

DS #: 05252

APN: 137-23-201-001

PROJECT: Summitlin West V22-Flight Edge Way
(From Kettle Bend to Desert Foothills)

SUBMITTAL: 2nd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		April 21, 2020
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
	Summerlin West V22 – Flight Edge Way (from Kettle Bend to Desert Foothills)	VTN Nevada
Cross Streets:	Desert Foothills Blvd. & Flight Edge Way	Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5252B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	137-23-201-001	CCRFC
Zoning Action:	N/A	
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	2/24/2020	3/16/2020	Not Approved	\$400.00	3754255: \$400
2 nd Submittal	3/26/2020	4/21/2020	See Comments Below	\$400.00	3790298: \$400
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS:

***** The Conditional Approval of this Drainage Study is to allow the engineer/developer to submit the Improvement Plans to City Land Development Only**

***** Do not submit the Drainage Study to Clark County Regional Flood Control District (CCRFC) prior to the Structural Design and Calculations being approved by the City Building & Safety Department**

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

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

- The project proposed to construct temporary drainage facilities including drainage berms/ditches along the north and south sides of the proposed improvements. Prior to the final plans approval, the developer must complete a **Maintenance & Liability Agreement** for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to *City Flood Control* for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the *City's Land Development Section* (702-229-6371) to begin the agreement process.

2. The subject project is based on the premise that *Kettle Bend Road* and the associated storm drain facilities are in place for flood protection. The subject drainage study will not be finally approved prior to the posting of the construction bonds of *Summerlin West Village 22 - Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road)*.

In order for the maintenance bond to be released in the future, a drainage update/letter will be required to justify that the berm/swale are no longer necessary and can be removed.

3. **This drainage study is acceptable in concept;** however, *City of Las Vegas* will not formally accept the study until the *Clark County Regional Flood Control District (CCRFCD)* has issued a letter of concurrence. The engineer should contact the CCRFCD to confirm that they have begun their review.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

4. All storm drain inlets that are more than 10'-deep require a special structural detail and calculations. Submit structural design and calculations to *City Building & Safety Department* for review and approval prior to the final approval of the drainage study.
5. All offsite interim flood control facilities such as but not limited to berms/ditches and temporary sump are privately owned and to be privately maintained by the *Howard Hughes Company*. Provide a note as such on the grading plans.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.



Sample Letter to
certify CD.pdf

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/R59E/23
AREA K-23

Addendum #1 to the Technical Drainage Study for

Summerlin West Village 22 Flight Edge Way Kettle Bend Rd to Desert Foothills Blvd

Las Vegas, Nevada

Prepared for:

Howard Hughes Company, LLC

Submitted to:

City of Las Vegas

Public Works



HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin West Village 22 Flight Edge Way- Kettle Bend to Desert Foothills Date: 03/26/2020

Location of Development: a) Descriptive (Cross Streets) North/South: Kettle Bend Road
East/West: Flight Edge Way

b) Section: 23 Township: 20S Range: 59E

c) APN: 137-23-201-001

Name of Owner: The Howard Hughes Company, LLC

Telephone No.: (702) 791-4336 Fax No.: (702) 791-4453 E-Mail Address: chris.anderson@howardhughes.com

Address: 10801 W. Charleston Blvd. LV, NV, 89135

Contact Person-Name: Joanna Ayson Telephone No.: (702)-873-7550

* E-Mail Address: jayson@vtnnv.com Fax No.: (702)-362-2597

Firm: VTN Nevada

Address: 2727 S. Rainbow Blvd, LV, NV, 89146

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☐	Planned Unit Development	☒	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit		Storm Drain, Grading

1. Total Owned Land Area: At Site: +/- 1.23 Acres Being Developed/Disturbed: +/-1.23 Acres

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

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

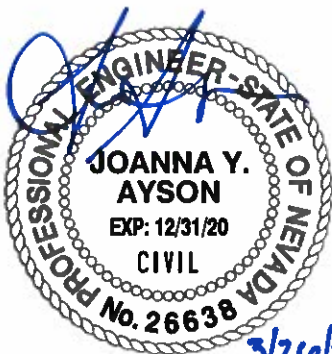
4. Proposed type of development (Residential, Commercial, Etc.): Roadway

5. Approximate upstream land area which drains to the subject site: +/- 2 acres

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: SWPA MPU(DS 4926), Summerlin V22-Kettle Bend Road(DS 5204);Master Drainage Study for Summerlin West Village 22(DS 5005)

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: 30" RCP located east of the project site in Kettle Bend Road.

8. Briefly describe your proposed schedule for the subject project: As soon as possible



Engineer's Seal

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

***New Required Field**

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

Local Entity File No.	Revision	Date

REFERENCE:

STANDARD FORM 1

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 16, 2020
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:	
	Summerlin West V22 – Flight Edge Way (from Kettle Bend to Desert Foothills)	
Cross Streets:	Desert Foothills Blvd. & Flight Edge Way	COPIES TO: VTN Nevada
File Number:	F:\Depot\DSMemos\DS5252A.doc	Howard Hughes Company, LLC
Parcel Number:	137-23-201-001	Bart Anderson, P.E., DevCo
Zoning Action:	N/A	CCRFC
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES	NO X

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1 st Submittal	2/24/2020	3/16/2020	See Comments Below	\$400.00	3754255: \$400
TOTAL FEES (LDDRS):				\$400.00	----

REMARKS:

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	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. The subject project is based on the premise that *Kettle Bend Road* and the associated storm drain facilities are in place for flood protection. The subject drainage study will not be finally approved prior to the posting of the construction bonds of *Summerlin West Village 22 - Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road)*.
2. The project proposed to construct temporary drainage facilities including drainage berms/ditches along the north and south sides of the proposed improvements. Prior to the final plans approval, the developer must complete a **Maintenance & Liability Agreement** for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to *City Flood Control* for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the *City's Land Development Section* (702-229-6371) to begin the agreement process.

In order for the maintenance bond to be released in the future, a drainage update/letter will be required to justify that the berm/swale are no longer necessary and can be removed.

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

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

4. **Sheet UT3 and Sheet UT7:** At the connection point between the existing 30"-RCP and the new one in *Flight Edge Way*, provide a connection detail such as collar in the next submittal.
5. In all pertinent lateral plan & profile sheets, label the depth of the proposed drop inlets. All storm drain inlets that are more than 10'-deep require a special structural detail and calculations. Submit structural design and calculations to *City Building & Safety Department* for review and approval prior to the final approval of the drainage study.
6. All offsite interim flood control facilities such as but not limited to berms/ditches and temporary sump are privately owned and to be privately maintained by the *Howard Hughes Company*. Provide a note as such on the grading plans.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

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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/R59E/23
AREA K-23

March 26, 2020

Albert Sung, P.E.
Flood Control Division
Department of Public Works
CITY OF LAS VEGAS
333 N. Rancho Blvd, 7th Floor
Las Vegas, NV 89106

**Subject: Addendum #1 to the Technical Drainage Study for Summerlin West Village
22 Flight Edge Way**

Mr. Sung:

This letter certifies that all items on the **Addendum #1 to the Technical Drainage Study for Summerlin West Village 22 Flight Edge Way** electronic submittal matches the paper version bound into the study.

Respectfully submitted,



Joanna Ayson, P.E.

ADDENDUM #1
TO THE TECHNICAL DRAINAGE STUDY
FOR
V22 FLIGHT EDGE WAY –
KETTLE BEND TO DESERT FOOTHILLS
DS-5252
CITY OF LAS VEGAS, NEVADA
W.O. # 7861

Prepared for:
HOWARD HUGHES COMPANY LLC

Submitted to:
CITY OF LAS VEGAS



March 26, 2020
W.O. #7861

City of Las Vegas
Department of Public Works
Flood Control
333 N. Rancho Drive, 7th Floor
Las Vegas, NV 89106

Attention: Albert Sung, P.E.
Project Engineer

SUBJECT: ADDENDUM #1 TO THE TECHNICAL DRAINAGE STUDY FOR V22 FLIGHT EDGE WAY – KETTLE BEND TO DESERT FOOTHILLS (DS-5251)

Mr. Albert Sung:

This Addendum #1 to the Technical Drainage Study for V22 Flight Edge Way – Kettle Bend to Desert Foothills (DS-5252) is being submitted to the City of Las Vegas Department of Public Works to address review comments dated March 17, 2020.

Comment #1

The subject project is based on the premise that the downstream Kettle Bend Road and the associated storm drain facilities are in place for flood protection. The subject drainage study will not be finally approved prior to the posting of the construction bond of Summerlin West Village 22- Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road)

RESPONSE: Acknowledged.

Comment #2

The project proposed to construct temporary drainage facilities including drainage berms/ditches along the northwest side of the proposed improvements. Prior to the final plans approval, the developer must complete a Maintenance & Liability Agreement for the interim drainage improvements and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities to City Flood Control for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the City's Land Development Section (702-229-6371) to begin the agreement process.

In order for the maintenance bond to be released in the future, a drainage update/letter will be required to justify that the berm/swale are no longer necessary and can be removed.

RESPONSE: The engineer/developer agrees to complete a Maintenance & Liability agreement for the interim drainage improvements and to post a maintenance bond. The engineer/developer acknowledges that

in order for the maintenance bond to be released in the future, a drainage letter will be required to justify that the interim facilities are no longer necessary and can be removed.

Comment #3

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

Please note that effective March 15, 2019, the CCRFCDD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

RESPONSE: Acknowledged. The subject drainage study and all addenda will be submitted to CCRFCDD concurrence.

