

LEGEND

1 CD1

DRAWING NUMBER FOR DETAIL W/ REF. TO THE SHEET WHERE IT IS SHOWN

EXISTING DROP INLET

PROPOSED DROP INLET

EXISTING GATE VALVE

EXISTING POWER POLE

EXISTING ELEC MARKER

EXISTING TRAFFIC SIGNAL

EXISTING FIRE HYDRANT

EXISTING UTILITY BOX

EXISTING METER BOX

PROPOSED CONTOUR

EXISTING CONTOUR

SPOT ELEVATION

EXISTING SPOT ELEVATION

SLOPE

EXISTING STREET LIGHT (STLT)

3:1 SLOPE UNLESS OTHERWISE NOTED ON PLAN

SITE VISIBILITY ZONE

PROPOSED UTILITIES

EXISTING UTILITIES

FUTURE UTILITIES

SECTION LINE

EASEMENT LINE

RIGHT-OF-WAY LINE

PROPERTY LINE

CENTERLINE

100 YR HYDRAULIC GRADE LINE

PROPOSED SEWER LINE W/MH

EXISTING SEWER LINE W/MH

EXISTING WATER LINE & GATE VALVE

EXISTING GAS LINE

EXISTING UNDERGROUND ELECTRICAL

EXISTING CABLE TV

EXISTING TELEPHONE

EXISTING OVERHEAD AND POWER POLES

EXISTING STORM DRAIN

FUTURE STORM DRAIN

EXISTING SIDEWALK AND RAMP

VIEW FENCE

NEW ABANDONED PIPE

EXISTING ABANDONMENT

SAWCUT

CONCRETE ENCASUREMENT

ASPHALT, CURB AND GUTTER REMOVAL

STUB & PLUG PIPE

EDGE OF PAVEMENT

RETAINING WALL

EX. WATER VALVE

ABBREVIATIONS

AIR

ASPHALT CONCRETE, ACRE

ASBESTOS CEMENT PIPE

ADDITIONAL

ANGLE POINT

ASSESSOR'S PARCEL NUMBER

APPROXIMATELY

AASHTO

ASTM

AVE

AVAR

AWWA

BC

BLM

BLVD

BM

BO

BVCS

BW

C & G

CATV

CBM

CCPW

CCTV

CCWRD

CFS

CIP

CIPM

CIPP

CIR

CLR

CLSM

CLV

CMP

CMU

CONC

COND

COORD

COR

CPEP

CT

CY

Δ

DBL

DCS

DEFLECT

DIA.

DIP

DIST

DR

DS

DTL

DW

DWG

E

ECR

ELE.ELEC

ELEV

EP, EOP

ESMT

EVC

EXIST, EX

EXP

FC

FF, FFE

FG

FL

FO

FRP

FS

FT

FTG

FUT

G

GA

GB

GND

GRD

H

HGT

HDWL

HGL

HORIZ

HP

HPS

IBC

INV

INT

JOINT

L

LT

LF

LP

LN

LP

LSCP

LWWD

MAX

ME

MH

MIN

MLCP

MOD

MON

MPH

N

NDOT

NO

NOSHA

NPC

NTS

OC

OH

OHP

P

PB

PBS

PC

PCC

PE

PH

PI

PIP

PIV

P

PLOP

PMF

POB

POC

P.O.C.

POT

PP

PROP

PRC

PRVC

PSI

PT

P.U.E.

PVC

PM

PVMT

PZ

R, RAD

RT

RCB

RCP

RD

RDWY

REC

REF

REINF

REQD

RIM

RND

ROW, R/W

RP

RPM

RSGV

S

SCH

SD

SDMH

SECT

SF

SHLDR

SHT

SL

ST

SP

SQ

SR

SS

SSMH

STA

STD

STL

STRUCT

SVZ

SW

SWG

TAN

TB

TC

TCE

TEL, TELE

TEMP

TF

TG

TMH

TP

TP

TRANS

TRW

TS

TSW

TW

TY, (TYP)

UDACS

UG

ULT

USD

UT

VAR

VC

VCP

VERT

VG

VOL

W

WS

WT

WTR

XING

YD

Z

RADIAL, RADIUS

RIGHT

REINFORCED CONCRETE BOX

REINFORCED CONCRETE PIPE

ROAD

ROADWAY

RECTANGULAR

REFERENCE

REINFORCED

REQUIRED

TOP OF RIM ELEVATION

ROUND

RIGHT OF WAY

RADIUS POINT

RAISED PAVEMENT MARKERS

RESILIENT SEAT GATE VALVE

SEWER, SOUTH

SCHEDULE

STORM DRAIN

STORM DRAIN MANHOLE

SECTION

SQUARE FOOT/FEET

SHOULDER

SHEET

STREET LIGHT

SERVICE POINT

SQUARE

SEWER RECLAIM MAIN

SANITARY SEWER

SANITARY SEWER MANHOLE

STATION

STREET

STANDARD

STEEL

STRUCTURE

SIGHT VISIBILITY ZONE

SIDEWALK

SOUTHWEST GAS

TELEPHONE OR TOP

TANGENT

TOP OF BERM

TOP OF CURB

TEMPORARY CONSTRUCTION ESMT

TELEPHONE

TEMPORARY

TOP OF FOOTING

TOP OF GRATE

TOP OF MANHOLE

TOP OF PIPE

TELEPHONE POLE

TRANSITION

TOP OF RETAINING WALL

TRAFFIC SIGNAL

TOP OF SIDEWALK

TOP OF WALL

TYPICAL

UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (LATEST EDITION)

UNDERGROUND

ULTIMATE

UNIFORM STD. DRAWINGS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA (LATEST EDITION)

UNDERGROUND TELEPHONE

VARIABLE/VARIES

VERTICAL CURVE

VITRIFIED CLAY PIPE

VERTICAL

VALLEY GUTTER

VOLUME

WATER, WEST

WITH

WATER SUPPLY

WEIGHT

WATER

CROSSING

YARD, YARD DRAIN

PRESSURE ZONE

PRIVATE WATER QUANTITIES				PUBLIC WATER QUANTITIES			
ITEMS	DESCRIPTION	QTY	PER	DESCRIPTION	QTY	PER	
1	2" TEE	1	EA	1 1/2" DOMESTIC WATER METER	2	EA	
2	2" GATE VALVE	1	EA	1 1/2" DOMESTIC RPPA	2	EA	
3	2"x2 1/2" REDUCER	1	EA	1 1/2" DOMESTIC COPPER TYPE K	20	EA	
4	2 1/2" WATERLINE	171	LF	1 1/2" DOMESTIC SERVICE SADDLE + CORP STOP	2	EA	
5	2 1/2" 45° BEND	1	EA				
6	6" GATE VALVE	1	EA				
7	6" WATERLINE	45	LF				
8	FIRE HYDRANT	1	EA				
9	10"x4" TEE	1	EA				
10	1 1/2"x2 1/2" REDUCER	2	EA				
11	2 1/2" 90° BEND	1	EA				
12	2 1/2" TEE	2	EA				

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT No. 125994 FIRST APPROVED DATE: 1/11/18

BASIS OF BEARINGS

NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 148, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

BENCHMARK		NAVD 88 DATUM	NAVD 83 DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "0368", BEING A USC&GS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DENTITION BASIN.		3246.63 (FEET)	989.574 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).			

PROJECT NO. 889-002

DESIGN: DRAWN: CHECK: PLOT DATE: 01-02-18 PLOT TIME: 17:15:51

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
goveengineering.com

CA LAS VEGAS SVD, LLC

DORAL ACADEMY

RED ROCK CAMPUS HIGH SCHOOL

PROJECT DATA

DRAWING C1.2

2 OF 13 SHTS

PROJ.#: 125994 AGREEMENT: 16643 QS: 137-34-NW

199

L17-01470 715-185

H: / CLV: L17-01470

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 OF THE CITY ENGINEERS, 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 SHALL 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 NINE (9") DIA. LINES. CONNECTIONS TO FIFTEEN (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "T" 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.

NO PORTION OF THE SITE FALLS WITHIN A FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA. SITE LOCATED ON PANEL 32003C2150E, DATED SEPTEMBER 27, 2002, AND PANEL 32003C2145F, DATED NOVEMBER 16, 2011. THIS PANEL SHOWS THAT THE PROJECT IS LOCATED WITHIN A ZONE X AND NOT LOCATED WITHIN A FEMA DESIGNATED 100-YEAR ZONE A OR SPECIAL FLOOD HAZARD AREA.

PROJECT No. 125994 FIRST APPROVED DATE: 11/11/81

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 SHIELDING 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. COMPACTION SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEER.
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 RECONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BULK FILL 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 THE OWNER'S EXPENSE. AN EXAMPLE OF THIS TYPE OF CONSTRUCTION, TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.
2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC ENGINEER AND THE CITY ENGINEER.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
4. ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE, WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB. IF IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE, WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.
5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A.
6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TEF0 PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
7. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE CIVIL PLANS.
8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED, AT NO EXPENSE TO THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BASES ARE INSTALLED.
10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER SHALL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR THE SERVICE REQUIREMENTS, THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHT/S AND/OR SERVICE/S INSTALLED UNDER THIS PLAN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO, AT (702) 228-6331).

APPROVED FOR CONSTRUCTION

REVISED 4/15/10

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 THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [FC SECTION 105.7.12]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [FC SECTION 3310, SECTION 3312]
5. TO IDENTIFY FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF STREET ADJACENT TO THE FIRE HYDRANTS. [FC SECTION 507.5.7.3.]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS SHALL BE CONDUCTED BEFORE COVERING THE LINES. COVER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [FC SECTION 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. [FC SECTION 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. [FC SECTION 507]
9. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED. [FC SECTION 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. [FC SECTION 507]
11. FIRE HYDRANTS SPACING SHALL BE AS FOLLOWS: [FC SECTION 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. PROVIDE A FIRE FANSATION HAZARD ZONES, WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES, THERE WILL BE 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. [FC SECTION C102.6]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [FC SECTION 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. [FC SECTION 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. [FC SECTION C102.7]
17. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [FC SECTION C102.8]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL VALVES/VEHICLE ACCESS SHALL BE INSTALLED AT EACH END OF ACCESS ROADWAYS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [FC SECTION C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING SURFACES, AND SHALL BE MAINTAINED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [FC SECTION 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% TO 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [FC SECTION 503.2.7, 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [FC 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 IN. [FC SECTION 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. NO PARKING IS PERMITTED ON BOTH SIDES OF AN ACCESS ROADWAY IF NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LINES THROUGH PARKING LOTS SHALL NOT BE LESS THAN 24 FT. [FC SECTION 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL FO THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [FC SECTION 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS (ROOMS) 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. [FC SECTION 503.3.1.2]
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. [FC SECTION 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 LANE. SIGNS SHALL BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR UNDER THE ROADWAY SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [FC SECTION 503.3.1]
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 SECTION 503.8 AND IFC APPENDIX M.

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISION; 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 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 BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE, WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CARE WHEN OPERATING NEAR EXISTING UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES WHICH ARE TO BE REMOVED OR REPLACED SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER OR OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK, CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH 1/2" ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER USD 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER USD 235. EXISTING LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (COMPANY, REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND RELOCATED ACCORDING TO THE RELOCATION REQUIREMENTS WITH N.R.S. STATUTE NO. 625.380 AND CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE UDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOW LINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

WALL NOTES:

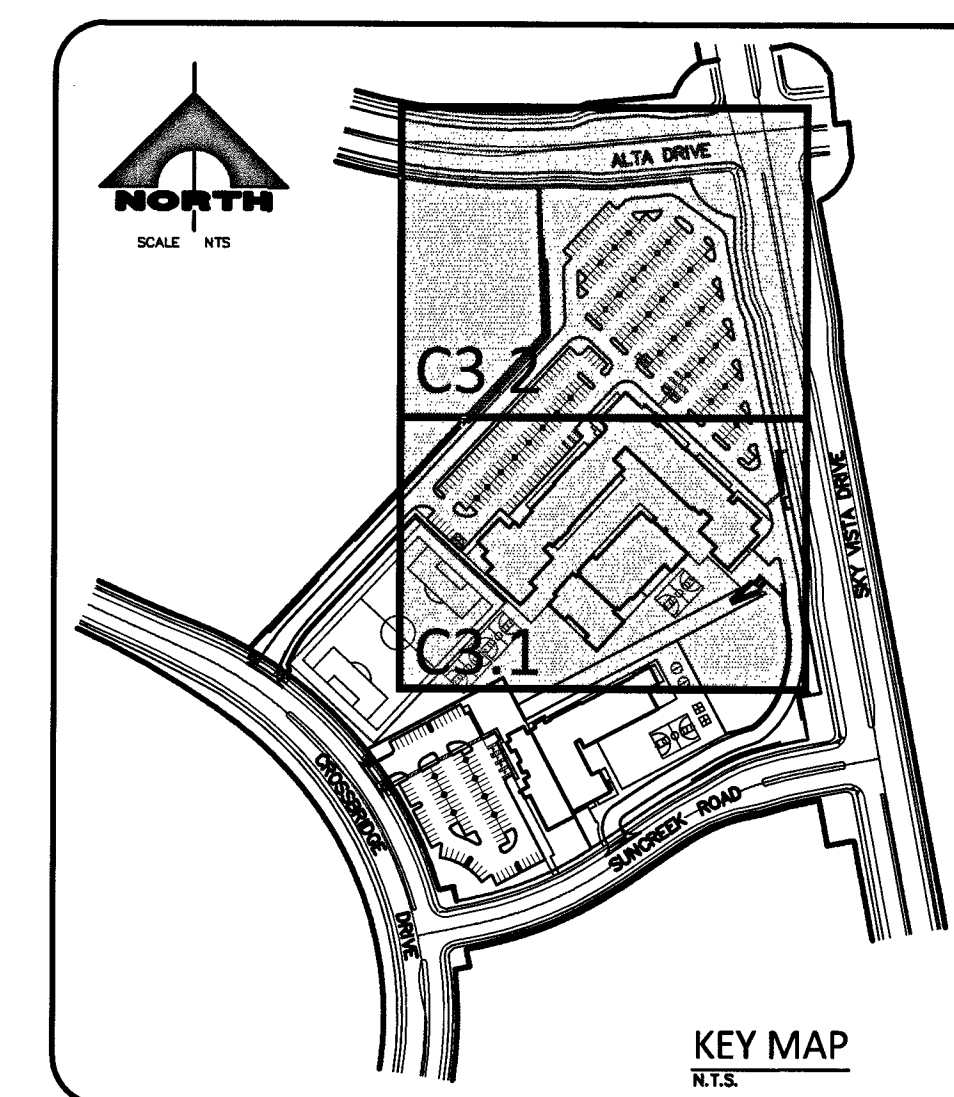
16. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC., THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION PRIOR TO OFFERING INSPECTION AND FIELD CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. SANITARY SEWER AND STORM DRAIN FACILITIES SHOWN ON THESE PLANS SHALL BE USED TO MEET THE REQUIREMENTS OF NRS 455 AND SHALL SHOW AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS ENTER THE PUBLIC RIGHT-OF-WAY. ANY DEVIATIONS FROM THE INFORMATION SHOWN SHALL BE NOTED AND SUBMITTED AS A REVISION TO THE PLANS AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION.
22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

