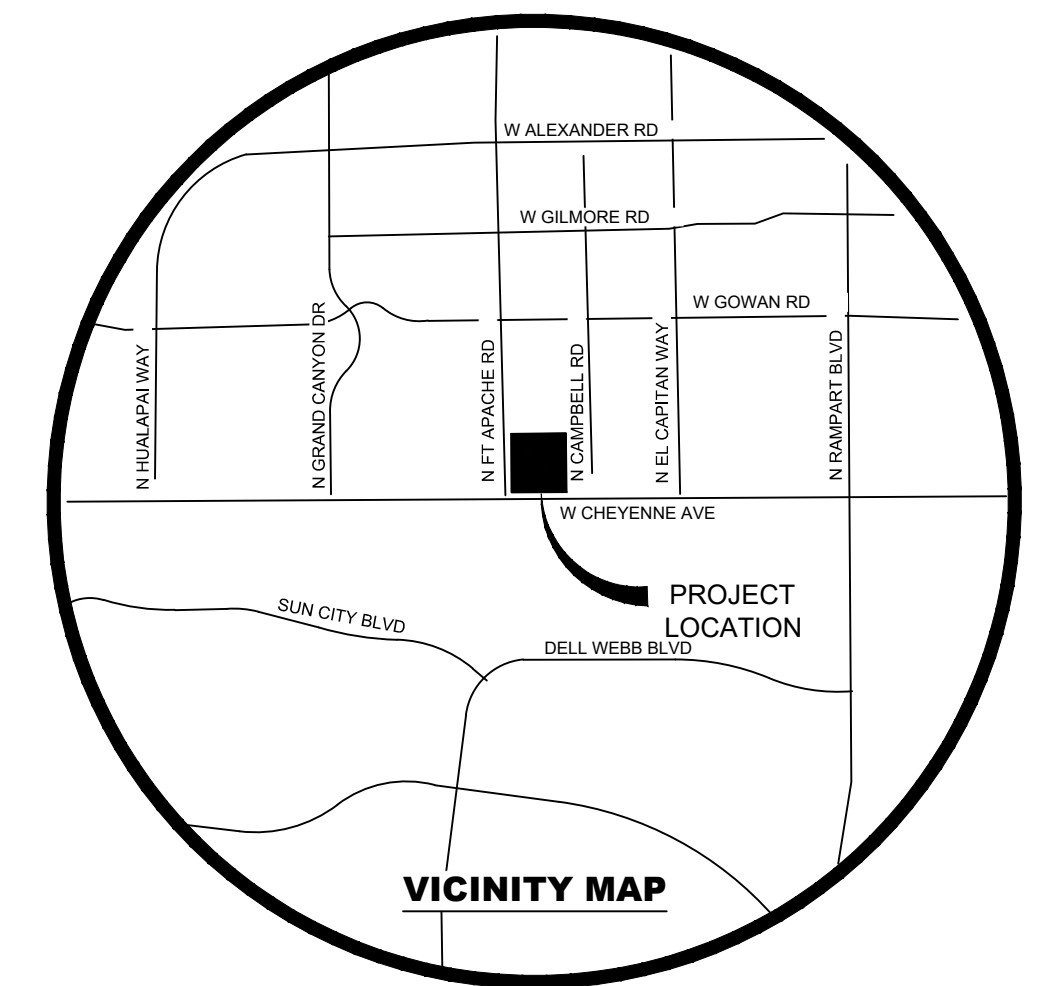
100-104-00-001





- 01 4" WHITE PAINTED SOLID PARKING LINE
- 02 INSTALL ACCESSIBLE PARKING STALLS PER CLV UDC #19.08.11
- 03 RED PAINTED CURB OR PAVEMENT W / TYPE C "NO PARKING FIRE LANE" STENCILED IN WHITE EVERY 50 FT, PER IFC 503.3
- 04 INSTALL 24" X 18" TYPE B SIGN, "ON-STREET PARKING IN MARKED FIRE LANS PROHIBITED", PER IFC 503.3 (SEE SIGN LEGEND BELOW)
- 05 INSTALL 36" X 36" R-1 "STOP" SIGN (PRIVATELY MAINTAINED) (SEE SIGN LEGEND BELOW)
- 06 INSTALL L.E.D. STREETLIGHT AND FOUNDATION FOR 100' R/W (PER QPL) PER CCAUSD's #314, #320 & #321
- 07 INSTALL R8-3 and R7-1a "NO PARKING" SIGNS (SEE SIGN LEGEND BELOW)
- 08 CONNECT PROPOSED STREETLIGHT TO EXISTING STREETLIGHT PULBBOX. ADJUST PULBBOX TO NEW SIDEWALK GRADE.