Comment #4

Sheet UT3 and Sheet UT7: At the connection point between the existing 30" RCP and the new one in Flight Edge Way, provide a connection detail such as collar in the next submittal.

RESPONSE: The existing RCP will be cut back to provide a clean joint as required to connect the new RCP. Note that the RCPs will have the same slope and no deflection between the existing and proposed pipes will occur. Non concrete collar is necessary.

Comment #5

In all pertinent lateral plan & profile sheets, label the depth of the proposed drop inlets. All storm drain inlets that are more than 10'-deep require a special structural detail and calculations. Submit structural design and calculation to City Building & Safety Department for review and approval prior to the final approval of the drainage study.

RESPONSE: The depths of the proposed drop inlets can be calculated from the difference between the top of curb and invert elevation labels provided on the plans. Therefore, the depths have not been labeled. The drop inlets at Station 14+91.07 and 10+87.75 are more than 10-feet deep, therefore a special structural detail and calculations are provided for the drop inlets.

Comment #6

All offsite interim flood control facilities such as but not limited to berms/ditches and temporary sump are privately owned and to be privately maintained by the Howard Hughes Company. Provide a note as such on the grading plans.

RESPONSE: The requested note has been provided on the grading plans.

I hope this addresses your concerns regarding this project. If there are any questions or any additional information is required, please contact this office.

Respectfully Submitted,

VTN Consulting

A handwritten signature in blue ink, appearing to read 'Joanna Ayson', with a stylized flourish at the end.

Joanna Ayson, P.E.

SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY

(STREET EE)

KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE

APN: 137-23-201-001

CITY OF LAS VEGAS

STATE OF NEVADA

DEVELOPED BY:

HOWARD HUGHES COMPANY, LLC

10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

OWNER
HOWARD HUGHES COMPANY, LLC
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

DEVELOPER
HOWARD HUGHES COMPANY, LLC
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

ENGINEERING FIRM
VTN
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550
FAX (702) 362-2597

SHEET INDEX

SHEET #	SHEET	DESCRIPTION	STATION RANGE
1	CV	COVER SHEET	
2	NT	NOTE SHEET	
3	HC1	HORIZONTAL CONTROL PLAN 1	
4	HC2	HORIZONTAL CONTROL PLAN 2	
5	HC3	HORIZONTAL CONTROL PLAN 3	
6	MUTW	MASTER UTILITY WATER	
7	MUTSD	MASTER UTILITY STORM DRAIN	
8	MGRD	MASTER GRADING PLAN	
9	GR1	GRADING PLAN 1	STA:18+50 TO STA:15+50
10	GR2	GRADING PLAN 2	STA:15+50 TO STA:12+00
11	GR3	GRADING PLAN 3	STA:12+00 TO STA:9+50
12	DT1	DETAIL SHEET 1	
13	DT2	DETAIL SHEET 2	
14	UT1	UTILITY PLAN & PROFILE 1	
15	UT2	UTILITY PLAN & PROFILE 2	
16	UT3	UTILITY PLAN & PROFILE 3	
17	UT4	UTILITY PLAN & PROFILE 4 WATER LATERAL	
18	UT5	UTILITY PLAN & PROFILE 5 STORM DRAIN LATERAL	
19	UT6	UTILITY PLAN & PROFILE 6 STORM DRAIN LATERAL	
20	UT7	UTILITY PLAN & PROFILE 7 STORM DRAIN LATERAL	
21	TR1	TRAFFIC & STREET LIGHTING PLAN 1	
22	TR2	TRAFFIC & STREET LIGHTING PLAN 2	
23	S1	STRUCTURAL DETAILS	

STATION RANGE

STA:18+50 TO STA:15+50

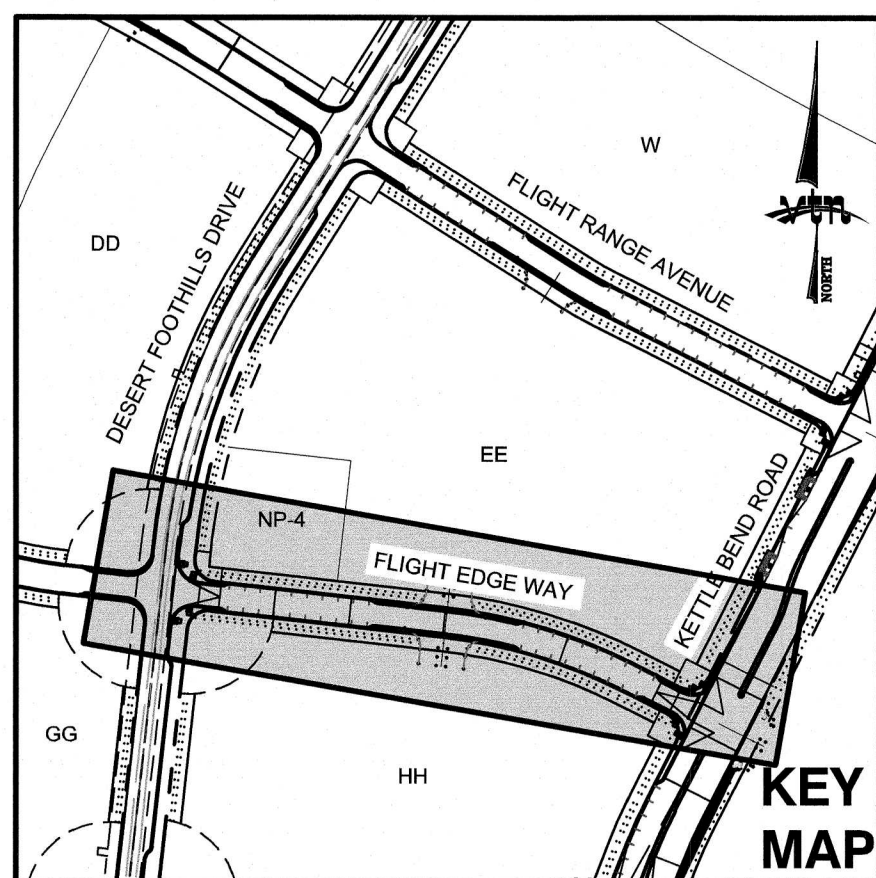
STA:15+50 TO STA:12+00

STA:12+00 TO STA:9+50



LOCATION MAP

N.T.S.



FIRE DEPARTMENT APPROVAL

APPROVAL BY THE FIRE DEPARTMENT HAVING
JURISDICTION IS REQUIRED PRIOR TO OBTAINING
FINAL APPROVAL FROM THE LVVWD.

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE
NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS
VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF
1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST
OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR

STANDARD PARALLEL (AND LATITUDE OF GRID

ORIGIN): 36°15'00"N

LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W

NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)

EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000

FTUS)

SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE

PROJECTED (GRID) VALUES BASED ON THE PRECEDING

PROJECTION DEFINITION. THE PROJECTION WAS DEFINED

SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT

TO "GROUND" DISTANCES IN THE PROJECT AREA.

2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID

COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO

MERIDIAN CONVERGENCE.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
(NAVD88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF
CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R69E,S03

THESE PLANS AND THE DESIGN CRITERIA CONTAINED WITHIN THESE PLANS ARE BASED
UPON THE INFORMATION PRESENTLY KNOWN BY THE ENGINEER AND INTENDED SOLELY AS
A GENERAL GUIDELINE FOR CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN
CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES, LAWS,
CODES, REGULATIONS AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE FEDERAL
FAIR HOUSING AMENDMENTS ACT, AMERICANS WITH DISABILITIES ACT, THE ARCHITECTURAL
BARRIERS ACT AND ANY APPLICABLE UNIFORM STANDARDS, SPECIFICATIONS OR DRAWINGS.
THE PERSON OR ENTITY PERFORMING THE CONSTRUCTION SHALL BE SOLELY RESPONSIBLE
TO MAKE SURE CONSTRUCTION IS IN CONFORMANCE WITH ALL LOCAL, STATE AND FEDERAL
STATUTES, LAWS, CODES, REGULATIONS, STANDARDS, GUIDELINES AND ORDINANCES AND
FURTHER, IS IN CONFORMANCE WITH ANY APPLICABLE DESIGN CRITERIA, INCLUDING BUT
NOT LIMITED TO SOILS REPORTS, TRAFFIC STUDIES, GEOTECHNICAL REPORTS,
ARCHITECTURAL PLANS AND SPECIFICATIONS, DRAINAGE PLANS OR STUDIES AND ANY
OTHER CRITERIA, STANDARDS OR REQUIREMENTS LISTED IN THE PLANS OR THE GENERAL
NOTES RELATED TO THESE PLANS OR PROVIDED BY ANYONE IN REFERENCE TO THIS
PROJECT.

APPROVALS

CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK DATE

"THE AFFIXED CENTURY LINK NEVADA APPROVAL DOES NOT
ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN
CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS.
RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT
TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR
PUBLIC UTILITY COMMISSION RULES AND REGULATIONS."

NV ENERGY DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE
SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NVENERGY
RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE
FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY
CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY
COMMISSION'S RULES AND REGULATIONS.

COX COMMUNICATIONS LAS VEGAS, INC. DATE

SOUTHWEST GAS CORPORATION DATE

LAS VEGAS FIRE & RESCUE DATE

LAS VEGAS VALLEY WATER DISTRICT

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT: DATE:

SHEETS: CV, NT, MUTW, MUTSD, UT1-UT8

KEVIN T. ORROCK, VICE PRESIDENT DATE

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

COVER SHEET

SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC 10/10/2019
DESIGNED BY: BCC 10/10/2019
CHECKED BY: WJM 03/28/2020
PROJECT NO: 7981
SCALE: N/A
HORIZ. VERT. N/A

WILLIAM J. MEYER
PROFESSIONAL ENGINEER STATE OF NEVADA
No. 15745
3/26/20

SHEET
CV
1 OF 23 SHEETS
DRAWING NO.