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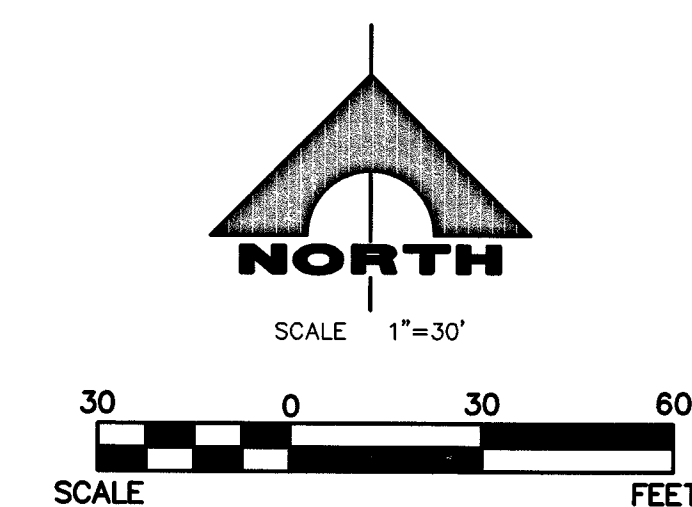
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PROJ#:125994 AGREE#:116643 QS:137-34-NW

 SIGHT VISIBILITY ZONE

NO WALLS, FENCES SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES OR HYDRANTS, TREES, AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXIST, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF THE CURB TO THE TOP OF THE SIGN, AND THE SIGN IS NOT PLACED ON GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.

ALL DIMENSIONS ARE TAKEN FROM BACK OF CURB UNLESS OTHERWISE NOTED. SEE DETAIL "A" SHEET C3.5 FOR SIGHT VISIBILITY ZONE DETAIL.

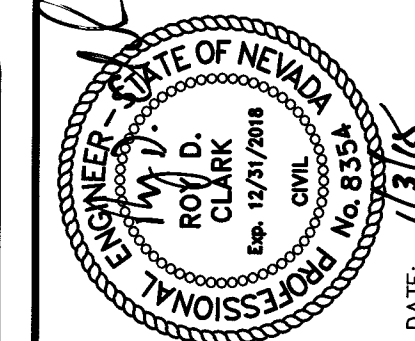


NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "D368", BEING A USCGS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEENTION BASIN.	3246.63 (FEET)	989.574 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD'89).		

199
L17-01470 715-186

H: / CLV: L17-01470

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OT TIME: 17:19:17	

RAINBOW BLVD. S, NV 89146 2000 2299 ring.com	DE DR CH PL PL	89-002_c3.1_HR2 dw
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**1555 S. RALPH AVE.
LAS VEGAS, NV 89102
T: 702.804.4444
F: 702.804.4444
gcwengineers.com**

CV
ERS SURVEYOR

G ENGINE			F:\Projects\8 Daniel Lee

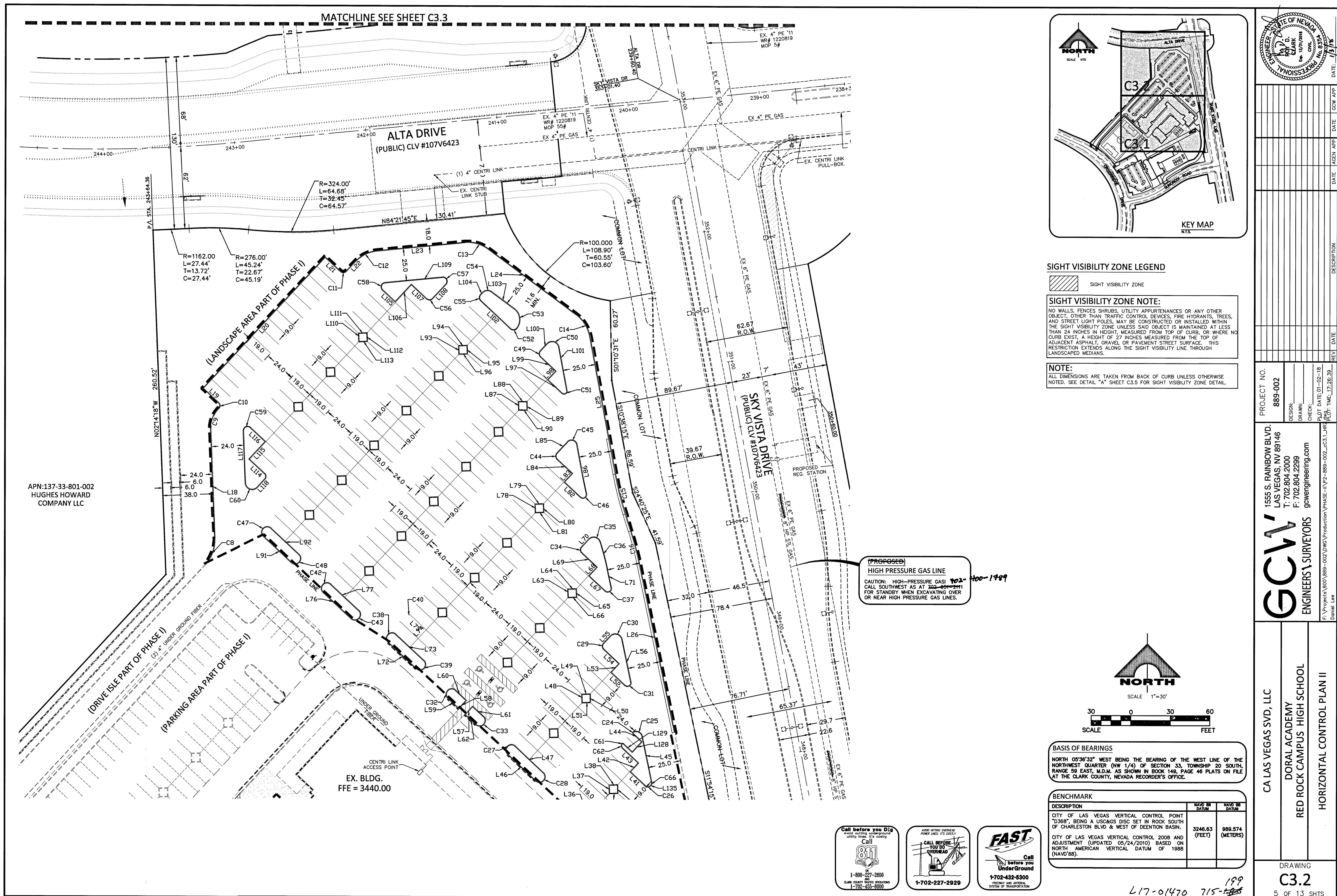
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HORIZONTAL

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DRAWING		

C3.1
4 OF 13 SHTS
/ CLV: L17-01470



BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N47°05'15"W	16.50'
L2	S42°54'45"W	43.12'
L3	S42°54'45"W	35.33'
L4	N47°04'25"W	70.52'
L6	N47°05'15"W	10.98'
L7	S47°05'15"E	17.00'
L8	N42°54'45"E	9.00'
L9	S47°05'15"E	14.37'
L10	S2°05'15"E	6.00'
L11	S87°54'45"W	6.00'
L12	N2°05'15"W	6.00'
L13	N87°54'45"E	6.00'
L14	S2°05'15"E	6.00'
L15	S87°54'45"W	6.00'
L16	N2°05'15"W	6.00'
L17	N87°54'45"E	6.00'
L18	N21°4'18"W	83.22'
L19	S47°05'15"E	16.00'
L20	S42°54'45"W	136.00'
L21	N47°05'15"W	16.00'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L22	S42°54'45"W	9.82'
L23	S84°21'45"W	66.61'
L24	S53°34'33"E	82.97'
L25	N10°38'15"W	106.09'
L26	N11°54'15"W	130.40'
L27	N47°05'15"W	12.50'
L28	N47°05'12"W	7.74'
L29	N42°54'45"E	6.69'
L30	S47°05'14"E	16.49'
L31	N42°54'46"E	25.05'
L32	N42°59'22"E	2.53'
L33	N12°09'13"W	15.82'
L35	N40°05'15"W	29.00'
L36	N47°05'15"W	29.00'
L37	S2°05'15"E	6.00'
L38	S87°54'45"W	6.00'
L39	N2°05'15"W	6.00'
L40	N87°54'45"E	6.00'
L41	N7°05'14"W	15.50'
L42	N42°54'45"E	9.00'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L43	N47°05'14"W	16.50'
L44	N47°05'14"W	9.25'
L45	N11°56'22"W	35.28'
L46	N47°05'15"W	29.00'
L47	N47°05'15"W	29.00'
L48	S2°05'15"E	6.00'
L49	S87°54'45"W	6.00'
L50	N2°05'15"W	6.00'
L51	N87°54'45"E	6.00'
L52	N47°05'15"W	14.37'
L53	N42°54'45"E	9.00'
L54	N47°05'15"W	16.00'
L55	N42°54'45"E	7.44'
L56	N11°54'15"W	32.94'
L57	N42°54'45"E	8.00'
L58	N42°54'45"E	8.00'
L59	N47°05'15"W	11.00'
L60	N47°05'15"W	11.00'
L61	N47°05'15"W	11.00'
L62	N47°05'15"W	11.00'

BC CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	90°00'00"	2.50'	3.93'	2.50'
C2	36°43'47"	52.47'	33.64'	17.42'
C3	36°42'42"	8.00'	5.13'	2.65'
C4	90°00'00"	0.50'	0.79'	0.50'
C5	65°23'13"	2.00'	2.28'	1.28'
C6	102°58'22"	3.00'	5.39'	3.77'
C7	77°01'38"	27.50'	36.97'	21.89'
C8	45°09'04"	27.50'	21.67'	11.43'
C9	45°09'04"	20.00'	15.76'	8.32'
C10	90°00'00"	3.00'	4.71'	3.00'
C11	90°00'00"	3.00'	4.71'	3.00'
C12	41°27'00"	26.50'	19.17'	10.03'
C13	42°03'42"	26.50'	19.45'	10.19'
C14	42°56'18"	26.50'	19.86'	10.42'
C15	7°08'09"	250.00'	31.14'	15.59'
C16	5°52'09"	250.00'	25.61'	12.82'
C17	180°00'00"	4.00'	12.57'	INFINITY'
C18	19°09'52"	14.50'	4.85'	2.45'
C19	90°05'49"	2.50'	3.93'	2.50'
C20	121°25'13"	4.50'	9.54'	8.02'

BC CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C21	115°01'13"	14.50'	29.11'	22.77'
C22	180°00'00"	4.00'	12.57'	INFINITY'
C23	180°00'00"	4.00'	12.57'	INFINITY'
C24	110°22'00"	0.50'	0.96'	0.72'
C25	104°46'52"	4.50'	8.23'	5.84'
C26	90°00'00"	2.50'	3.93'	2.50'
C27	180°00'00"	4.00'	12.57'	INFINITY'
C28	180°00'00"	4.00'	12.57'	INFINITY'
C29	90°00'00"	3.00'	4.71'	3.00'
C30	125°11'00"	5.00'	10.92'	9.64'
C31	144°49'00"	2.50'	6.32'	7.88'
C32	180°00'00"	4.00'	12.57'	INFINITY'
C33	180°00'00"	4.00'	12.57'	INFINITY'
C34	90°00'00"	3.00'	4.71'	3.00'
C35	119°33'02"	5.00'	10.43'	8.58'
C36	5°37'58"	225.00'	22.12'	11.07'
C37	144°49'00"	2.50'	6.32'	7.88'
C38	180°00'00"	4.00'	12.57'	INFINITY'
C39	180°00'00"	4.00'	12.57'	INFINITY'
C40	90°00'00"	3.00'	4.71'	3.00'