24' FIRE LANE (TYPICAL)



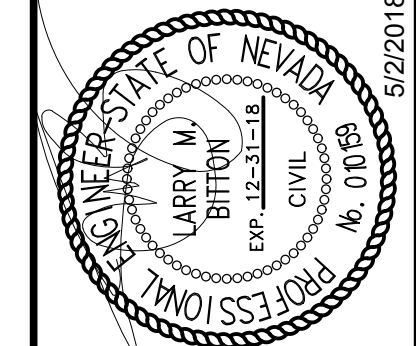
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WARNING

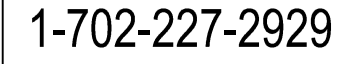
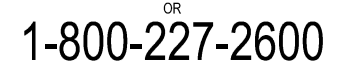
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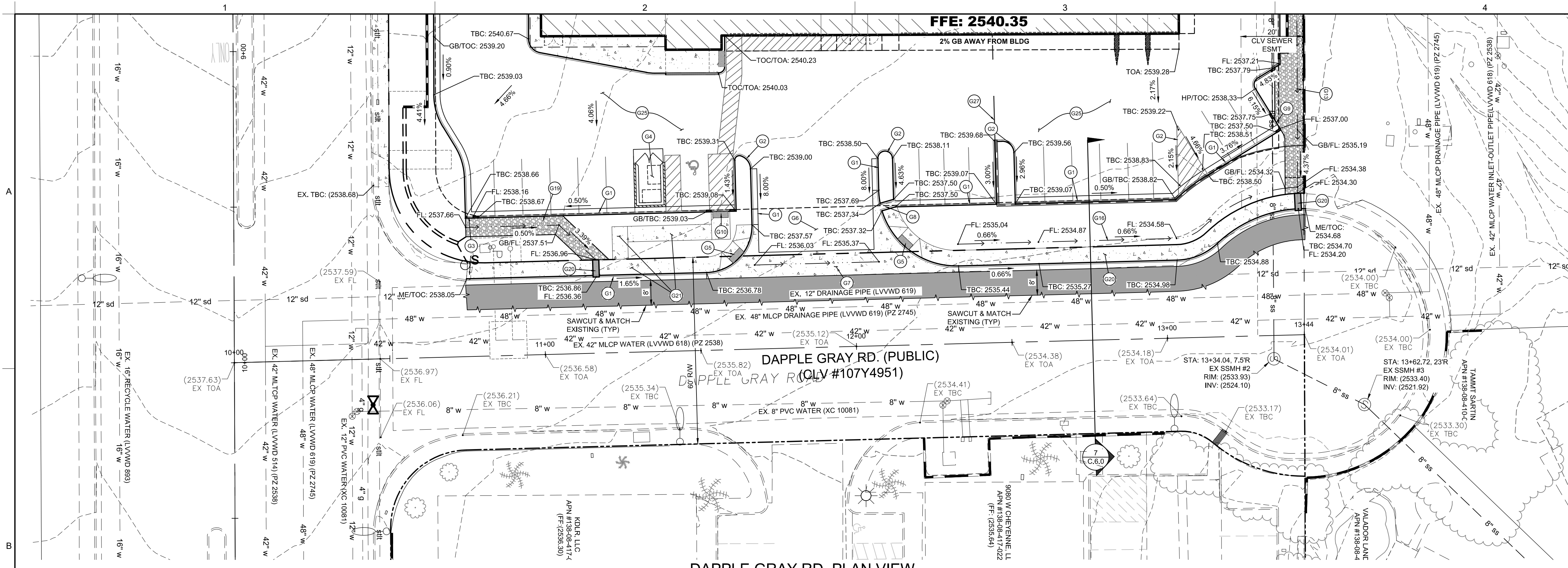
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DATE	5/2/2018	Δ		DATE
DESIGNED				
MDP				
DRAWN				
SS				
CHECKED				
LMB				
PROJECT				
NW-1029-1801				
*SEE GENERAL NOTES SHEET				



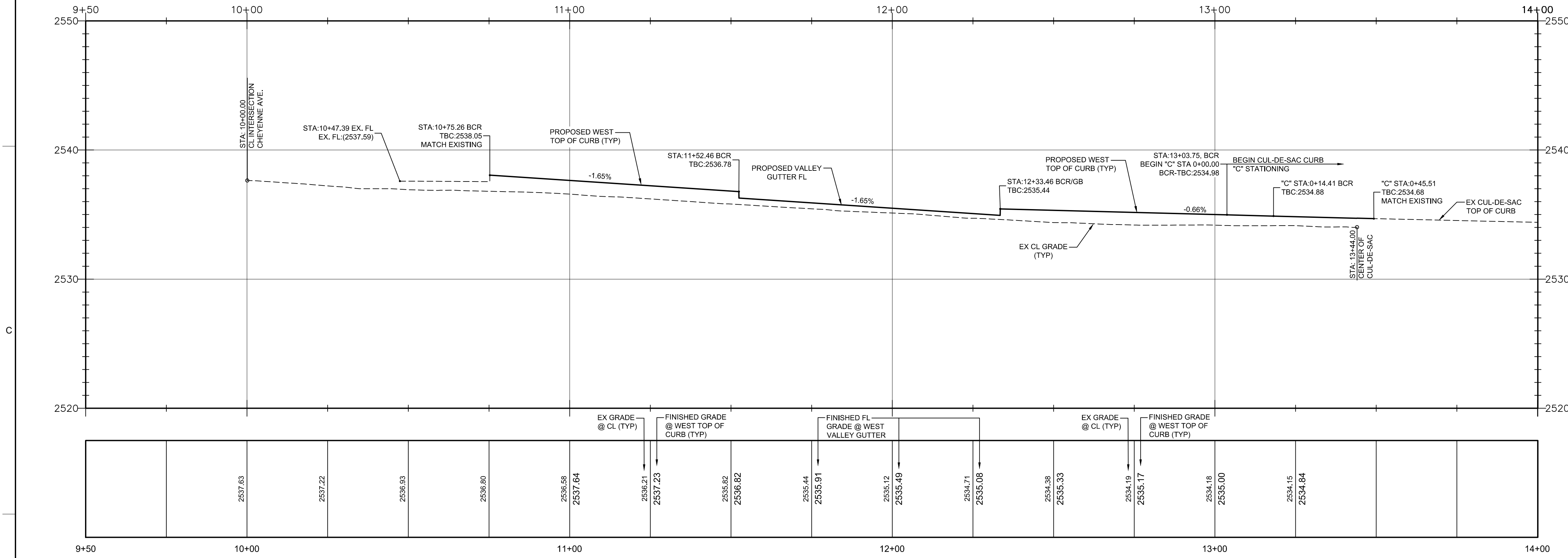
ALL-STORAGE
CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA
SIGNAGE AND STRIPING PLAN