AVOID HITTING OVERHEAD
POWER LINES. IT'S COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

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

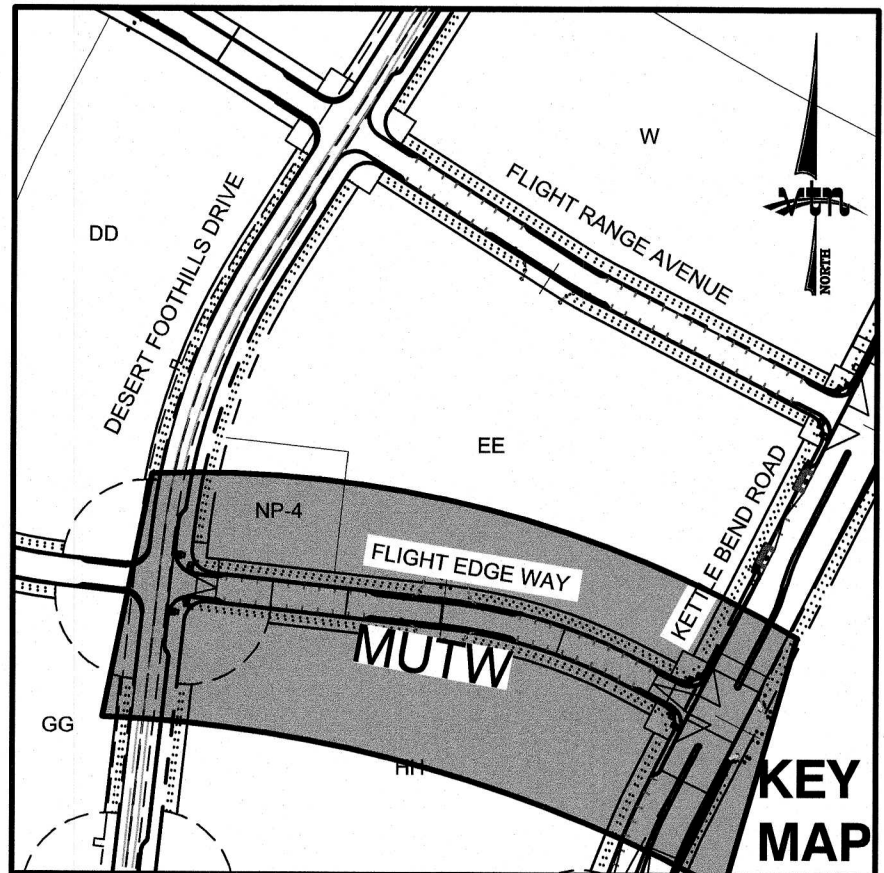
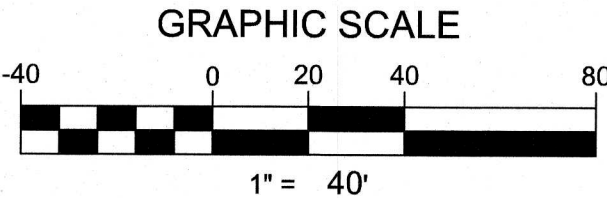
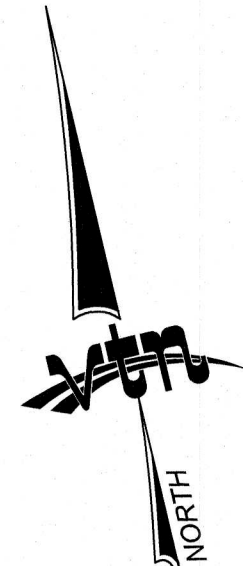
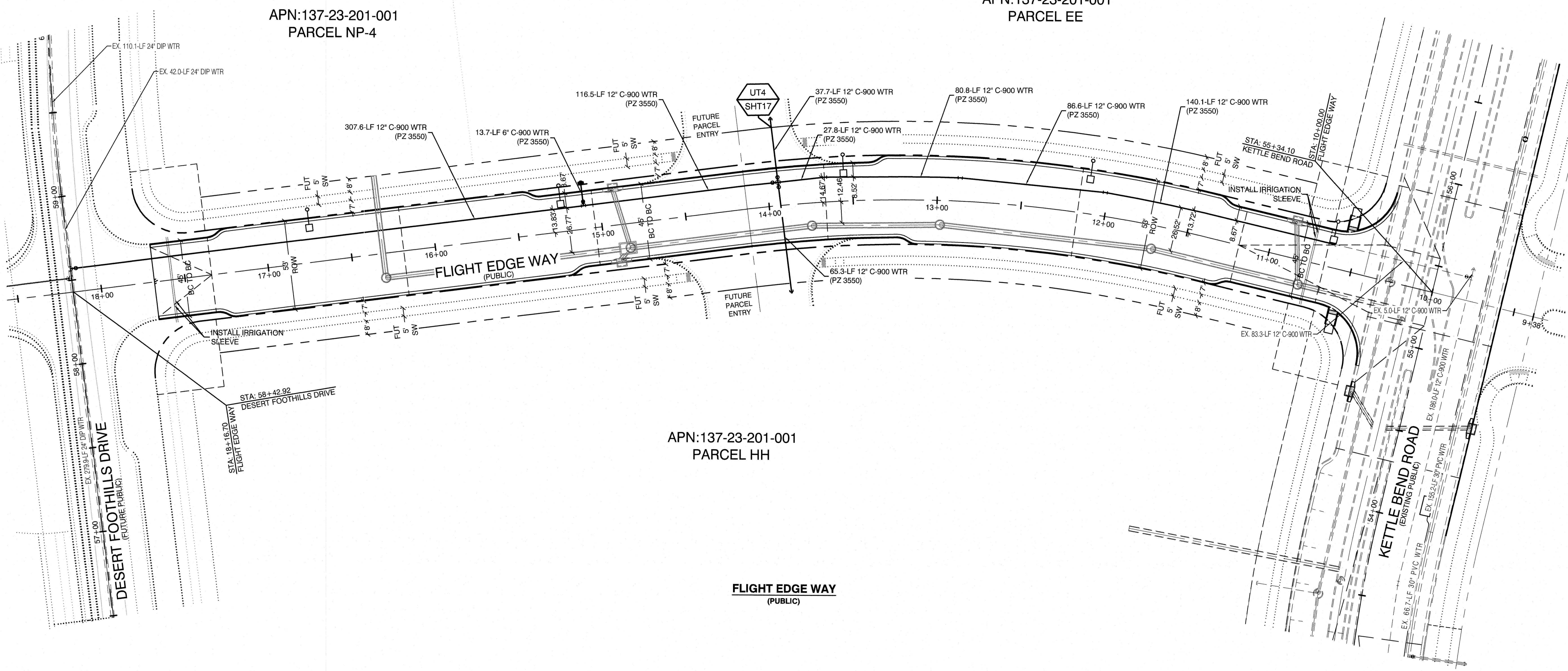
811

1-800-227-2600
OR
1-702-455-7511
CLARK COUNTY TRAFFIC
OPERATIONS

AVOID HITTING UNDERGROUND
TRAFFIC SIGNALS AND STREET LIGHTS.
IT'S COSTLY.

Call
before you
Underground

1-702-455-7511
CLARK COUNTY TRAFFIC
OPERATIONS
1-702-227-6611
LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM



BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 420,000.00 M (1,312,333.333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.

2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R69E,S03

CONSTRUCTION NOTES

UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT # = SHEET NUMBER

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE No. 15

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.

2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON 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 AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

AVOID HITTING UNDERGROUND WATER MAINS AND OTHER LINES. IT'S COSTLY.

Call before you Dig

1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
1-702-228-6611
LAS VEGAS AREA COORDINATED TRAFFIC SYSTEM

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.

Call before you Dig

811

OR

1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

LAS VEGAS FIRE & RESCUE APPROVAL

BY: _____ DATE: _____

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS, FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

LAS VEGAS VALLEY WATER DISTRICT APPROVAL

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT: _____
DATE: _____
LWVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY

CITY OF LAS VEGAS

10845 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702.791.4000

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 673-7550 FAX: (702) 382-2597 WEB: WWW.VTNN.COM
CONSULTING ENGINEERS & PLANNERS • LAND SURVEYORS