BC CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C42	180°00'00"	4.00'	12.57'	INFINITY'
C43	180°00'00"	4.00'	12.57'	INFINITY'
C44	90°00'00"	3.00'	4.71'	3.00'
C45	126°27'00"	4.00'	8.83'	7.93'
C46	145°47'24"	2.50'	6.36'	8.12'
C47	180°00'00"	4.00'	12.57'	INFINITY'
C48	180°00'00"	4.00'	12.57'	INFINITY'
C49	90°00'00"	3.00'	4.71'	3.00'
C50	126°27'00"	5.00'	11.03'	9.91'
C51	143°33'00"	2.00'	5.01'	6.07'
C52	93°08'59"	3.00'	4.88'	3.17'
C53	93°20'19"	10.00'	16.29'	10.60'
C54	83°30'42"	5.00'	7.29'	4.46'
C55	90°00'00"	3.00'	4.71'	3.00'
C56	90°00'00"	3.00'	4.71'	3.00'
C57	138°33'00"	3.00'	7.25'	7.93'
C58	131°27'00"	3.00'	6.88'	6.65'
C59	135°09'04"	3.00'	7.08'	7.27'
C60	134°50'56"	5.00'	11.77'	12.03'
C61	104°28'39"	0.50'	0.91'	0.65'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L63	S2°05'15"E	6.00'
L64	S87°54'45"W	6.00'
L65	N2°05'15"W	6.00'
L66	N87°54'45"E	6.00'
L67	N47°05'15"W	16.99'
L68	N42°54'45"E	9.70'
L69	N47°05'15"W	16.00'
L70	N42°54'45"E	7.85'
L71	S11°54'15"E	13.57'
L72	N47°05'15"W	29.00'
L73	N47°05'15"W	29.00'
L74	N42°54'45"E	6.17'
L75	N47°05'15"W	15.00'
L76	N47°05'15"W	29.00'
L77	N47°05'15"W	29.00'
L78	S2°05'15"E	6.00'
L79	S87°54'45"W	6.00'
L80	N2°05'15"W	6.00'
L81	N87°54'45"E	6.00'
L82	N47°05'15"W	16.62'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L83	N42°54'45"E	9.00'
L84	N47°05'15"W	16.00'
L85	N42°54'45"E	11.73'
L86	S10°38'15"E	27.20'
L87	S2°05'15"E	6.00'
L88	S87°54'45"W	6.00'
L89	N2°05'15"W	6.00'
L90	N87°54'45"E	6.00'
L91	N47°05'15"W	29.00'
L92	N47°05'15"W	29.00'
L93	S2°05'15"E	6.00'
L94	S87°54'45"W	6.00'
L95	N2°05'15"W	6.00'
L96	N87°54'45"E	6.00'
L97	N47°05'15"W	14.79'
L98	N42°54'45"E	9.00'
L99	N47°05'15"W	16.00'
L100	N42°54'45"E	7.54'
L101	S10°38'15"E	33.58'
L102	N47°05'15"W	30.99'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L103	S53°34'33"E	21.57'
L104	N42°54'45"E	2.15'
L105	N47°05'15"W	13.01'
L106	S42°54'45"W	18.00'
L107	N47°05'15"W	16.00'
L108	S42°54'45"W	14.84'
L109	N84°21'45"E	43.82'
L110	S2°05'15"E	6.00'
L111	S87°54'45"W	6.00'
L112	N2°05'15"W	6.00'
L113	N87°54'45"E	6.00'
L114	N47°05'15"W	16.00'
L115	S42°54'45"W	18.00'
L116	N47°05'15"W	15.28'
L117	N214°18"W	39.31'
L118	S42°54'45"W	8.30'
L120	S42°54'45"W	13.67'
L121	S47°05'15"E	4.00'
L122	N42°54'45"E	1.17'
L123	N47°05'15"W	2.33'

BC CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C62	75°31'21"	2.50'	3.30'	1.94'
C63	90°00'00"	3.00'	4.71'	3.00'
C64	89°58'51"	3.00'	4.71'	3.00'
C65	41°22'25"	27.49'	19.85'	10.38'
C66	54°51'07"	2.50'	2.39'	1.30'

BC LINE TABLE		
LINE #	DIRECTION	LENGTH
L124	S42°54'45"W	1.17'
L125	N47°05'15"W	2.33'
L126	S47°05'15"E	2.83'
L127	N42°54'45"E	0.67'
L128	S42°54'46"W	11.00'
L129	N47°05'14"W	9.44'
L132	S42°54'45"W	80.77'
L133	S47°05'15"E	16.00'
L134	N42°54'11"E	16.00'
L135	N42°54'46"E	0.43'

BASIS OF BEARINGS

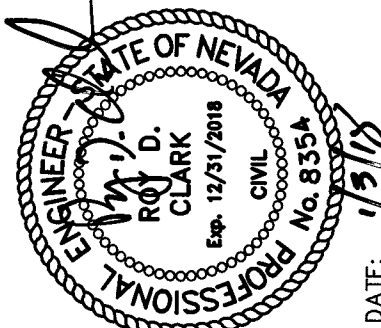
NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 148, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

BENCHMARK		
DESCRIPTION	NAD 83 DATUM	NAD 83 DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "7368", BEING A USCGAS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEENTON BASIN.	3246.63 (FEET)	989.574 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAD'88).		



L17-01470 715-186 ¹⁹⁹

H: / CLV: L17-01470

[illegible]

PROJECT NO.
889-002

DESIGN: _____
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 CHECK: _____
 PLOT DATE: 01-02-18
 PLOT TIME: 17:27:49

GCW'
ENGINEERS'SURVEYORS

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LAS VEGAS, NV 89146
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gownengineering.com

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Daniel Lee

CALAS VEGAS SVD, LLC

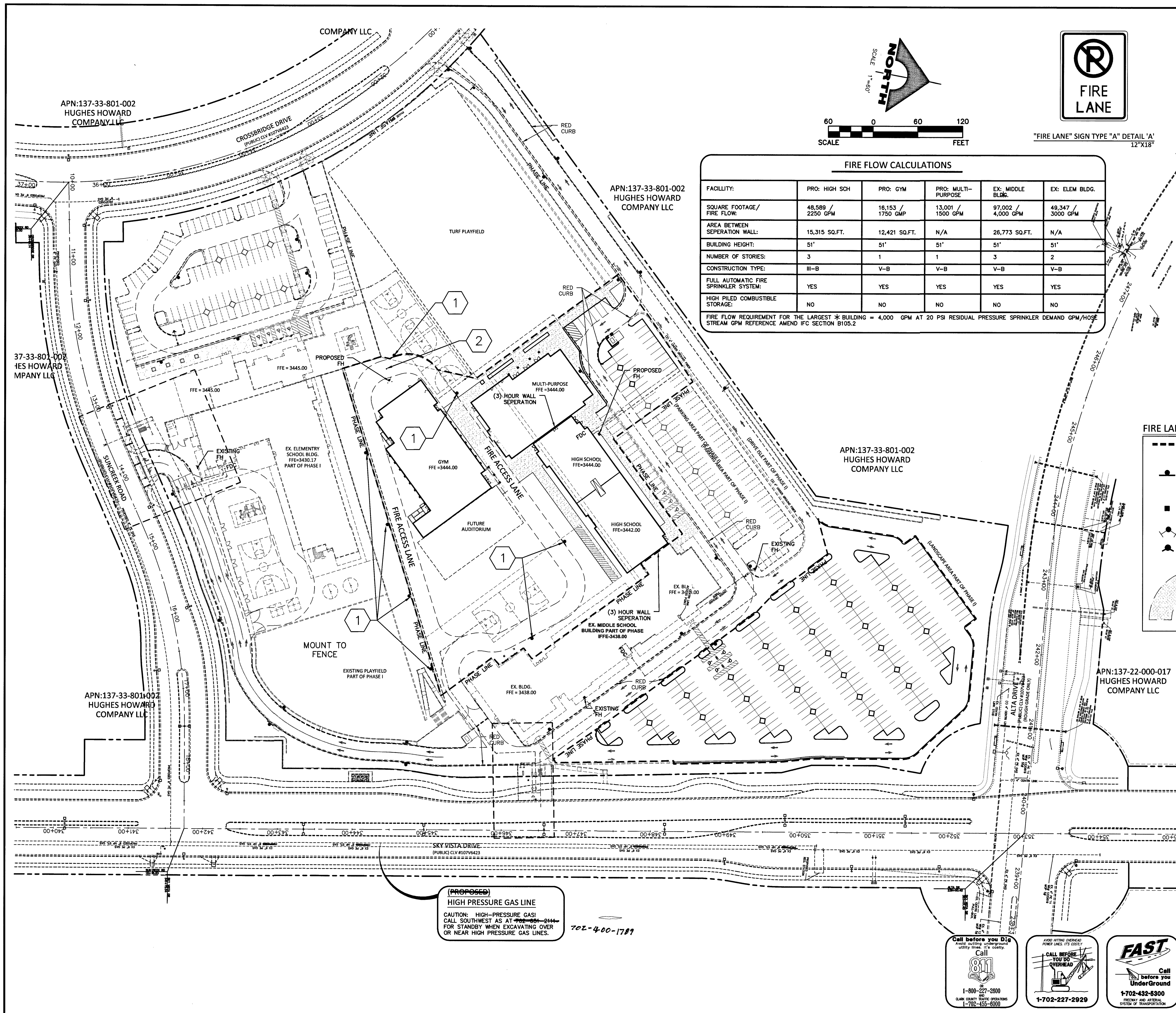
DORAL ACADEMY
RED ROCK CAMPUS HIGH SCHOOL

HORIZONTAL CONTROL CURB DATA TABLES

DRAWING
C3.3

6 OF 13 SHTS

H: / CLV: L17-01470

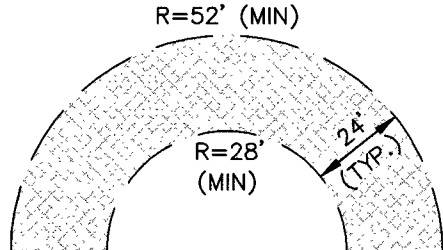


FACILITY:	PRO: HIGH SCH	PRO: GYM	PRO: MULTI-PURPOSE	EX: MIDDLE BLDG.	EX: ELEM BLDG.
SQUARE FOOTAGE/ FIRE FLOW:	48,588 / 2250 GPM	16,153 / 1750 GMP	13,001 / 1500 GPM	97,002 / 4,000 GPM	48,347 / 3800 GPM
AREA BETWEEN SEPERATION WALL:	15,315 SQ.FT.	12,421 SQ.FT.	N/A	26,773 SQ.FT.	N/A
BUILDING HEIGHT:	51'	51'	51'	51'	51'
NUMBER OF STORIES:	3	1	1	3	2
CONSTRUCTION TYPE:	III-B	V-B	V-B	V-B	V-B
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	YES	YES	YES	YES	YES
HIGH PILED COMBUSTIBLE STORAGE:	NO	NO	NO	NO	NO

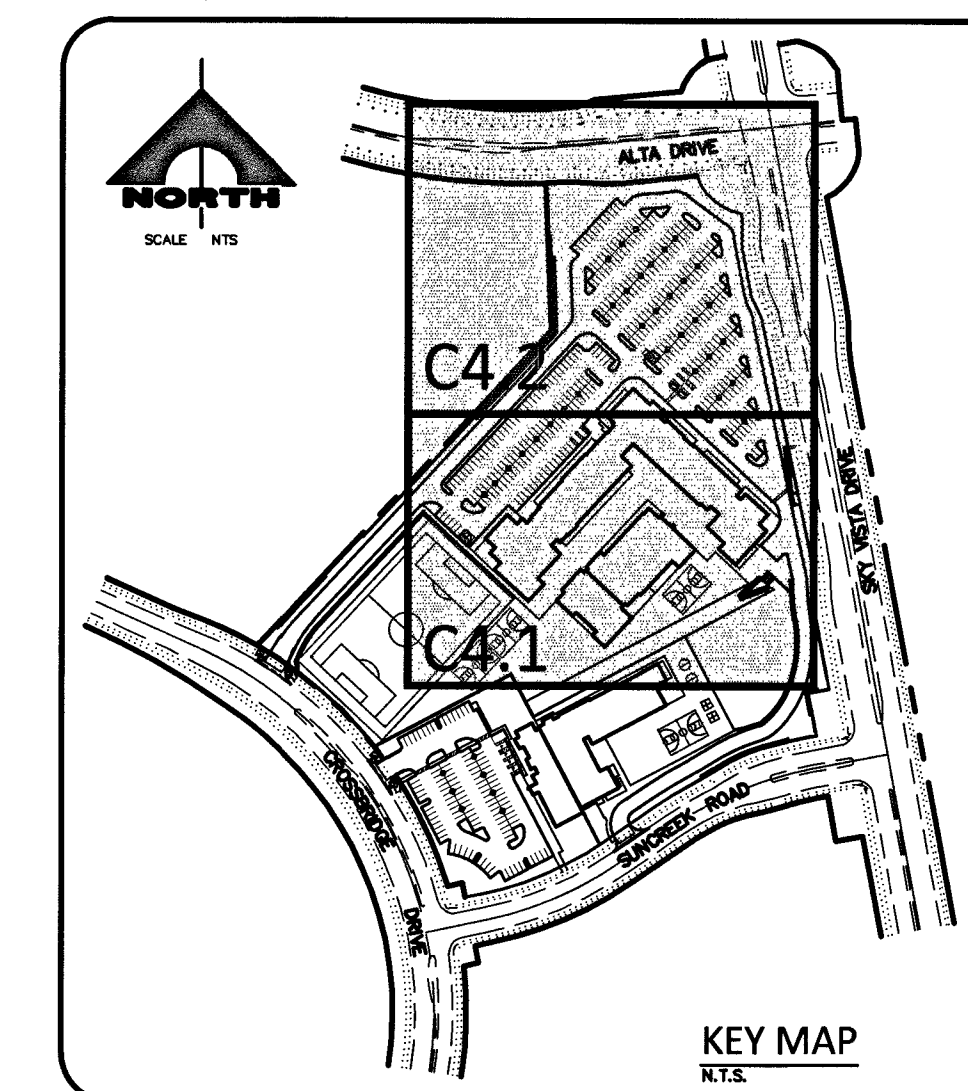
FIRE FLOW REQUIREMENT FOR THE LARGEST * BUILDING = 4,000 GPM AT 20 PSI RESIDUAL PRESSURE SPRINKLER DEMAND GPM/HOSE STREAM GPM REFERENCE AMEND IFC SECTION B105.2

NO.	ITEM USDCCA: UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA.
1	INSTALL "FIRE LANE" SIGNS PER DETAIL 'A' THIS SHEET.
2	INSTALL "FIRE HYDRANT BLUE REFLECTOR" PER CITY OF LAS VEGAS FIRE DEPARTMENT GUIDELINES.