138-08-401-013





DAPPLE GRAY RD. PLAN VIEW



DAPPLE GRAY RD. - WEST TOP OF CURB PROFILE

SCALE: 1" = 20' H
SCALE: 1" = 5' V

BENCHMARK:

RIVET AND PLATE IN TOPO OF CURB AT THE SOUTHEAST CORNER OF CHEYENNE AND FORT APACHE ELEVATIONS: 778.771 METERS 2555.02 FEET

BASIS OF BEARING:

S89°45'25"W BEING THE CENTERLINE OF CHEYENNE AVENUE AS SHOWN ON THE FINAL MAP OF CHEYENNE/CAMBELL PLAT BOOK 139 PAGE 19 OR R.

FLOOD ZONE:

THIS SITE IS LOCATED IN A ZONE "X", AREAS OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN. PER THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL 32003C2135F. CLARK COUNTY, NEVADA DATED NOVEMBER 16, 2011.

GRADING KEY NOTES:

- CONSTRUCT "L" CURB AND GUTTER PER CCAUSD #216
- CONSTRUCT "A" CURB PER CCAUSD #219
- CONSTRUCT 2.0' WIDE CURB OPENING PER DETAIL 15 SHEET C.6.0
- CONSTRUCT TRASH ENCLOSURE (SEE ARCHITECTURAL PLANS FOR DETAILS)
- CONSTRUCT SIDEWALK RAMP "CASE 1" PER CCAUSD #235
- CONSTRUCT HEAVY DUTY COMMERCIAL DRIVEWAY PER CCAUSD #226.S3
- CONSTRUCT CROSS GUTTER PER CCAUSD #228
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- ALL EX. NVE FACILITIES TO REMAIN. PROTECT IN PLACE.
- CONSTRUCT 3.0' VALLEY GUTTER PER DETAIL 11 SHEET C.6.0
- CONSTRUCT BMP SWALE PER DETAIL 9 SHEET C.6.0.
- CONSTRUCT RETAINING WALL (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS)
- CONSTRUCT CURB/SIDEWALK TRANSITION PER DETAIL 14 SHEET C.6.0 FOR DETAILS
- CONSTRUCT LANDSCAPE SWALE PER DETAIL 2 SHEET C.6.0. WITH D50=6",T=12" LANDSCAPE ROCK
- CONSTRUCT LANDSCAPE SWALE PER DETAIL 2 SHEET C.6.0. WITH D50=2",T=4" LANDSCAPE ROCK
- CONSTRUCT BMP SWALE PER DETAIL 8 SHEET C.6.0.
- CONSTRUCT SIDEWALK DRAIN PER CCAUSD #236
- CONSTRUCT 5.0' SIDEWALK PER CCAUSD #234
- CONSTRUCT LANDSCAPE BERM PER DETAIL 16 SHEET C.6.0
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- CONSTRUCT 3" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE PER GEO HTE #XX-XXXXX. SEE STREET SECTIONS FOR DETAILS
- INSTALL GATE (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS)
- CONSTRUCT LANDSCAPE SWALE PER DETAIL 9 SHEET C.6.0.
- EXISTING TO REMAIN. ADJUST COMPONENTS TO NEW FINISHED GRADE.
- CONSTRUCT PERIMETER SECURITY WALL (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR DETAILS)

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- SOILS REPORT NOTE:
GRADING SHALL BE IN ACCORDANCE WITH SOILS REPORT PREPARED BY: SOUTHWEST GEOTECHNICAL
PROJECT NAME: ALL STORAGE - 9172 W CHEYENNE AVE
PROJECT NO.: 175430
DATE: JAN 15, 2018
- CUT/FILL ESTIMATES:
FROM EXISTING TO FINISH GRADE ELEVATIONS
CUT: 1,154 CY
FILL: 4,581 CY
NET: 3,427 CY
- FLOOR SECTION ASSUMES 5" SLAB OVER MIN. 4" TYPE II. CONTRACTOR TO VERIFY WITH STRUCTURAL PLANS AND GEOTECHNICAL ENGINEER.