MASTER UTILITY WATER

SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC 10/14/2019

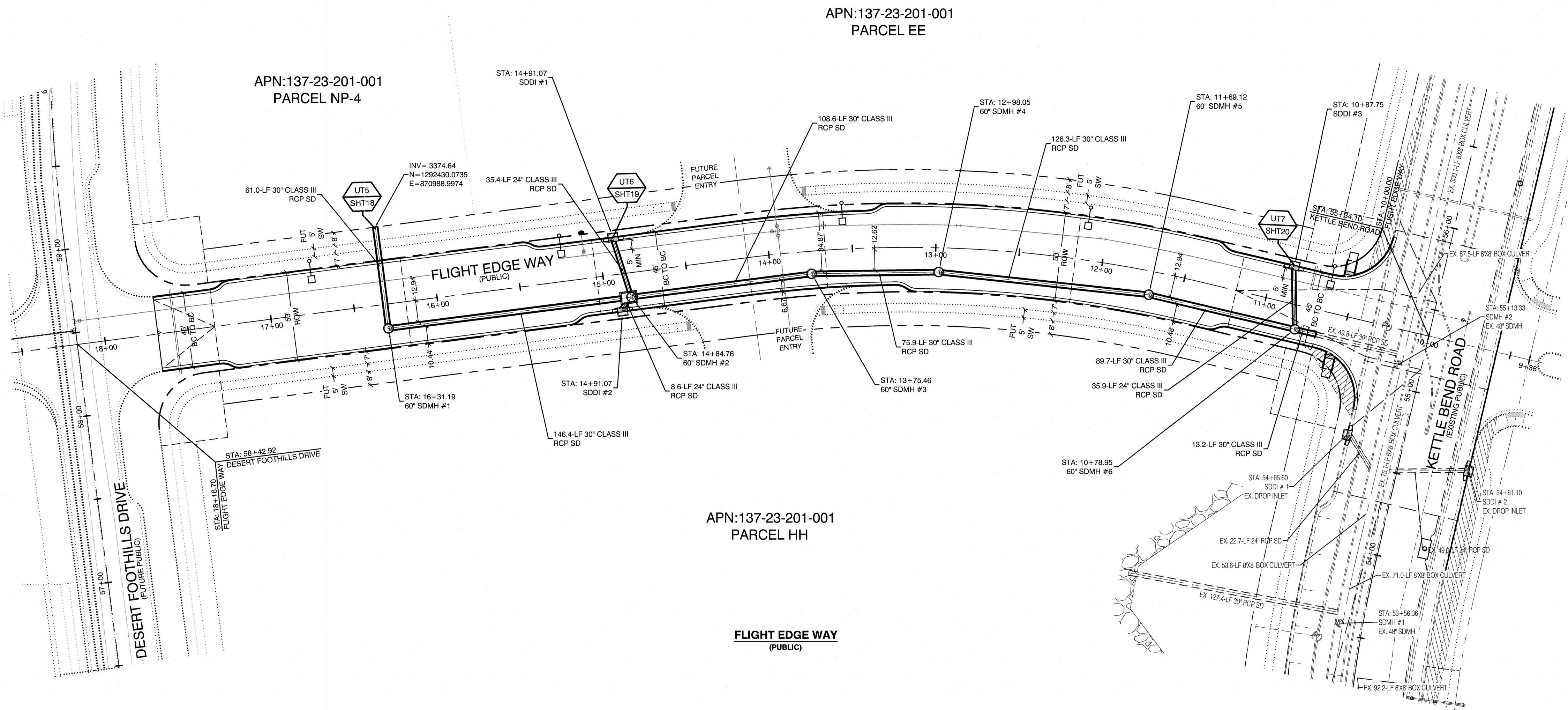
DESIGNED BY: BCC 10/14/2019

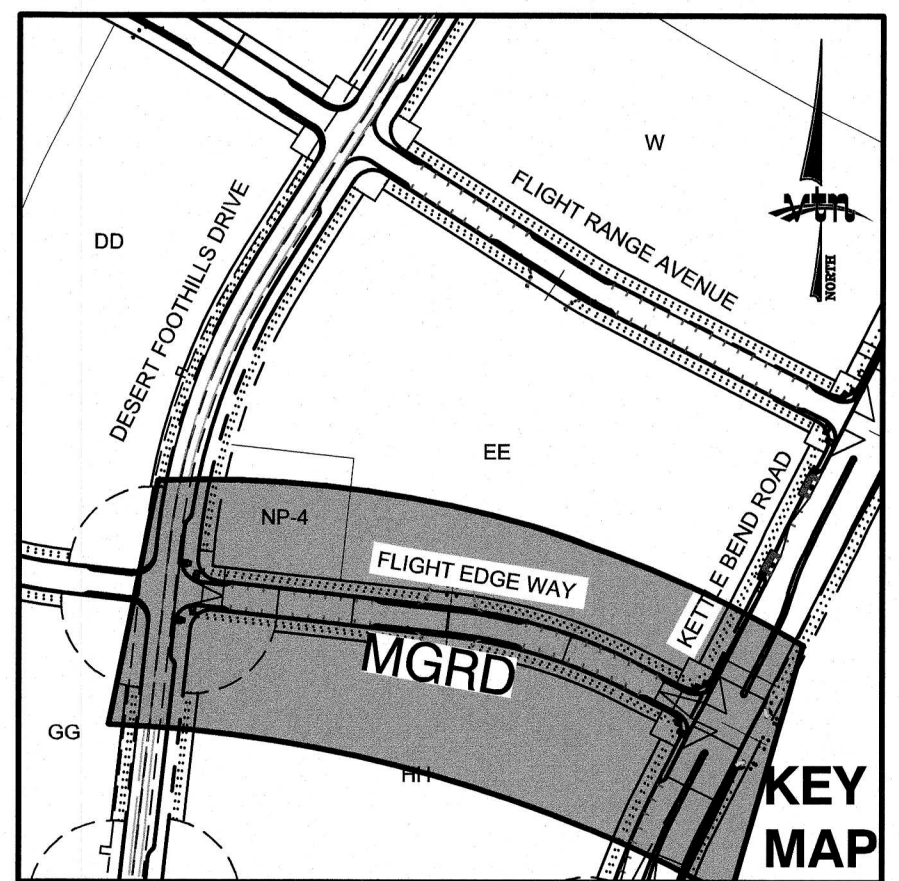
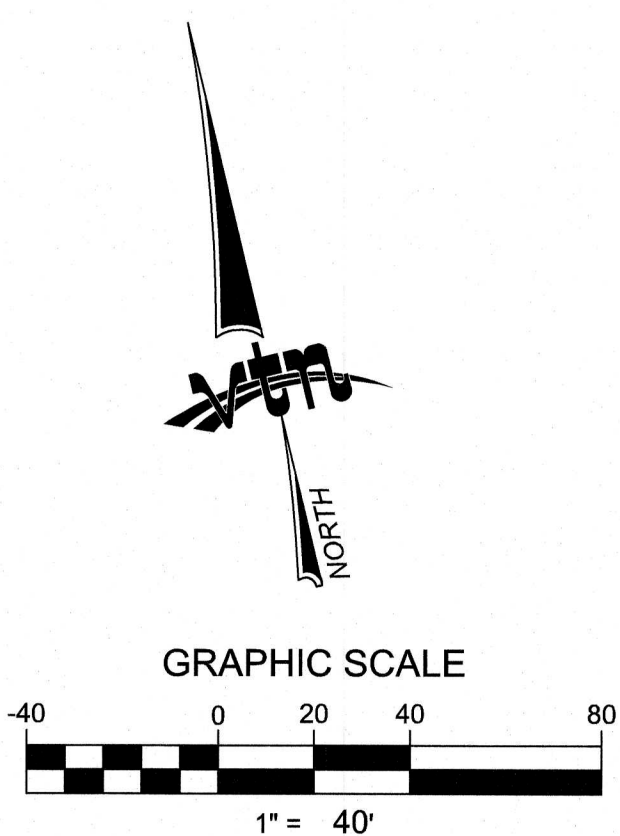
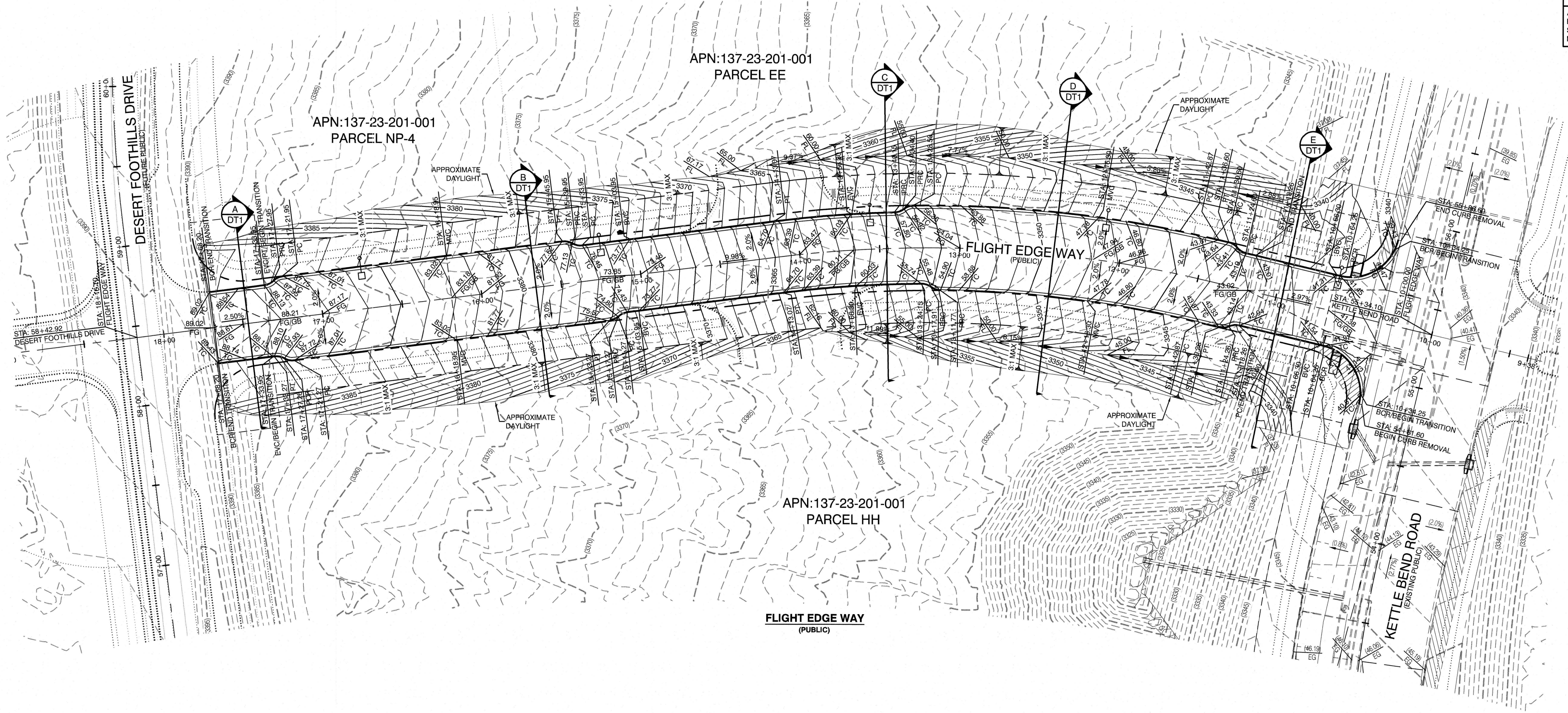
CHECKED BY: WJM 03/28/2020

PROJECT NO: 7801

SCALE: 1"=40' HORIZ. N/A VERT.