FIRE LANE LEGEND

	INDICATES RED PAINTED CURB WITH "NO PARKING FIRE LANE" PAINTED EVERY 100 FT. PER CITY OF LAS VEGAS FIRE PREVENTION DIVISION GUIDELINES. (TYPE "C")
	INDICATES PROPOSED LOCATION OF FIRE LANE SIGNS (DETAIL "A" HEREON) TO BE PLACED AT EVERY INTERSECTION STATING "FIRE LANE". FIRE LANE SIGNS SHALL CONFORM TO CITY OF LAS VEGAS FIRE PREVENTION DIVISION GUIDELINES.
	INDICATES PROPOSED LOCATION OF BLUE FIRE HYDRANT REFLECTIVE MARKER PER CITY OF LAS VEGAS FIRE PREVENTION DIVISION GUIDELINES.
	FIRE PREVENTION DIVISION CONNECTION
	PAINT PRIVATE FIRE HYDRANTS RED PER CITY OF LAS VEGAS FIRE PREVENTION DIVISION GUIDELINES.
	INDICATES 24' MINIMUM WIDTH FIRE LANE AND TYPICAL TURNING RADIUS PER CITY OF LAS VEGAS FIRE PREVENTION DIVISION GUIDELINES. PAVEMENT SECTION WILL BE HEAVY DUTY TRUCK SECTION PER DETAIL "F" SHEET C8.3.

APPROVALS					
 LAS VEGAS FIRE & RESCUE	12/20/17 DATE				
BASIS OF BEARINGS					
NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.					
BENCHMARK					
DESCRIPTION	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 2px;">NAVD 88 DATUM</th> <th style="width: 50%; padding: 2px;">NAVD 88 DATUM</th> </tr> <tr> <td style="padding: 5px; text-align: center;">3246.63 (FEET)</td> <td style="padding: 5px; text-align: center;">989.574 (METERS)</td> </tr> </table>	NAVD 88 DATUM	NAVD 88 DATUM	3246.63 (FEET)	989.574 (METERS)
NAVD 88 DATUM	NAVD 88 DATUM				
3246.63 (FEET)	989.574 (METERS)				
CITY OF LAS VEGAS VERTICAL CONTROL POINT "T3689", BEING A USCGS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEJONTON BASIN.					
NORTH AMERICAN VERTICAL CONTROL 2008 AND ADJUSTMENT UPDATED 05/24/2010 BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).					



NO.	ITEM
①	INSTALL NDOT TYPE 2 DROP INLET, (A=2.5') PER NDOT STD. DWG. N R-4.2.1.
②	INSTALL 48" Ø TYPE I STORM DRAIN MANHOLE PER USDCCA DWG. NO. 403
③	INSTALL 12" PVC STORM DRAIN PIPE PER UDACS TRENCH DETAIL PLAN NO. 16 AND 17.

NO.	ITEM	USDOCCA: UNIFORM STANDARD DRAWINGS CLARK COUNTY ARE
4	INSTALL "A" CURB PER DETAIL "A" SHEET C8.2	
5	INSTALL "L" CURB PER USDOCCA STD. DWG. 216	
6	EXISTING CURB TO BE REMOVED.	
7	CONSTRUCT 4" THICK SIDEWALK PER USDOCCA STD. DWG. 234	
8	EXISTING 3" CONCRETE VALLEY GUTTER PROTECT IN PLACE, ADJUST EXISTING FLOW LINE INVERT ELEVATION TO MATCH INVERT ELEVATION SHOWN ON PLAN.	
9	CONSTRUCT 2" AC PAVEMENT OVER 5" TYPE II AGGREGATE BASE (CARP) PER DETAIL "F" SHEET C8.2	
10	CONSTRUCT 3" AC PAVEMENT OVER 5.5" TYPE II AGGREGATE BASE (TRUCK) PER DETAIL "F" SHEET C8.2	
11	LANDSCAPE AREA. SEE LANDSCAPE PLANS FOR DETAILS	
12	INSTALL 3" WIDE VALLEY GUTTER PER DETAIL "B" SHEET C8.02.	
13	TRASH ENCLOSURE SEE ARCHITECTURAL PLANS.	
14	NOT USED.	
15	INSTALL PLANTERS SEE ARCHITECTURAL PLANS.	
16	EXISTING CURB, PROTECT IN PLACE.	
17	EXISTING SIDEWALK TO BE REMOVED.	
18	EXISTING ASPHALT AREA WITHIN THE NEW CONCRETE SIDEWALK AREA TO BE REMOVED.	

DRAINAGE CERTIFICATION

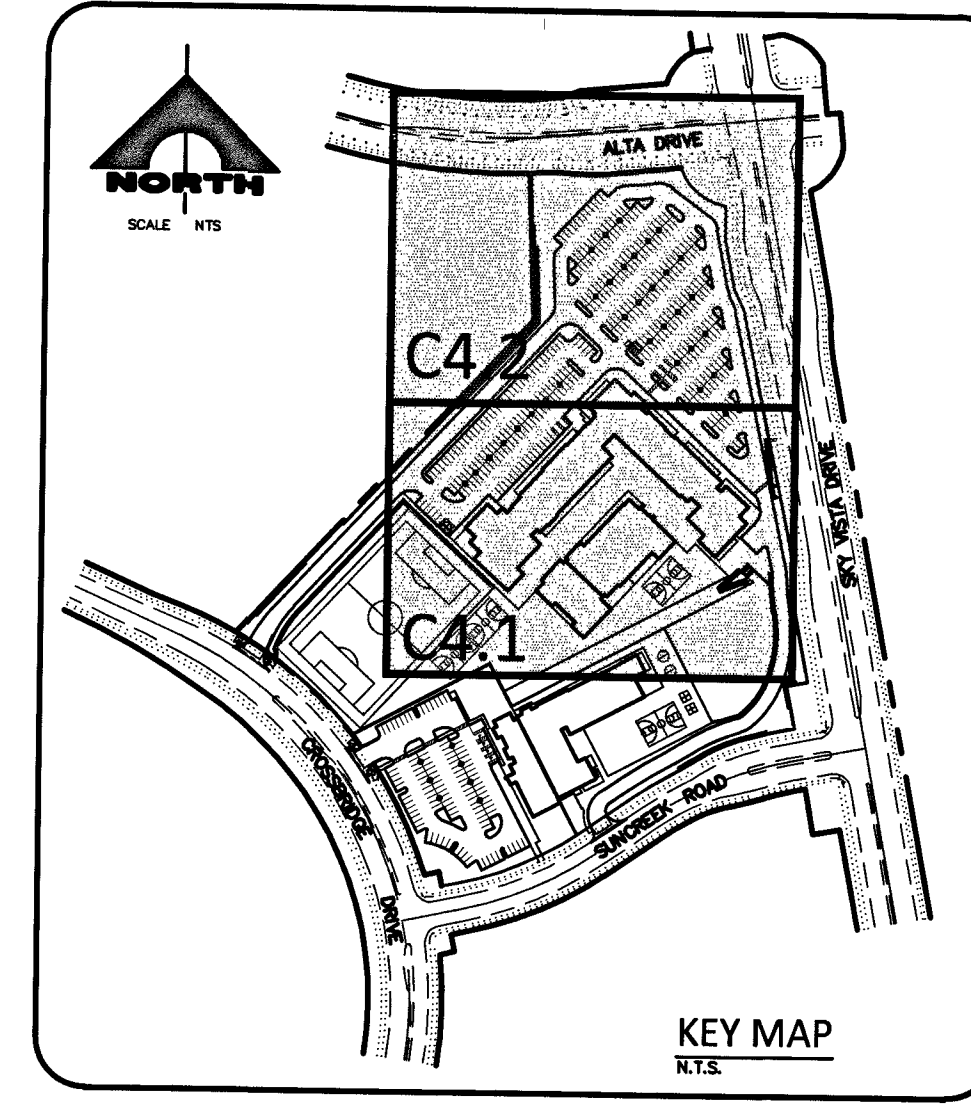
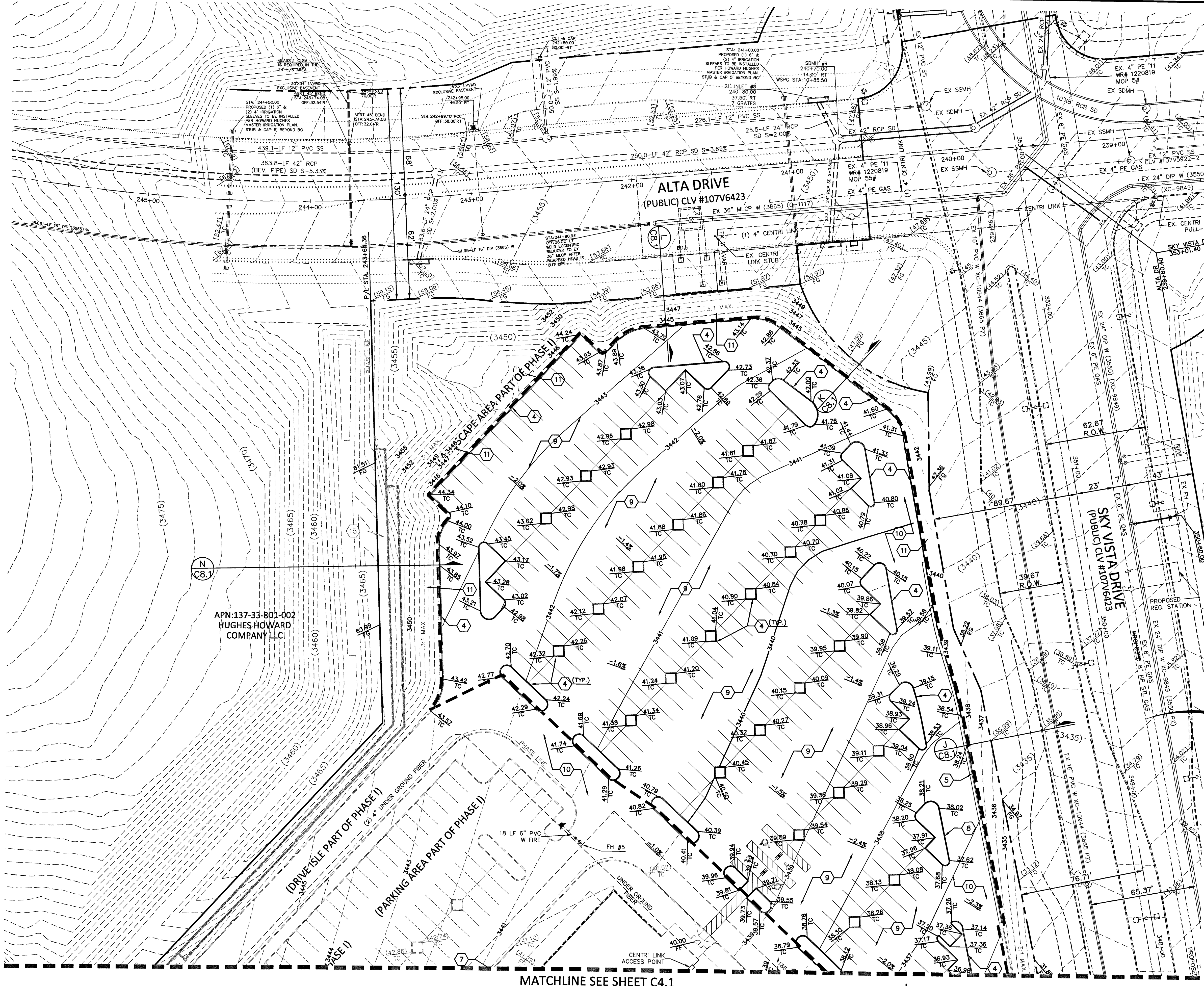
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH
APPROVED DRAINAGE STUDY DS-4755A ON FILE AT THE CITY OF
VEGAS FOR THIS PROJECT.