DRAINAGE CERTIFICATION

I CERTIFY THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED DRAINAGE STUDY ON FILE WITH THE CITY OF LAS VEGAS FOR THIS PROJECT. (DS 4906B)

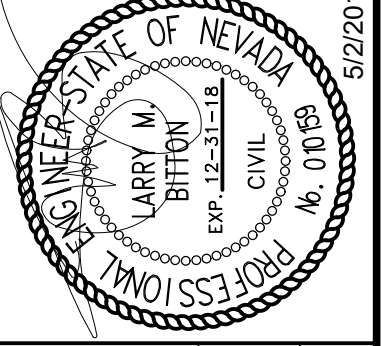
LARRY M. BITTON 01059
P.E. NO. DATE

WARNING

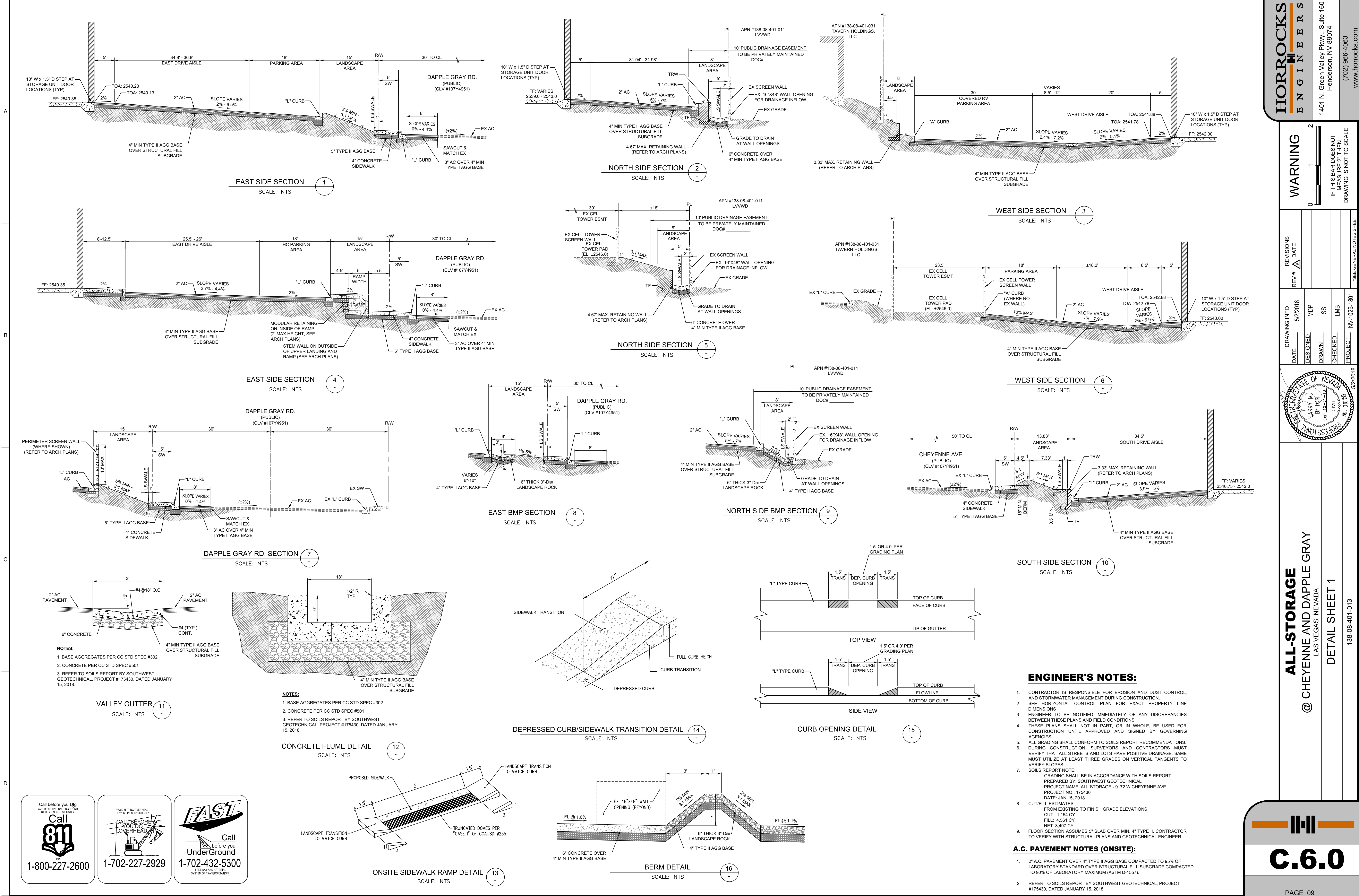
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REVISIONS	REV #	DATE