WILLIAM J. MEYER
PROFESSIONAL ENGINEER-STATE OF NEVADA
No. 15745
3/26/20
SHEET
MUTW
6 OF 23 SHEETS
DRAWING NO.





OFFSITE FLOOD CONTROL NOTE:
ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERM/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FT/US)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FT/US)
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SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO 'GROUND' DISTANCES IN THE PROJECT AREA.
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BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R98E,S03

GRADING NOTE
THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHER STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:
REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

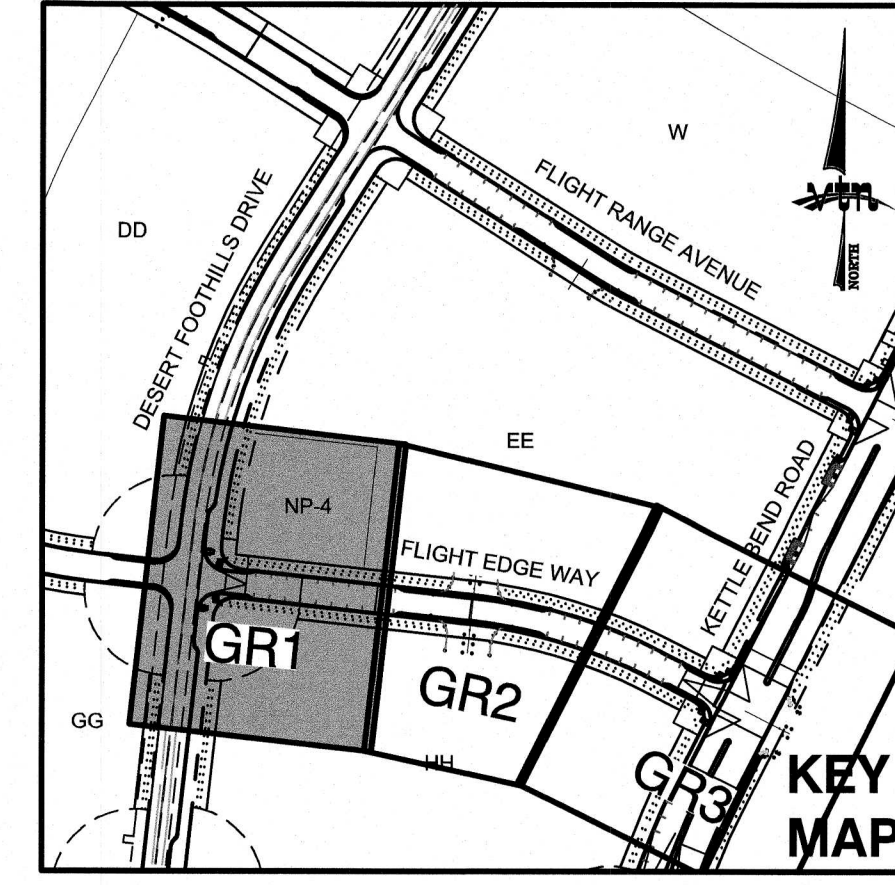
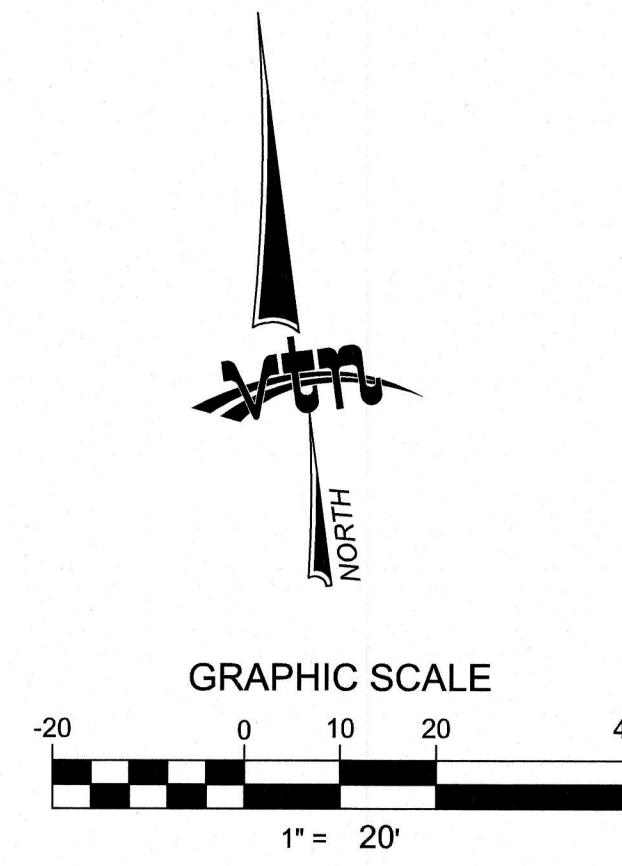
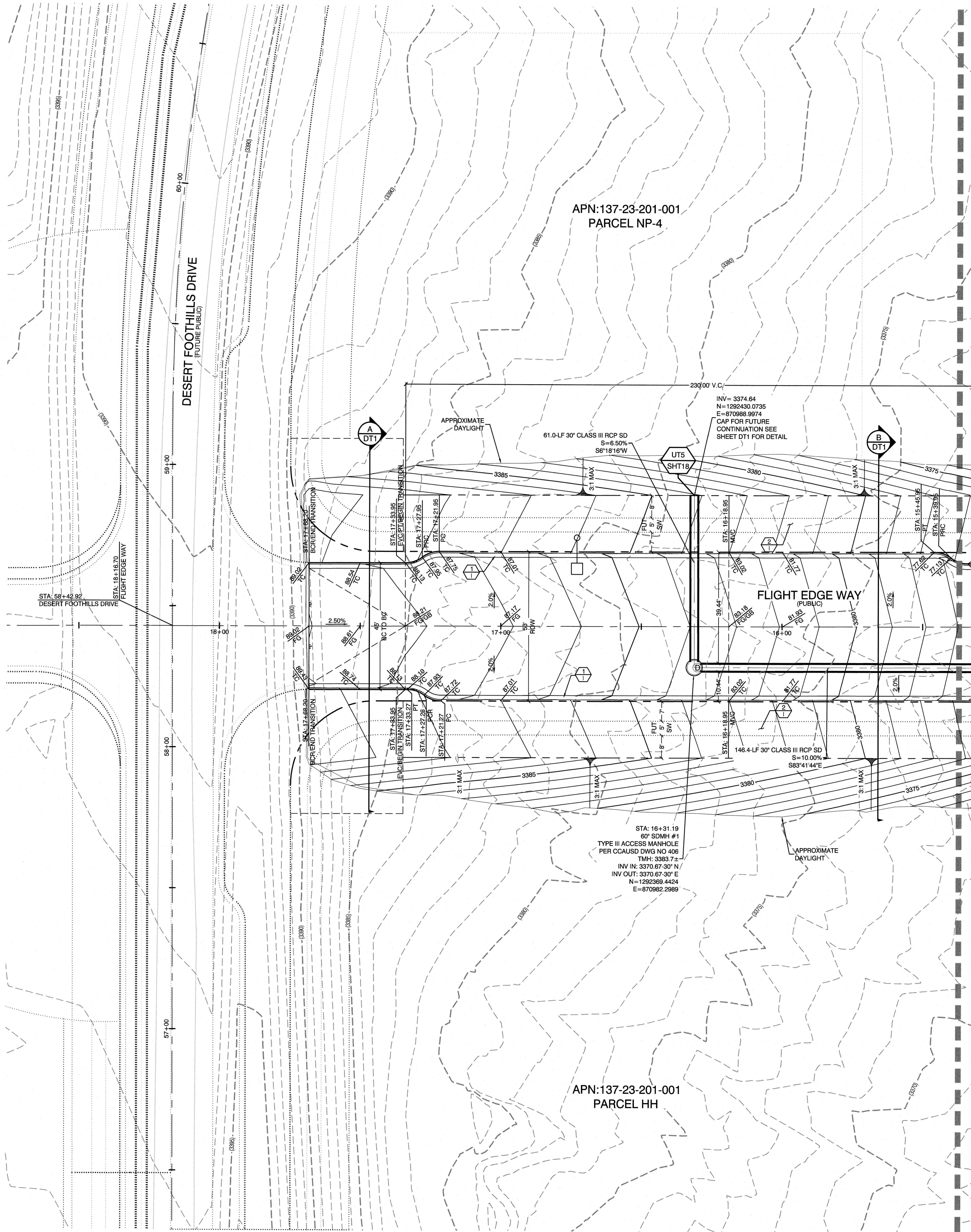
SIGHT VISIBILITY ZONES:
NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

ENGINEER DISCLAIMER NOTE:
UTILITY LOCATIONS SHOWN HERE ON 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 AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS5252

WILLIAM J MEYER, P.E. No. 15745 DATE

HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10845 GRIFFITH PEAK DRIVE, SUITE 160 LAS VEGAS, NEVADA 89135 702.791.4000		CITY OF LAS VEGAS 2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH. (702) 873-7599 FAX (702) 362-2897 WEB WWW.VTNV.COM CONSULTING ENGINEERS & LAND SURVEYORS	
MASTER GRADING PLAN		SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY-KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE	
DRAWN BY: BCC	10/14/2019	DESIGNED BY: BCC	10/14/2019
CHECKED BY: WJM	03/26/2020	PROJECT NO.: 7981	SCALE: 1"=40' HORIZ. N/A VERT.
		MGRD 8 OF 23 SHEETS DRAWING NO.	