Roy D. Clark 1/3/18

ROY D. CLARK P.E. 354 DATE _____

BENCHMARK		
DESCRIPTION	NAVD 88 DATUM	NAVD DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "D3687", BEING A USCG&S DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEONTION BASIN.	3246.63 (FEET)	989.55 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).		

DRAWING C4.1 8 OF 13 SHTS	CA LAS VEGAS SVD, LLC DORAL ACADEMY RED ROCK CAMPUS HIGH SCHOOL GRADING PLAN I	GCW' ENGINEERS\ SURVEYORS 1555 S. RAINBOW BLVD, LAS VEGAS, NV 89146 T: 702.804.2000 F: 702.804.2299 gcwengineering.com	PROJECT NO. 889-002	DESIGN: DRAWN: CHECK:	PLOT DATE: 01-02-18 PLOT TIME: 17:39:21	REV	DATE	DESCRIPTION	DATE	AGEN APP	DATE	GCW APP	 DATE: 1/3/18



STORM DRAIN CONSTRUCTION NOTES

NO.	ITEM
1	INSTALL NDOT TYPE 2 DROP INLET, (A=2.5') PER NDOT STD. DWG. NO. R-4.2.1.
2	INSTALL 48" TYPE I STORM DRAIN MANHOLE PER USDOCA DWG. NO. 403
3	INSTALL 12" PVC STORM DRAIN PIPE PER UDACS TRENCH DETAIL PLATE NO. 18 AND 17.

GRADING CONSTRUCTION NOTES

NO.	ITEM
4	INSTALL "A" CURB PER DETAIL "A" SHEET C8.2
5	INSTALL "L" CURB PER USDOCA STD. DWG. 216
6	EXISTING CURB TO BE REMOVED.
7	CONSTRUCT 4" THICK SIDEWALK PER USDOCA STD. DWG. 234
8	EXISTING 3" CONCRETE VALLEY GUTTER PROTECT IN PLACE, ADJUST EXISTING FLOW LINE INVERT ELEVATION TO MATCH INVERT ELEVATION SHOWN ON PLAN.
9	CONSTRUCT 2" AC PAVEMENT OVER 5" TYPE II AGGREGATE BASE (CAR) PER DETAIL "F" SHEET C8.2
10	CONSTRUCT 3" AC PAVEMENT OVER 5.5" TYPE II AGGREGATE BASE (TRUCK) PER DETAIL "F" SHEET C8.2
11	LANDSCAPE AREA. SEE LANDSCAPE PLANS FOR DETAILS
12	INSTALL 3" WIDE VALLEY GUTTER PER DETAIL "B" SHEET C8.02
13	TRASH ENCLOSURE SEE ARCHITECTURAL PLANS.
14	NOT USED.
15	INSTALL PLANTERS SEE ARCHITECTURAL PLANS.
16	EXISTING CURB, PROTECT IN PLACE.
17	EXISTING SIDEWALK TO BE REMOVED.
18	EXISTING ASPHALT AREA WITHIN THE NEW CONCRETE SIDEWALK AREA TO BE REMOVED.

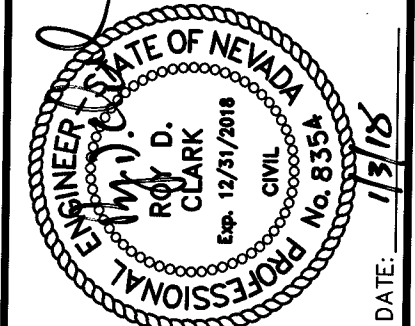
(PROPOSED)
HIGH PRESSURE GAS LINE
CAUTION: HIGH-PRESSURE GAS!
CALL SOUTHWEST AS AT 702-651-2111
FOR STANDBY WHEN EXCAVATING OVER
OR NEAR HIGH PRESSURE GAS LINES.

NOTE:
ALL ONSITE STORM DRAIN SYSTEMS AND ASSOCIATED FACILITIES ARE
PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY DORAL ACADEMY.

DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE
APPROVED DRAINAGE STUDY DS-4755A ON FILE AT THE CITY OF LAS
VEGAS FOR THIS PROJECT.
Roy D. Clark 1/3/18
ROY D. CLARK P.E. 8354 DATE

BASIS OF BEARINGS
NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE
NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 48 PLATS ON FILE
AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

DESCRIPTION	NAVD 88 DATUM	NAVD 88 ELEVATION
CITY OF LAS VEGAS VERTICAL CONTROL POINT "D368", BEING A US&GS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEATION BASIN.	3246.63 (FEET)	989.574 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).		



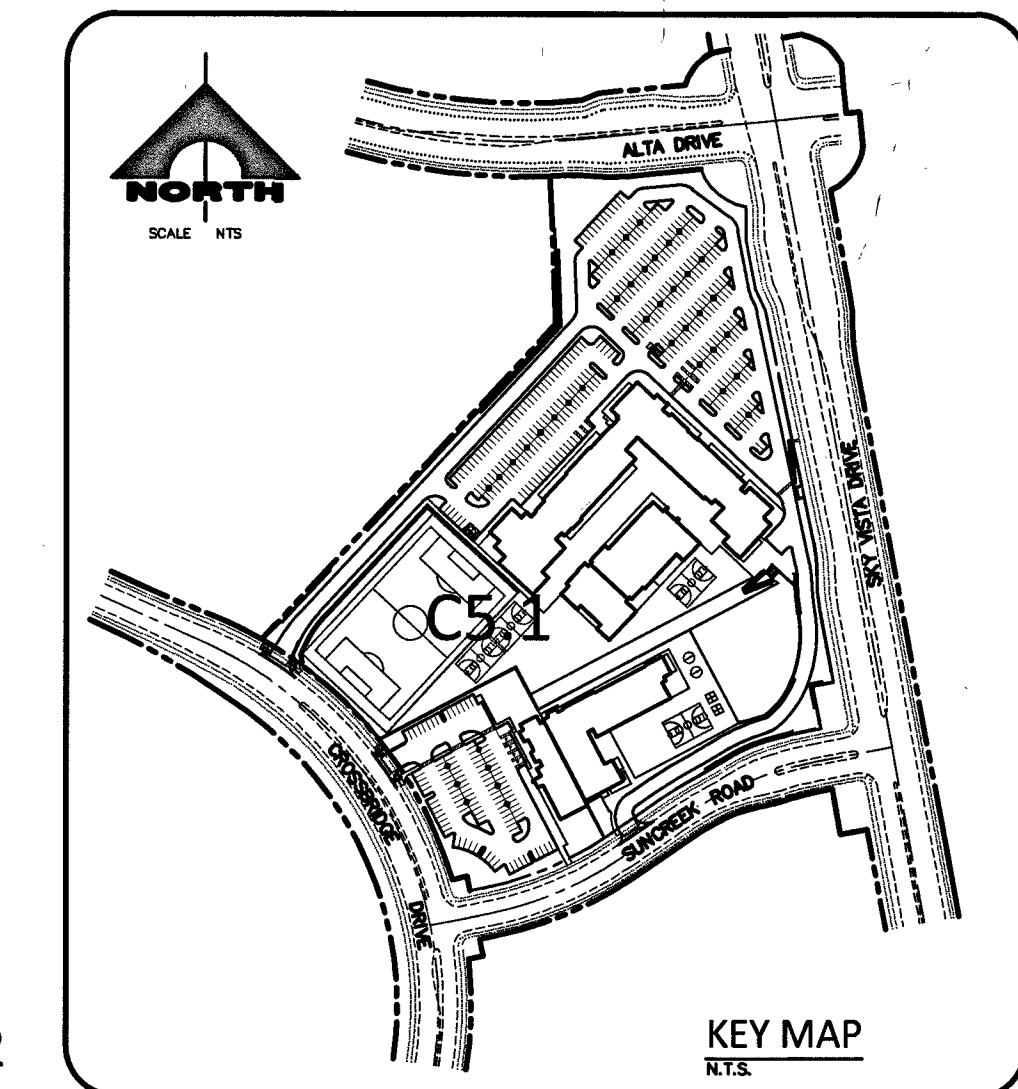
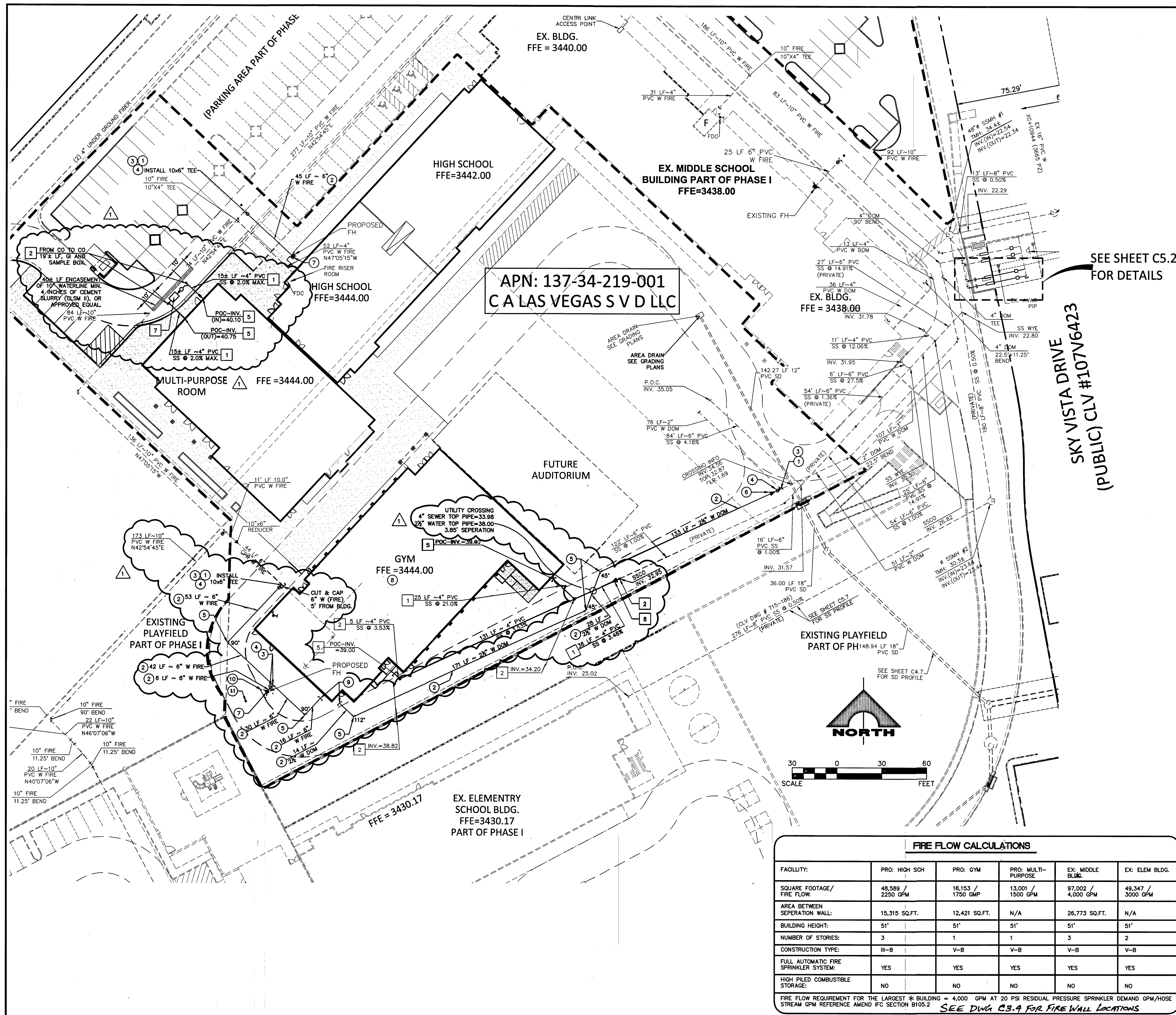
PROJECT NO.	889-002
DESIGN:	
DRAWN:	
CHECK:	
DATE:	01-02-18
REV:	
DATE:	01-02-18
DESCRIPTION:	

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowingengineering.com
ENGINEERS & SURVEYORS
Daniel Lee

CA LAS VEGAS SVD, LLC
DORAL ACADEMY
RED ROCK CAMPUS HIGH SCHOOL
GRADING PLAN II

DRAWING
C4.2
9 OF 13 SHTS

117-01470 715-1883
H: / CLV: L17-01470



- #### SEWER CONSTRUCTION NOTES
1. DCSWCS: DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS.
 2. INSTALL PVC SEWER LINE (SDR-35) PER DCSWCS DWG. NO. SD-17 (PAVED AREAS) AND SD-16 (UNPAVED AREAS) (SEE PLAN FOR SIZES).
 3. INSTALL CLEAN OUT WITH TRAFFIC BEARING COVER PER DCSWCS DWG. NO. SD-26 AND DETAIL 'N' SHEET C8.2.
 4. INSTALL WYE PER DCSWCS DWG. NO. SD-22 AND DETAIL 'F' SHEET C8.2.
 5. CONNECT TO EXISTING PRIVATE SEWER MAIN.
 6. POINT OF CONNECTION. SEE PLUMBING PLANS FOR CONTINUATION.
 7. INSTALL SDR-35 4"x6" CONCENTRIC REDUCER COUPLING.
 8. INSTALL 450 GALLON GREASE INTERCEPTOR. SEE PLUMBING PLANS FOR DETAILS.