DRAWING INFO	DATE	DESIGNED	MDP	DRAWN	SS	CHECKED	LMB	PROJECT
	5/2/2018							NV-1029-1801



ALL-STORAGE
@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA
DAPPLE GRAY PLAN AND PROFILE
138-08-401-013

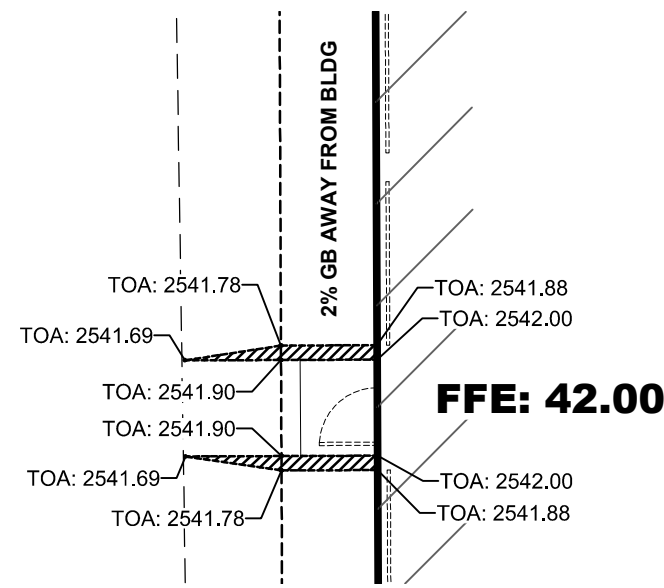