CONSTRUCTION NOTES

- CONSTRUCT 24" TYPE "1" CURB & GUTTER PER STD. DWG. 216.
- FUTURE SIDEWALK.
- CONSTRUCT HANDICAP RAMP SEE SHEET DT2 & DT3
- SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
- FIELD VERIFY AND MATCH EXISTING

OFFSITE FLOOD CONTROL NOTE:

ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERMS/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FT/US)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHINGS AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FT/US)
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SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

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BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USCGS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
721S.R59E.S03

CONSTRUCTION NOTES

UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT# = SHEET NUMBER

GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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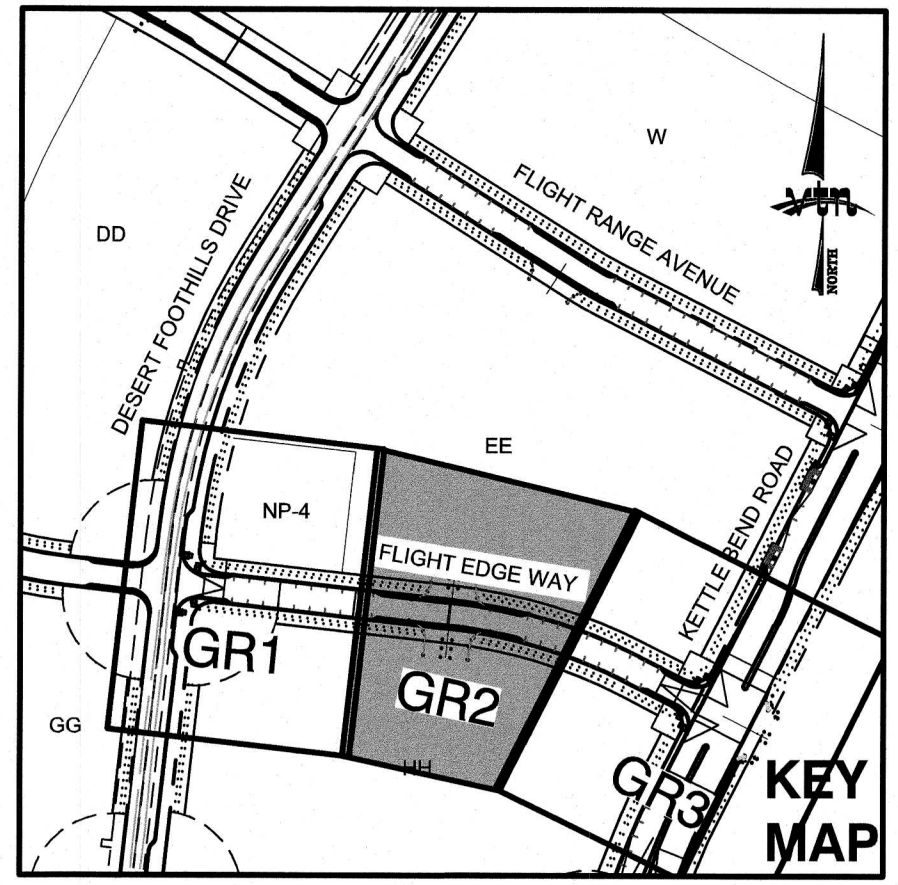
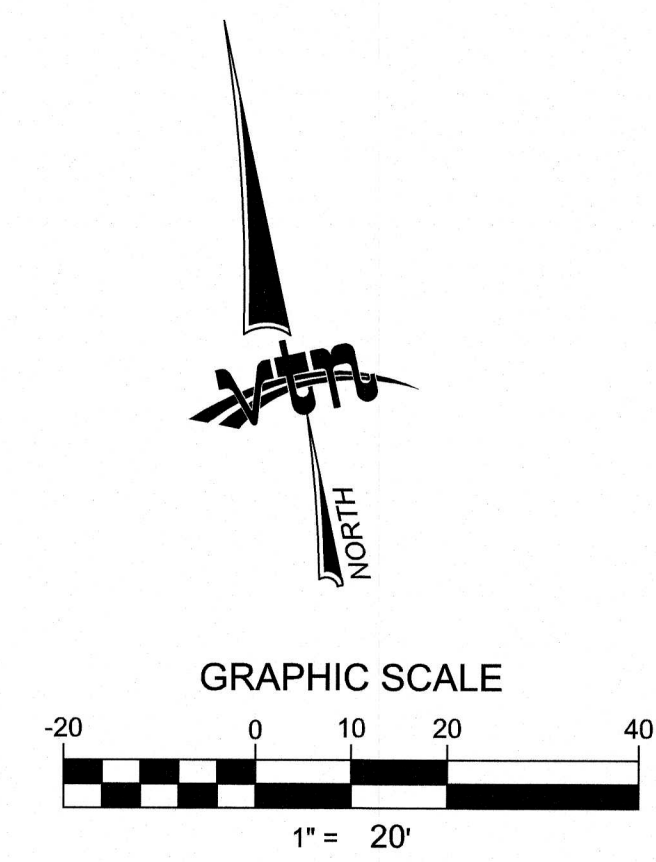
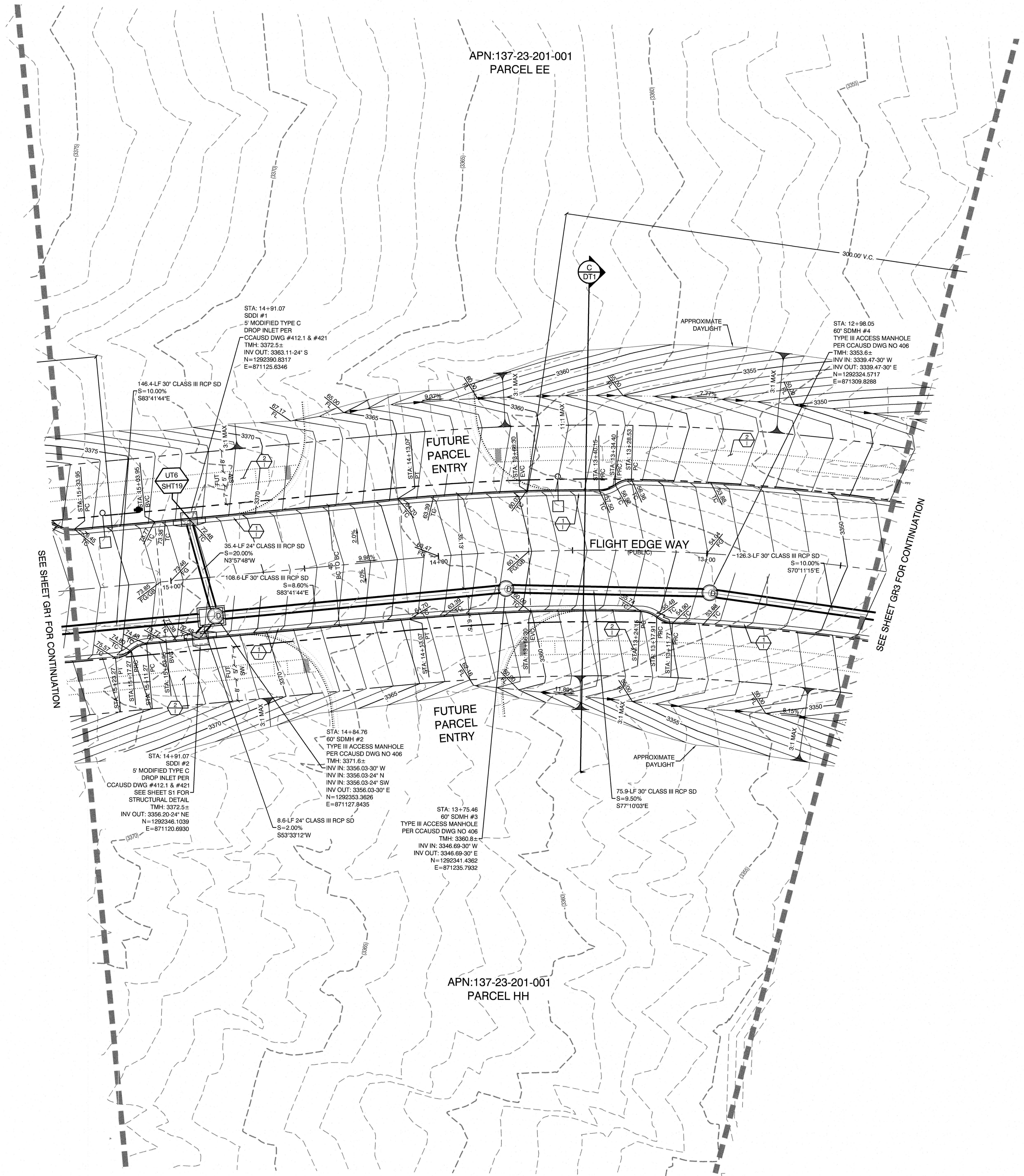
WILLIAM J MEYER, P.E. No. 15745 DATE

Call before you Dig

1-702-227-2929

1-800-227-2600 AND 1-702-455-6000 CLARK COUNTY TRAFFIC OPERATIONS

HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10845 BRIFTH PEAK DRIVE SUITE 160 LAS VEGAS, NEVADA 89135 702.791.4000		CITY OF LAS VEGAS	
GRADING PLAN 1		SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY-KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE	
DRAWN BY: BCC	DESIGNED BY: BCC	CHECKED BY: WJM	PROJECT NO: 7981
DATE: 10/10/2019		DATE: 10/10/2019	
SCALE: 1" = 20'		SCALE: 1" = 20'	
SHEET: GR1		SHEET: GR1	
DRAWING NO.		DRAWING NO.	