- #### WATER CONSTRUCTION NOTES (PRIVATE)
1. UDACS: PLATE NO. PER UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS.
 2. CONNECT TO EXISTING WATER LINE. SEE PLAN FOR SIZE.
 3. INSTALL PVC WATER LINE, PER UDACS PLATE NO. 17 (SEE PLAN FOR SIZES).
 4. INSTALL TEE PER UDACS PLATE NO. 31 (SAME SIZE AS CONNECTING LINES).
 5. INSTALL GATE VALVE PER UDACS PLATE NO. 30 & 39 (SAME SIZE AS LINE).
 6. INSTALL BEND PER UDACS PLATE NO. 31 (SEE PLAN FOR ANGEL).
 7. INSTALL INCREASER/REDUCER (SAME SIZE AS CONNECTING LINES) PER UDACS PLATE NO. 30.
 8. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 40.
 9. INSTALL CAP PER UDACS PLT. NO. 36 (SAME SIZE AS LINE).
 10. POINT OF CONNECTION. SEE PLUMBING PLANS FOR CONTINUATION.
 11. INSTALL BOLLARDS PER UDACS PLATE NO. 75.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT No. 125994 FIRST APPROVED DATE: 12/11/18

LVWMD APPROVED FIRE FLOW 4000 GPM AT 20 PSI RESIDUAL

DISCLAIMER NOTES

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 LOCATION.

APPROVALS

[Signature] 12/21/17

LAS VEGAS FIRE & RESCUE DATE

THIS PROPERTY MAY HAVE STATIC PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRVs ARE THE DEVELOPERS RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVWMD FACILITIES.

BASIS OF BEARINGS

NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH RANGE 58 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

BENCHMARK		
DESCRIPTION	NAVD 88 DATUM	NAVD 88 DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "D368", BEING A US&GS DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEENTON BASIN.	3246.63 (FEET)	989.574 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).		

FIRE FLOW CALCULATIONS					
FACILITY:	PRO: HIGH SCH	PRO: GYM	PRO: MULTI-PURPOSE	EX: MIDDLE BLDG.	EX: ELEM. BLDG.
SQUARE FOOTAGE/ FIRE FLOW:	48,589 / 2250 GPM	16,153 / 1750 GPM	13,001 / 1500 GPM	97,002 / 4,000 GPM	49,347 / 3000 GPM
AREA BETWEEN SEPERATION WALL:	15,315 SQ.FT.	12,421 SQ.FT.	N/A	28,773 SQ.FT.	N/A
BUILDING HEIGHT:	51'	51'	51'	51'	51'
NUMBER OF STORIES:	3	1	1	3	2
CONSTRUCTION TYPE:	III-B	V-B	V-B	V-B	V-B
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	YES	YES	YES	YES	YES
HIGH PILED COMBUSTIBLE STORAGE:	NO	NO	NO	NO	NO

FIRE FLOW REQUIREMENT FOR THE LARGEST * BUILDING = 4,000 GPM AT 20 PSI RESIDUAL PRESSURE SPRINKLER DEMAND GPM/HOSE STREAM GPM REFERENCE AMEND IFC SECTION B105.2

SEE DWG. C3.4 FOR FIRE WALL LOCATIONS

PROJECT NO. 889-002

DESIGN: [Signature]

CHECK: [Signature]

PLOT DATE: 12-19-17

DATE: 12-19-17

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
governingengineering.com

GCW
ENGINEERS & SURVEYORS

CA LAS VEGAS SVD, LLC

DORAL ACADEMY

RED ROCK CAMPUS HIGH SCHOOL

UTILITY PLAN I

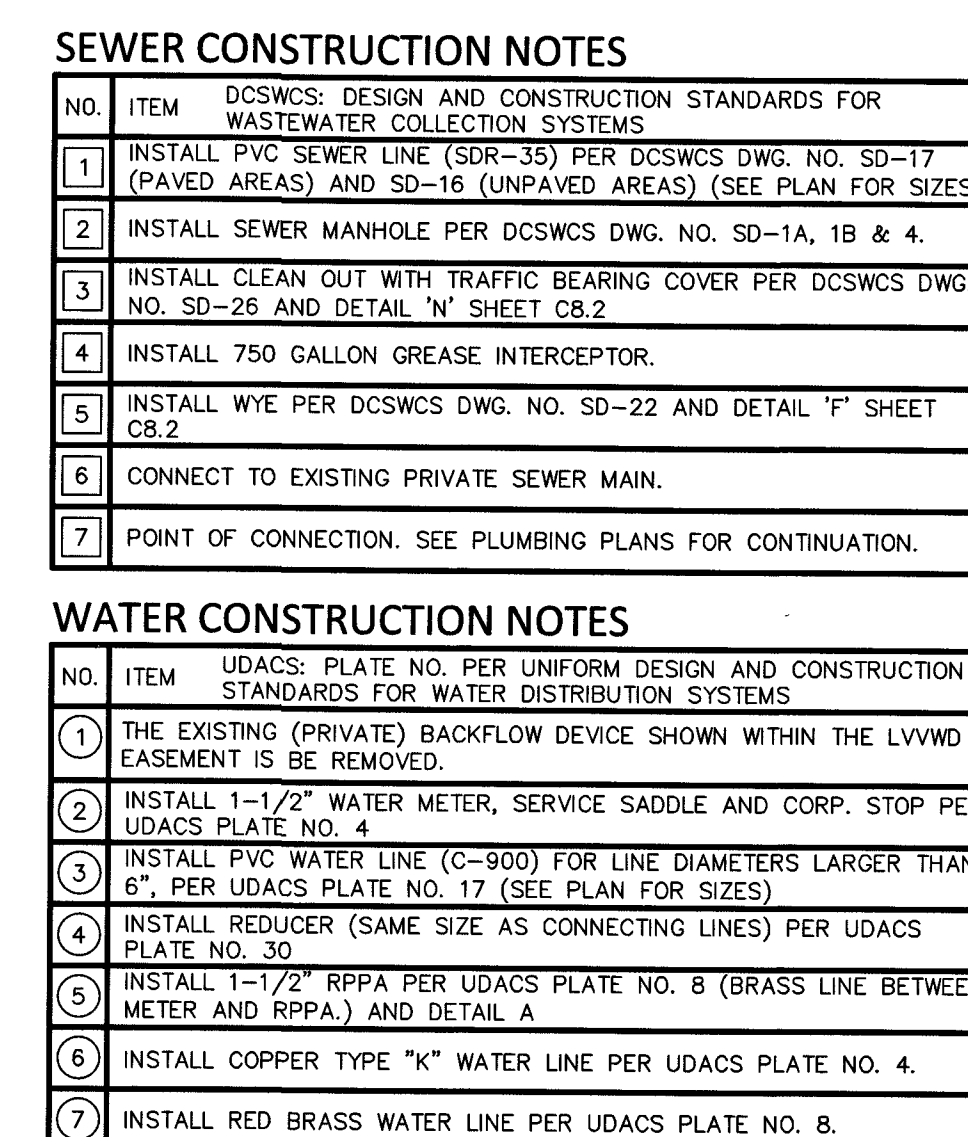
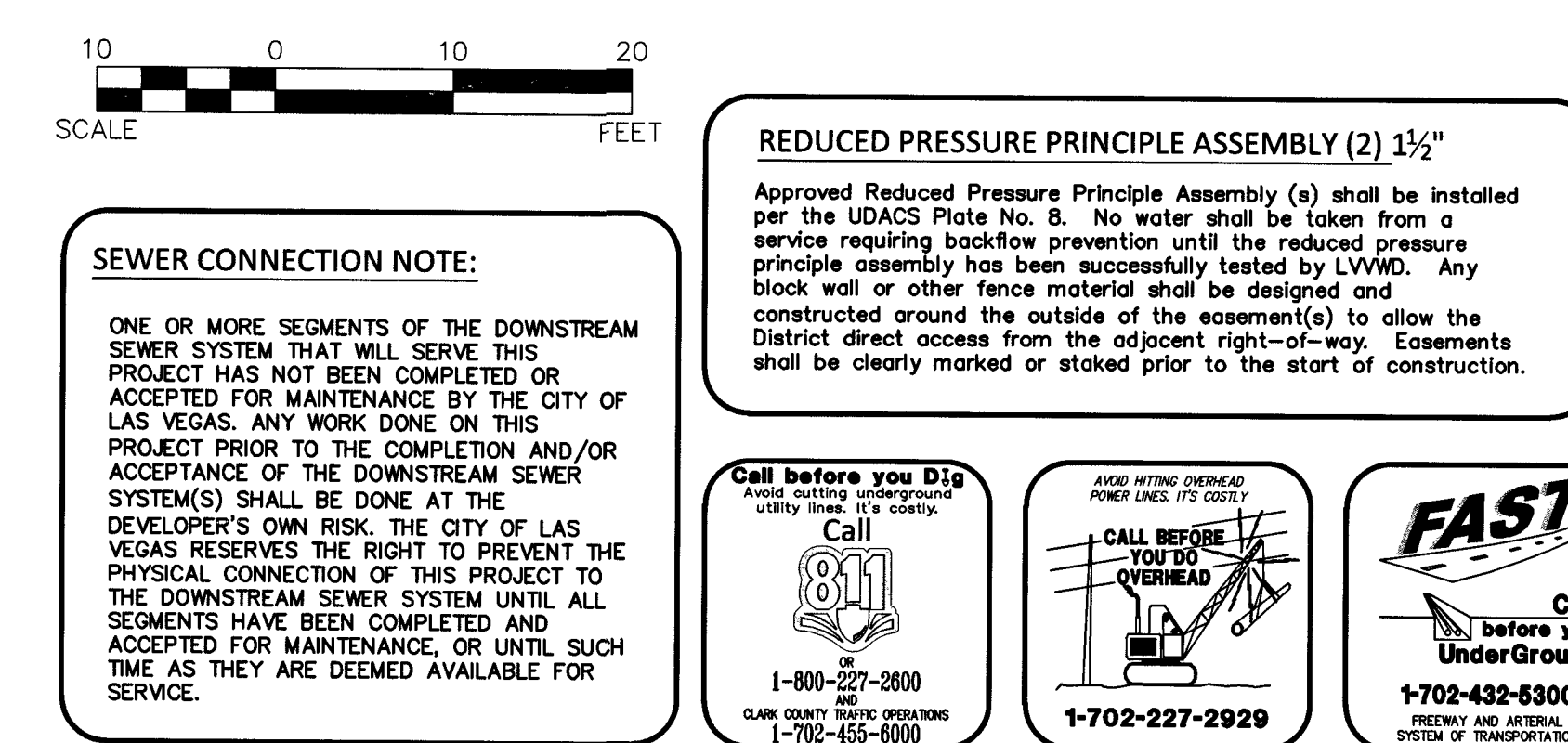
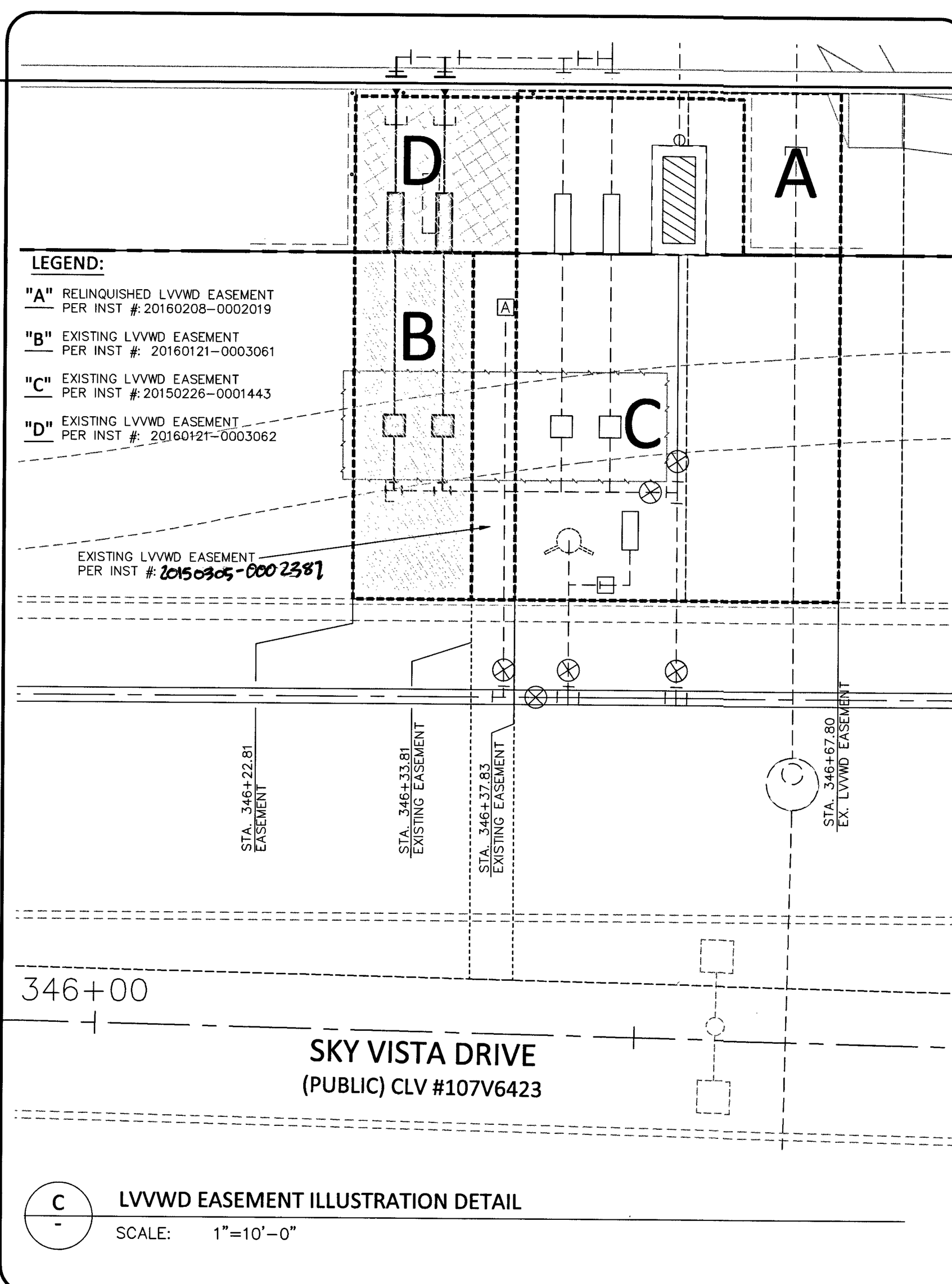
DRAWING