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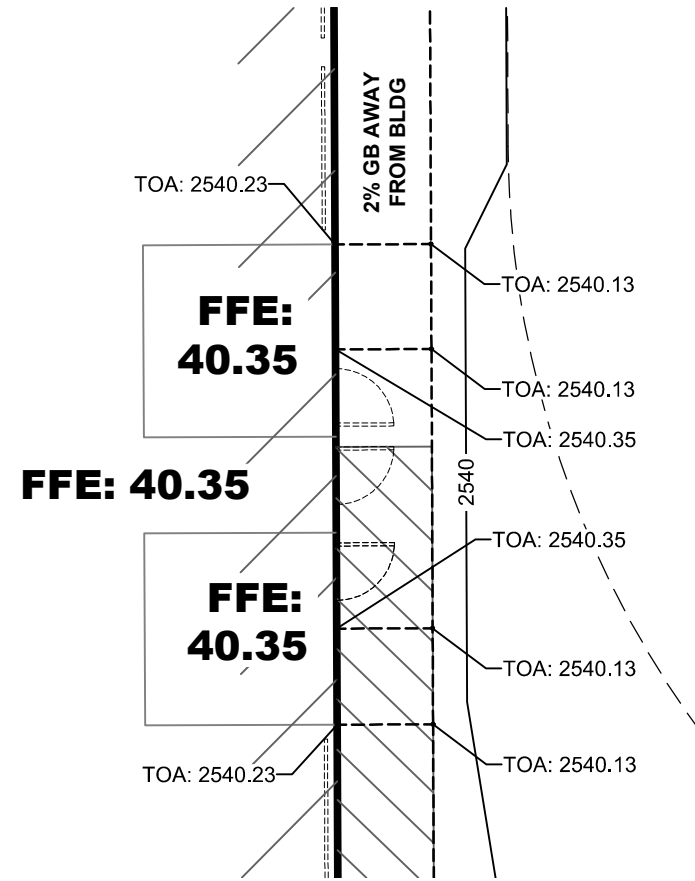
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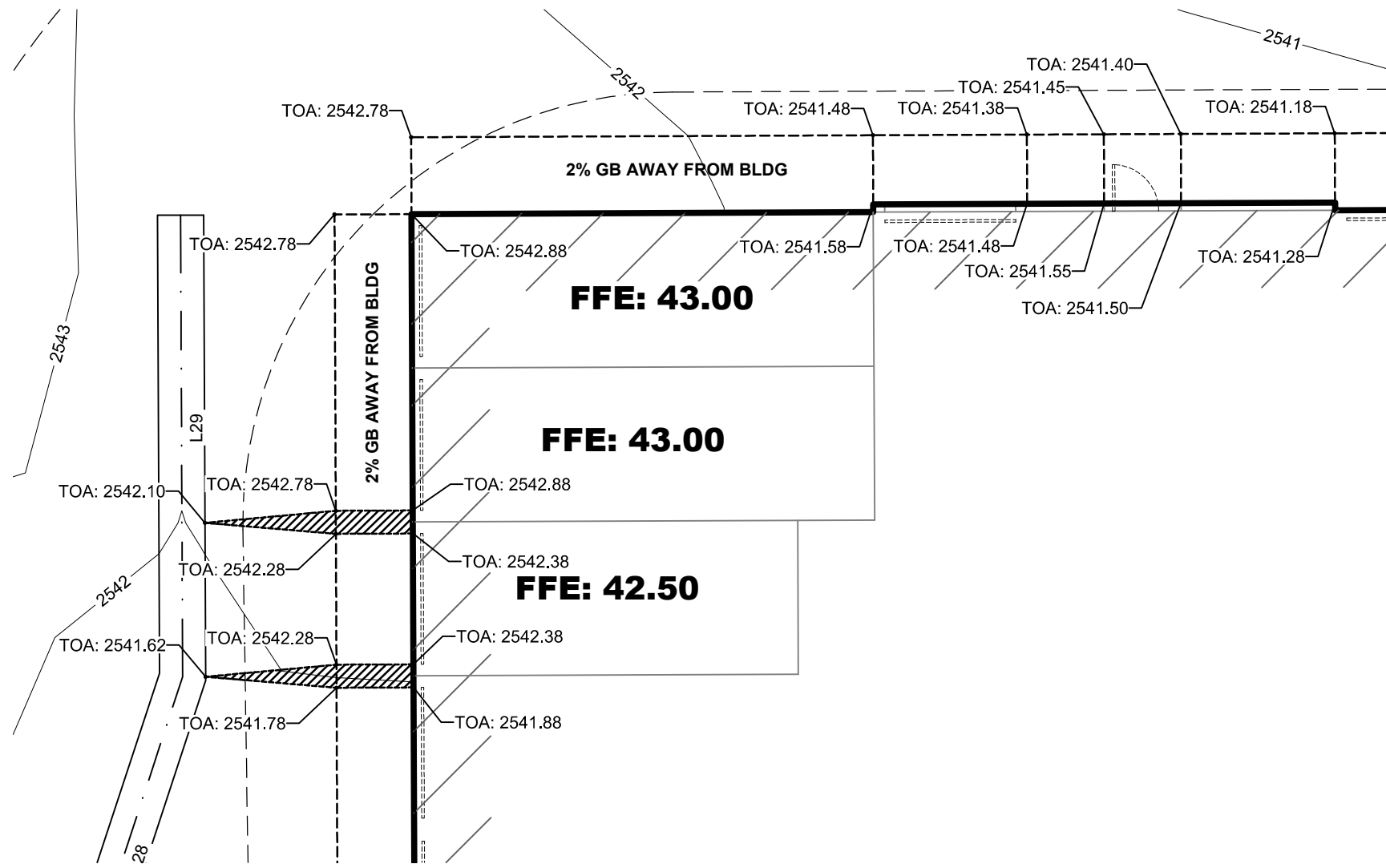
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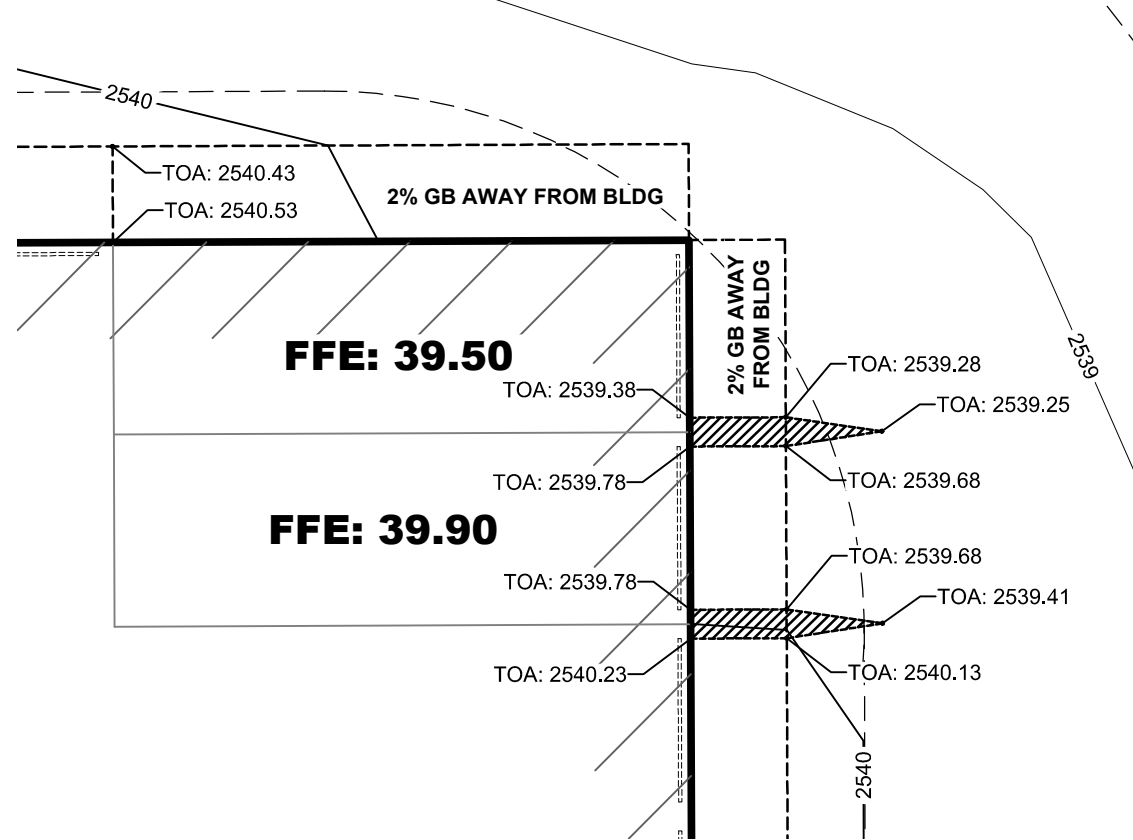
AREA 1 ENLARGED DETAIL
SCALE: 1"=10'