CONSTRUCTION NOTES

- CONSTRUCT 24" TYPE 'L' CURB & GUTTER PER STD. DWG. 216.
- FUTURE SIDEWALK
- CONSTRUCT HANDICAP RAMP SEE SHEET DT2 & DT3
- SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
- FIELD VERIFY AND MATCH EXISTING

OFFSITE FLOOD CONTROL NOTE:

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BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
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SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

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BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CITY OF LAS VEGAS BENCHMARK: C368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)

FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R69E,S03

CONSTRUCTION NOTES

UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT # = SHEET NUMBER

GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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WILLIAM J MEYER, P.E. No. 15745 DATE



Call before you Dig

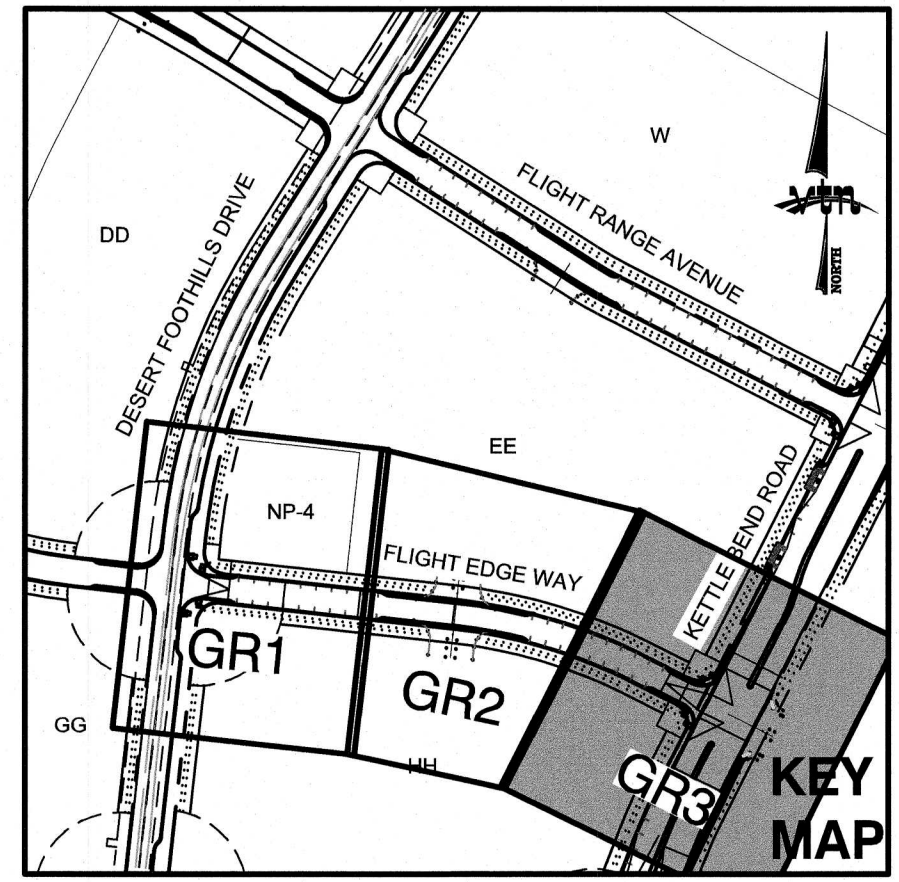
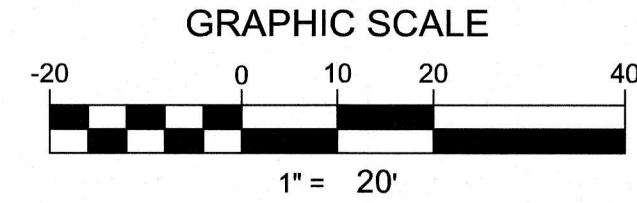
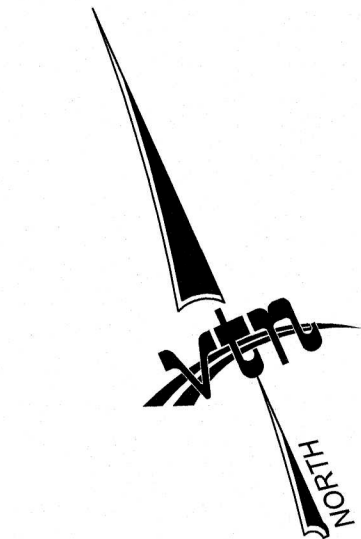
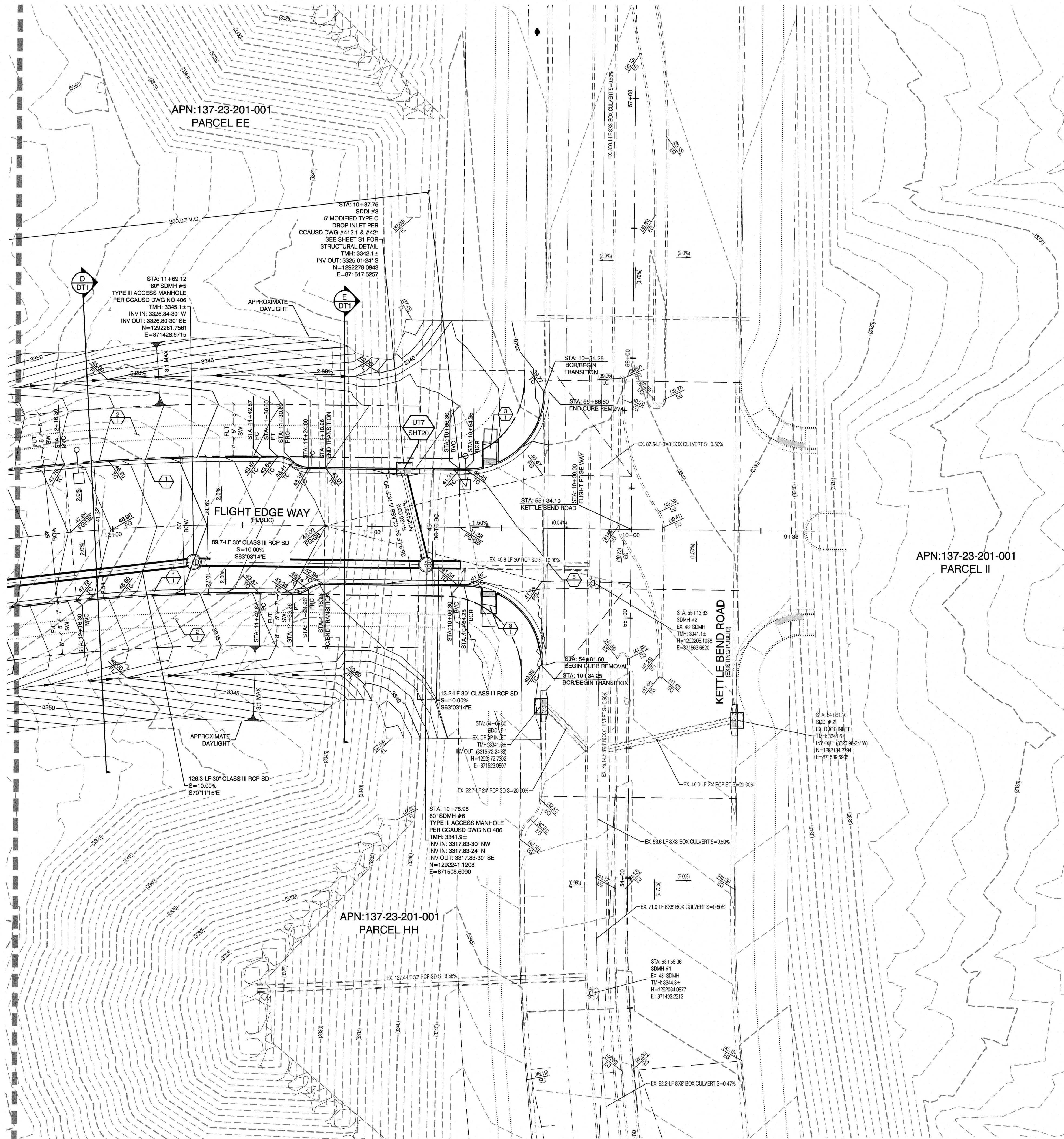
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

Call before you Dig

1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10845 GRIFFITH PEAK DRIVE, SUITE 160 LAS VEGAS, NEVADA 89125 702-791-4000		CITY OF LAS VEGAS 2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146 PH: (702) 973-7550 FAX: (702) 382-2587 WEB: WWW.VTNN.COM CONSULTING ENGINEERS & PLANNERS • LAND SURVEYORS	
GRADING PLAN 2		SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY-KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE	
DRAWN BY: BCC	DESIGNED BY: BCC	CHECKED BY: WJM	PROJECT NO.: 7861
DATE: 10/10/2019		DATE: 03/28/2020	
SCALE: 1"=20'		SCALE: 1"=20'	
HORIZ. VERT.		HORIZ. VERT.	
3/26/20 SHEET GR2 10 OF 23 SHEETS DRAWING NO.			