C5.1

10 OF 13 SHTS

PROJ# 125994 AGREE# 116643 QS: 137-34-NW

199
17-01470 715-186



APPROVED FOR CONSTRUCTION
Y. J. HAD
 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
 PROJECT NO. 125994 FIRST APPROVED DATE: 11/11/82
 LVWD APPROVED FIRE FLOW: 4000 GPM AT 20 PSI RESIDUAL

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISH GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

WATER PRESSURE NOTE:

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ONE-STORY (PRIVATE), PRESSURE-REDUCING VALVES (PRV) BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

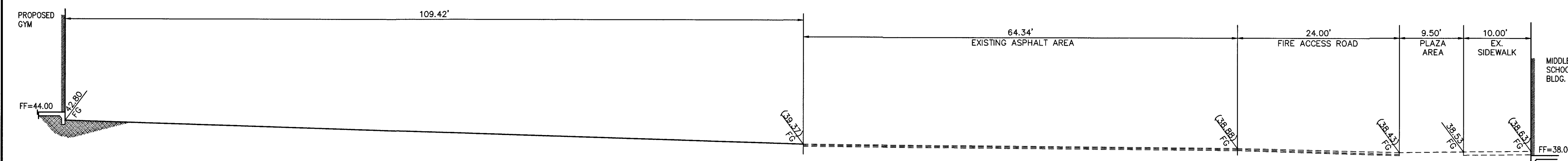
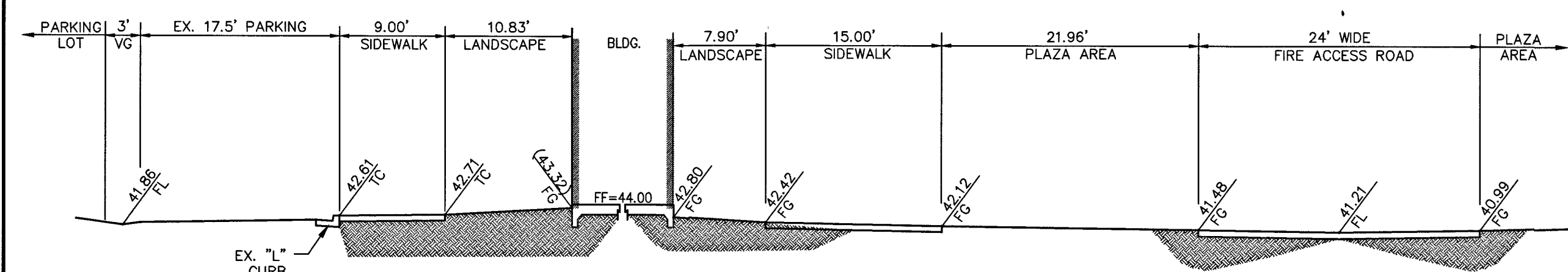
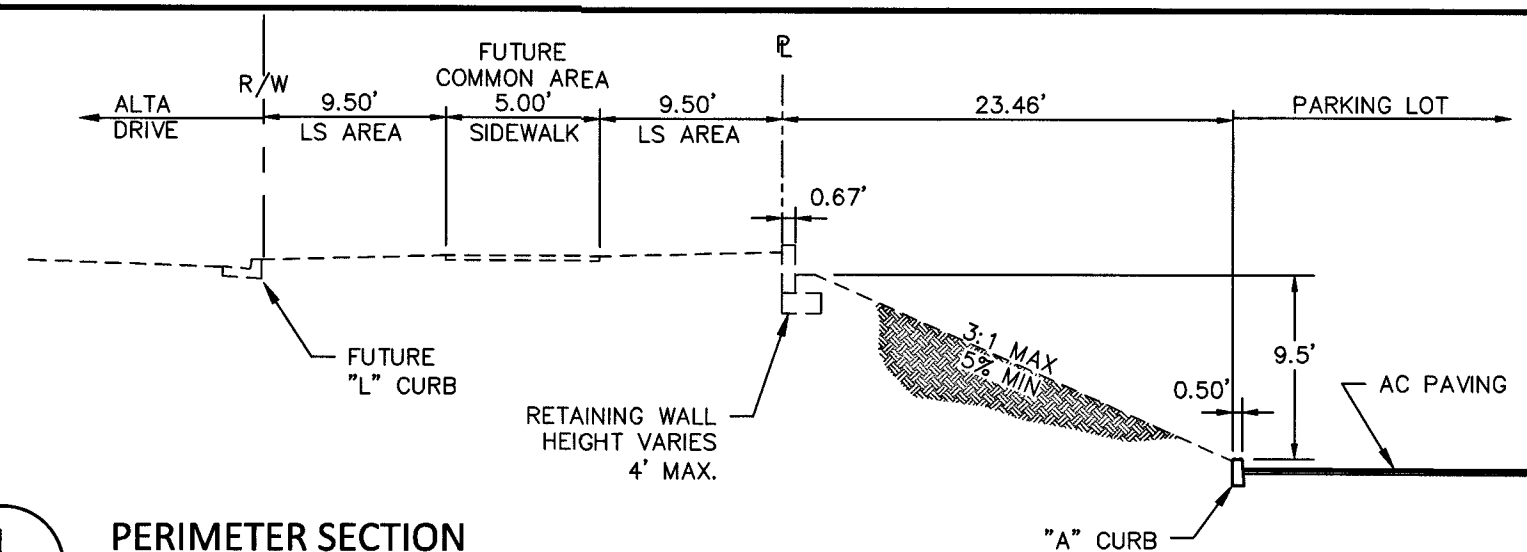
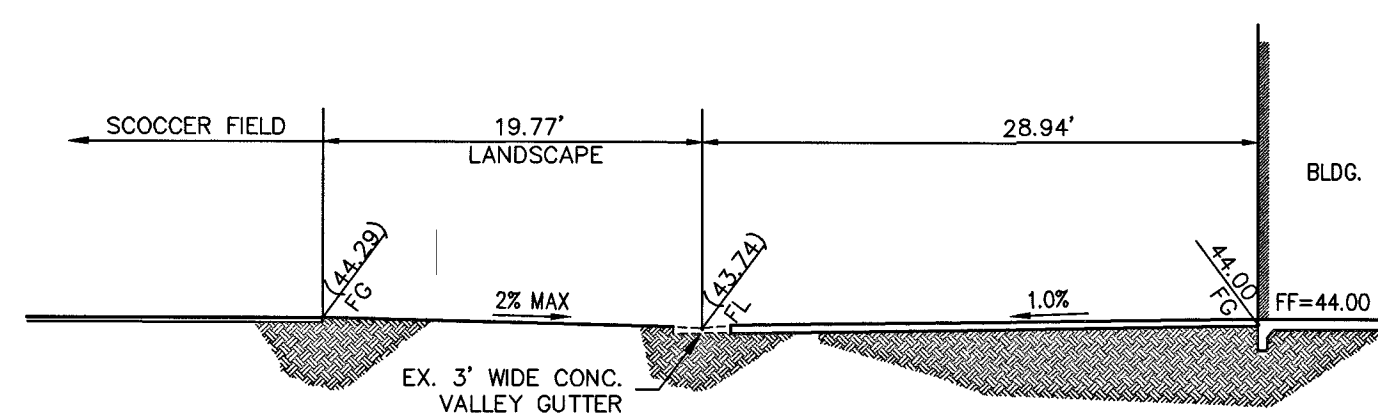
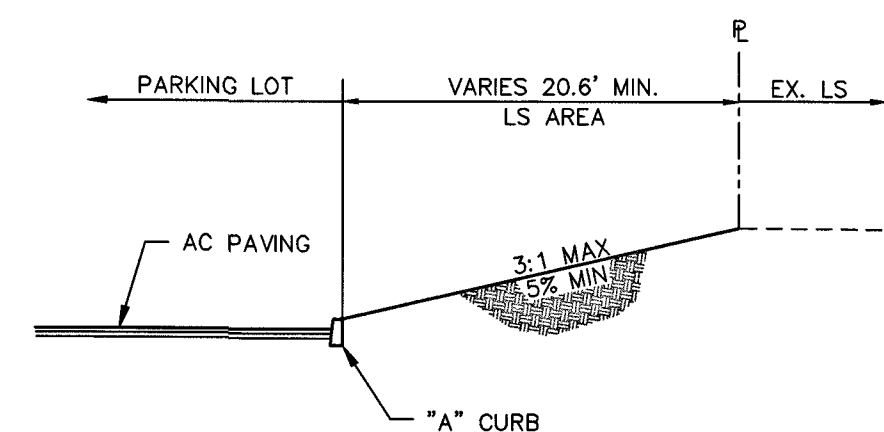
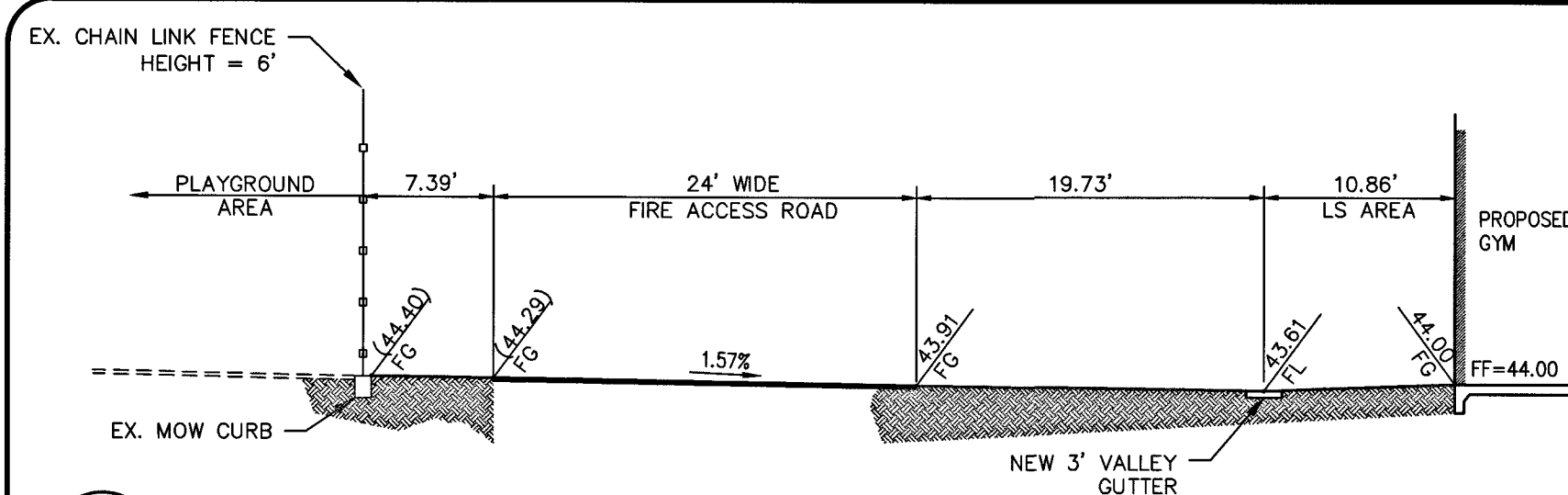
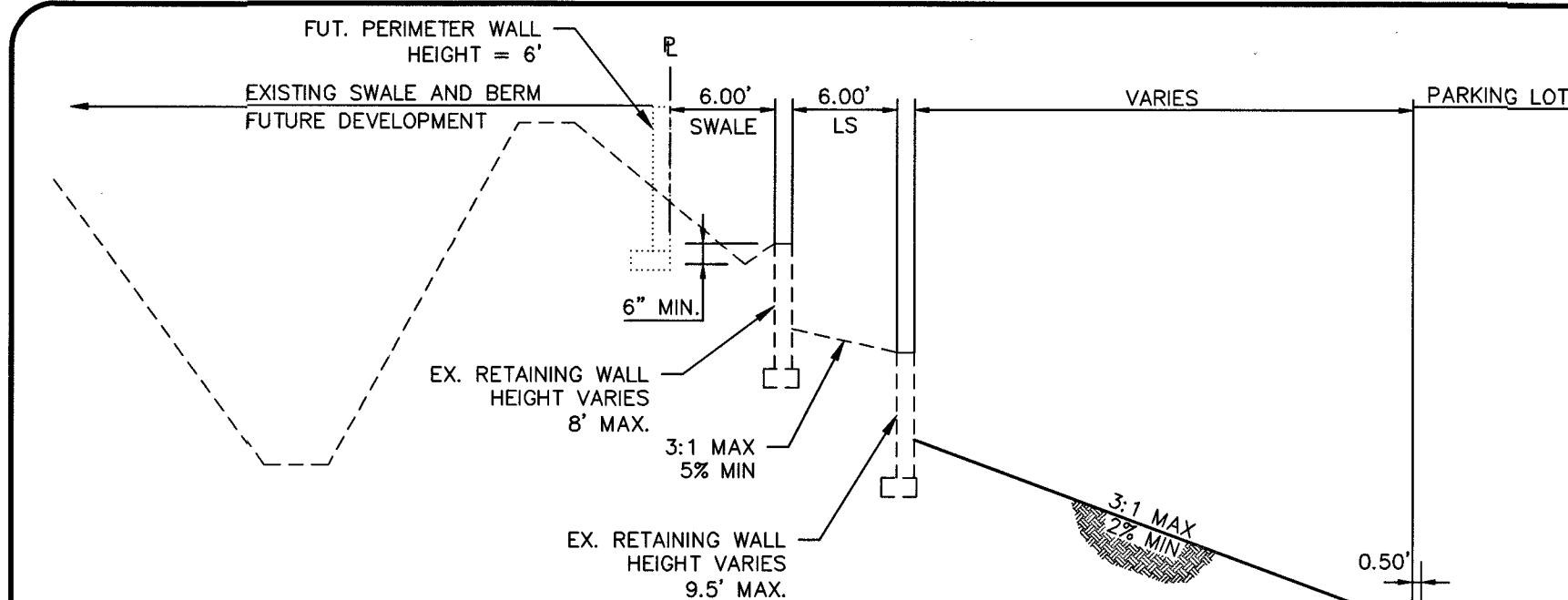
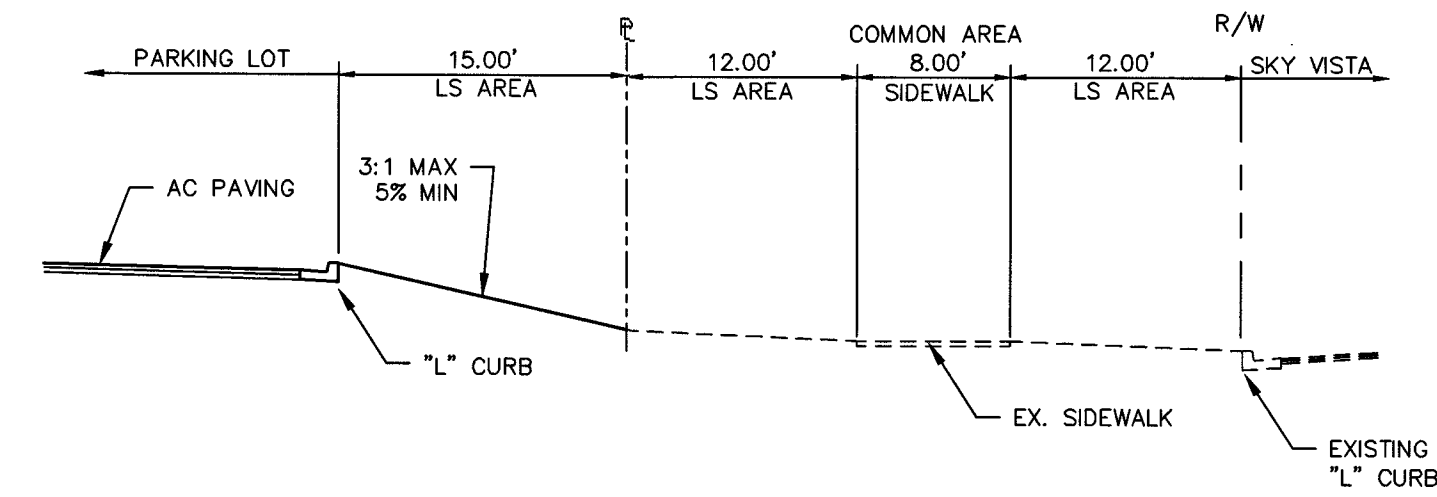
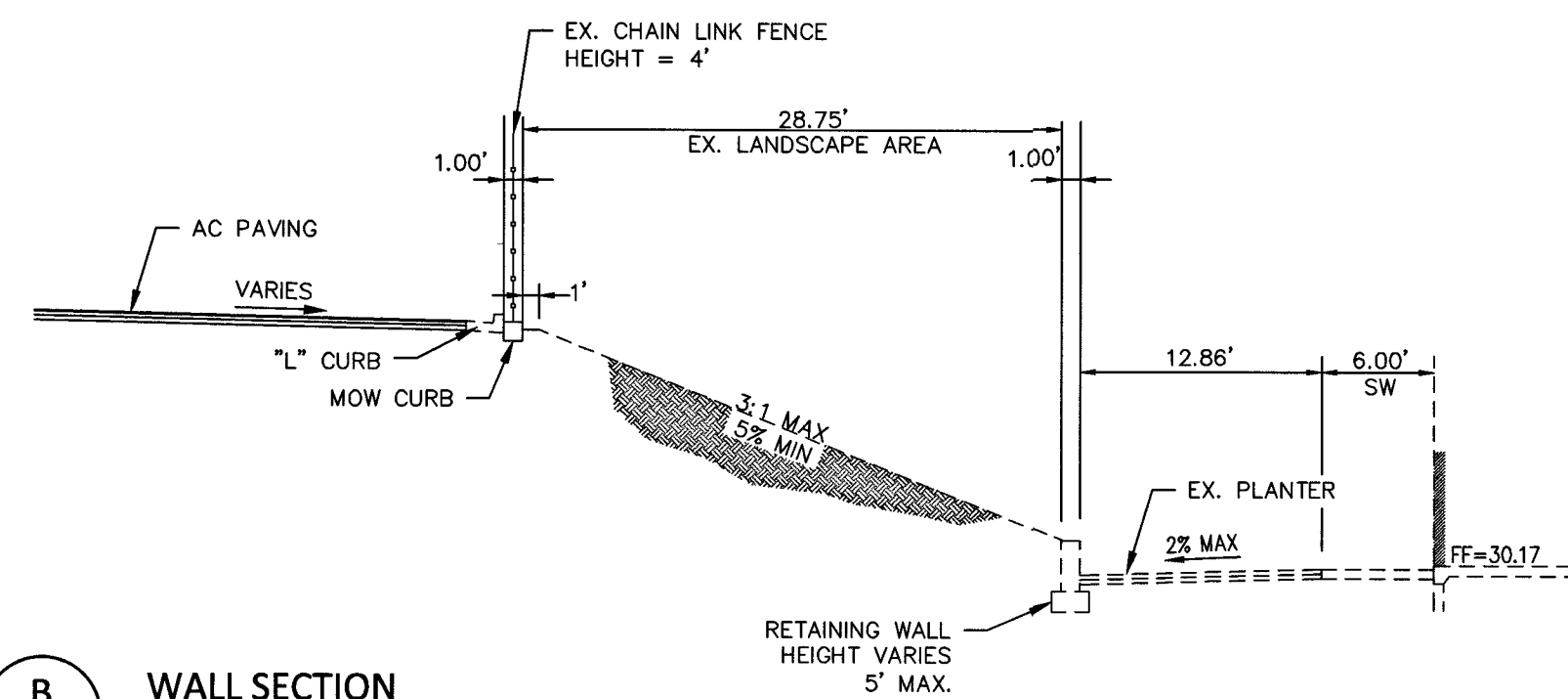
DISCLAIMER NOTES