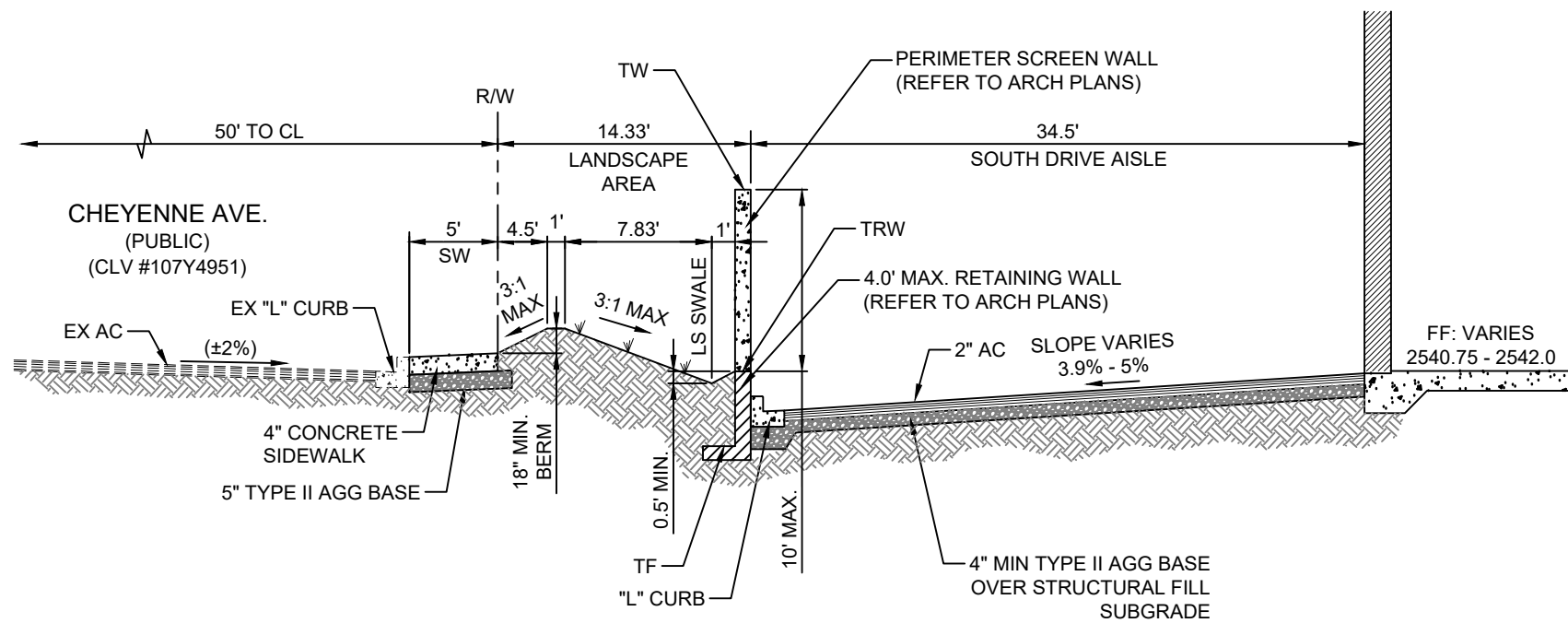
AREA 2 ENLARGED DETAIL
SCALE: 1"=10'