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD 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 LOCATION.

BASIS OF BEARINGS

NORTH 05°36'32" WEST BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 33, TOWNSHIP 20 SOUTH RANGE 59 EAST, M.D.M. AS SHOWN IN BOOK 149, PAGE 46 PLATS ON FILE AT THE CLARK COUNTY, NEVADA RECORDER'S OFFICE.

BENCHMARK		
DESCRIPTION	NAVO 88 DATUM	NAVO 88 DATUM
CITY OF LAS VEGAS VERTICAL CONTROL POINT "D368", USING A USCG&S DISC SET IN ROCK SOUTH OF CHARLESTON BLVD & WEST OF DEENTON BASIN.	3246.63 (FEET)	989.57 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL 2008 AND ADJUSTMENT (UPDATED 05/24/2010) BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD'88).		

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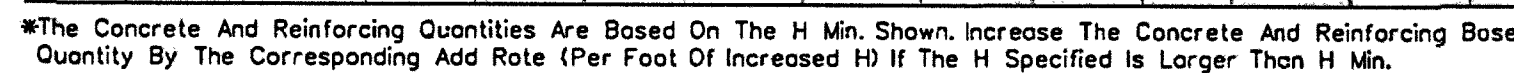
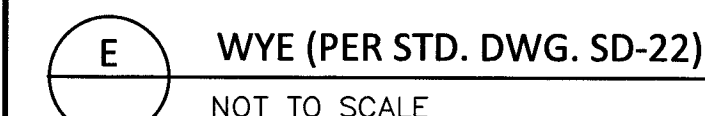
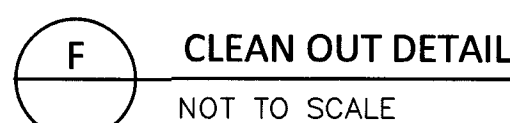
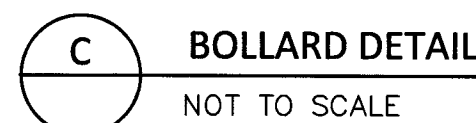
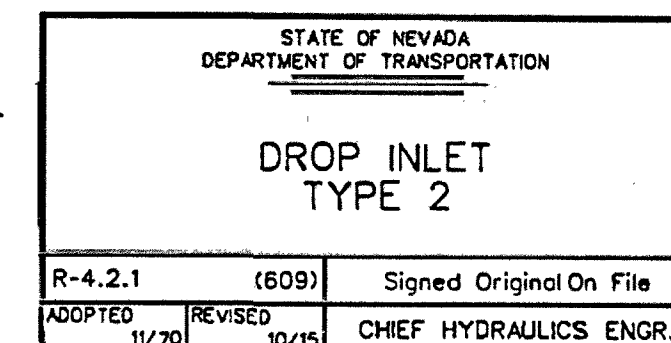
PROJECT NO.
889-002

DESIGN: _____
 DRAWN: _____
 CHECK: _____
 PLOT DATE: 01-02-18
 PLOT TIME: 17:54:44

GCI
ENGINEERS \ SURVEYORS

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gowingengineering.com

CA LAS VEGAS SVD, LLC
DORAL ACADEMY
RED ROCK CAMPUS HIGH SCHOOL
DETAIL SHEET 1

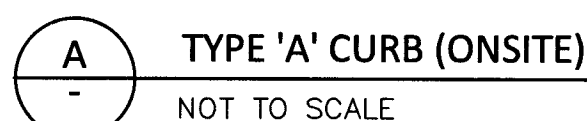
SECTION B-B

NOTES:

1. All concrete shall be class A or AA.
2. Reinforcing steel shall be No.4 bars with maximum spacing at 15 inch centers, wired tightly at all intersections and embedded 2 inches clear of all concrete surfaces.
3. Exposed edges of concrete shall be chamfered 1 inch.
4. Dimensions may be varied to fit local conditions if ordered by the engineer.
5. Commercial prefabricated gratings approved by the bridge division may be used in lieu of the field-welded grating shown.
6. Extreme low cover situations to be reviewed by hydraulics engineer.
7. Slope catch basin floors 10:1 from all directions toward outlet pipe. If basin is used as a junction, slope flow line(s) to outlet pipe and provide a 10:1 slope to flow line(s).
8. See sheet R-2.9.1 for details if connecting HDPE pipe.
9. A single Type 2 drop inlet shall be constructed unless a double or triple is specified.
10. Single grate configuration shown for clarity. Outside dimensions of each grate shall measure 2 feet by $A+4\frac{1}{4}"$.
11. Run rebar continuous thru construction joint. Joint must be a minimum of 3 inches from horizontal bar.
12. Weld one tab on $\frac{1}{4}"$ of grate and remaining two tabs 5 inches from edge of frame. Six tabs per inlet, three tabs on each side.
13. Weld tabs 5 inches from edge of frame. Four tabs per grate, two on each side.
14. For multiple grate installations, the station/offset is to the center of the concrete drop inlet structure.
15. Grate is to fit in the frame and be easily removed. If the gap between the grate and frame is greater than $\frac{1}{4}"$ on each side of the grate, the grate and frame shall be removed and reconstructed to the tolerances specified or, with approval of the engineer, a filler strip up to $\frac{1}{4}"$ in thickness may be welded flush to the top of the frame to reduce the gap to a maximum of $\frac{1}{4}"$.
16. Additional pipe penetrations may be placed in any well. Pipe penetrations are to be to the center of the structure well unless specified otherwise.



NOTES:
1. CONTINUOUS #4 REBAR IN RADIUS OF CURB ONLY.



NOT TO SCALE

PROJECT NO.
889-002

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DRAWING

C8.2

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