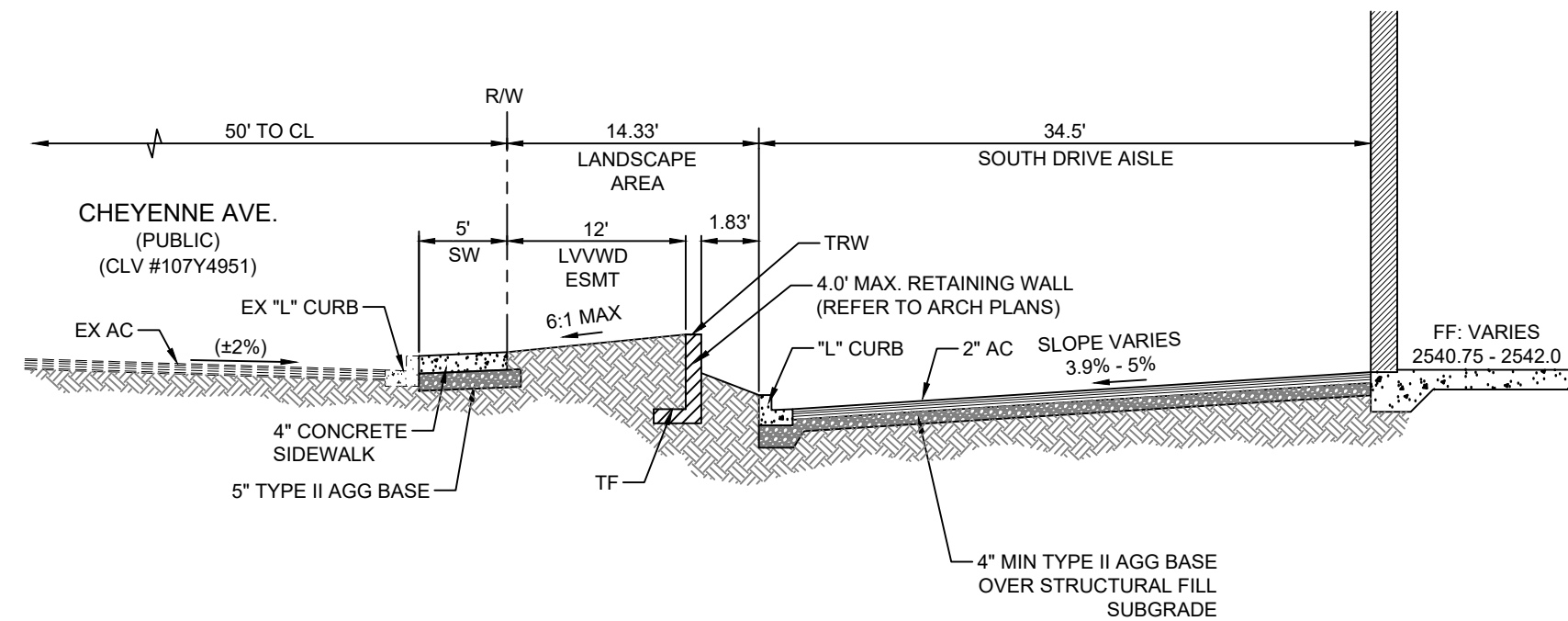
AREA 3 ENLARGED DETAIL
SCALE: 1"=10'



AREA 4 ENLARGED DETAIL
SCALE: 1"=10'



SOUTH SIDE SECTION
SCALE: NTS



SOUTH SIDE SECTION
SCALE: NTS

ENGINEER'S NOTES:

- CONTRACTOR IS RESPONSIBLE FOR EROSION AND DUST CONTROL AND STORMWATER MANAGEMENT DURING CONSTRUCTION.
- SEE HORIZONTAL CONTROL PLAN FOR EXACT PROPERTY LINE DIMENSIONS.
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- SOILS REPORT NOTE:
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PROJECT NAME: ALL STORAGE - 9172 W CHEYENNE AVE
PROJECT NO.: 175430
DATE: JAN 15, 2018
- CUT/FILL ESTIMATES:
FROM EXISTING TO FINISH GRADE ELEVATIONS
CUT: 1,154 CY
FILL: 4,561 CY
NET: 3,407 CY
- FLOOR SECTION ASSUMES 5" SLAB OVER MIN. 4" TYPE II. CONTRACTOR TO VERIFY WITH STRUCTURAL PLANS AND GEOTECHNICAL ENGINEER.

A.C. PAVEMENT NOTES (ONSITE):

- 2" A.C. PAVEMENT OVER 4" TYPE II AGG BASE COMPACTED TO 95% OF LABORATORY STANDARD OVER STRUCTURAL FILL SUBGRADE COMPACTED TO 90% OF LABORATORY MAXIMUM (ASTM D-1557).
- REFER TO SOILS REPORT BY SOUTHWEST GEOTECHNICAL, PROJECT #175430, DATED JANUARY 15, 2018.

HORROCKS
ENGINEERS

1401 N. Green Valley Pkwy., Suite 160
Henderson, NV 89074

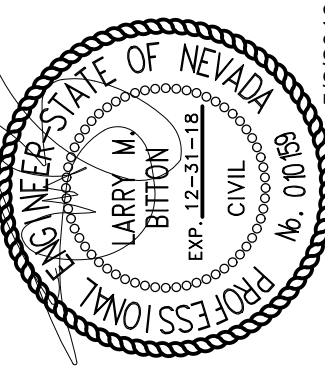
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WARNING

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DRAWING IS NOT TO SCALE

REVISIONS
REV # DATE

DRAWING INFO
DATE 5/2/2018
DESIGNED MDP
DRAWN SS
CHECKED LMB
PROJECT NV-1029-1801



ALL-STORAGE

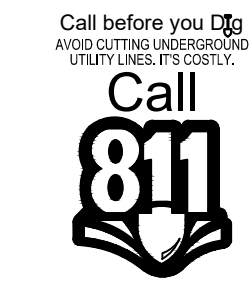
@ CHEYENNE AND DAPPLE GRAY
LAS VEGAS, NEVADA

DETAIL SHEET 2

138-08-401-013



C.6.1



1-800-227-2600



1-702-227-2929



1-702-432-5300