SEE SHEET GR2 FOR CONTINUATION



- CONSTRUCTION NOTES**
- 1. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
 - 2. FUTURE SIDEWALK
 - 3. CONSTRUCT HANDICAP RAMP SEE SHEET DT2 & DT3
 - 4. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
 - 5. FIELD VERIFY AND MATCH EXISTING
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BASIS OF BEARING

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LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

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BENCHMARK

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NAV88 ELEVATION: 989.574 METERS (3,246.63 FEET)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)

FND USCGS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.

T21S, R69E, S03

CONSTRUCTION NOTES

UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT # = SHEET NUMBER

GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS. STRUCTURES, SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON 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 AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS5252

WILLIAM J MEYER, P.E. No. 15745 DATE

Call before you Dig

1-702-227-2929

1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY

CITY OF LAS VEGAS

GRADING PLAN 3

SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BOC 10/10/2019

DESIGNED BY: BOC 10/10/2019

CHECKED BY: WJM 03/28/2020

PROJECT NO: 7961

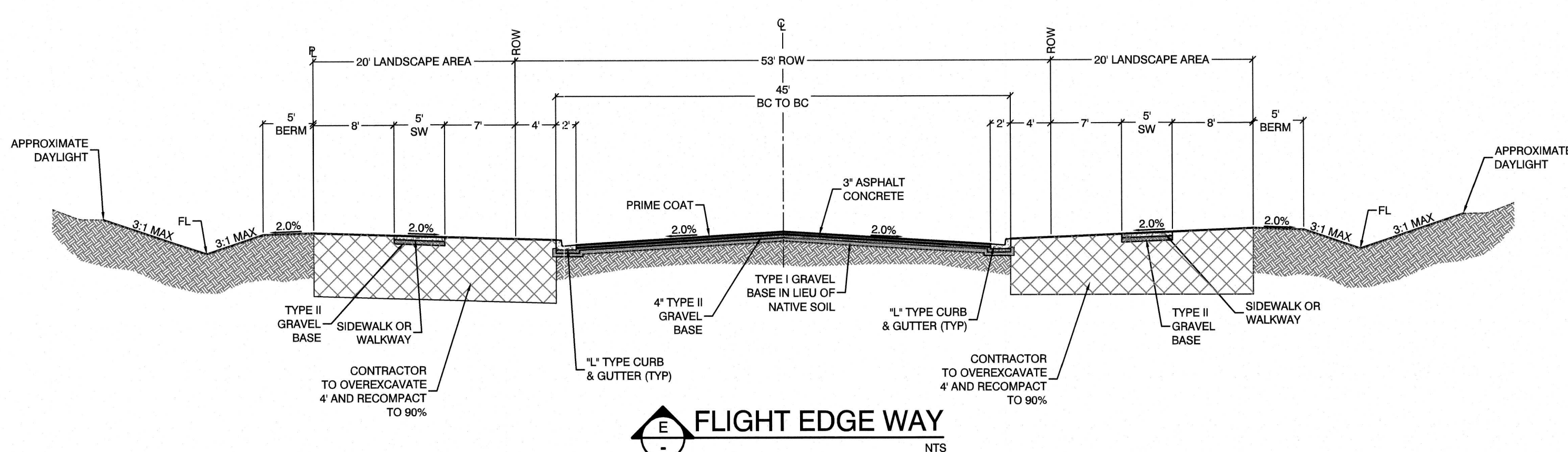
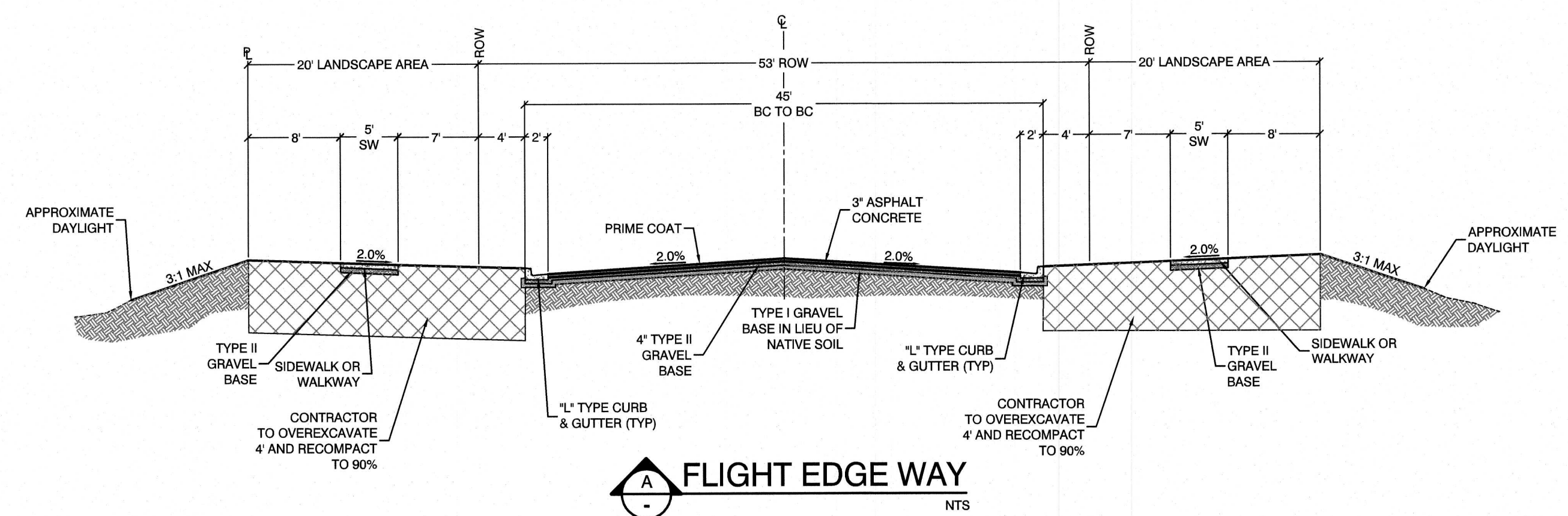
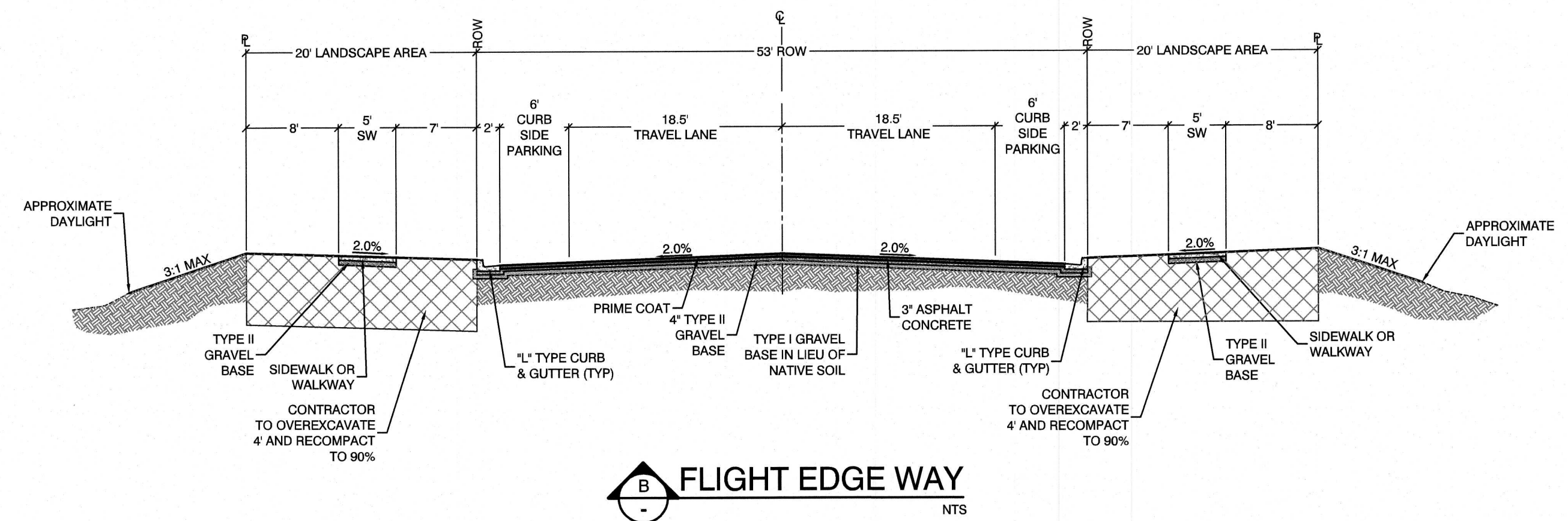
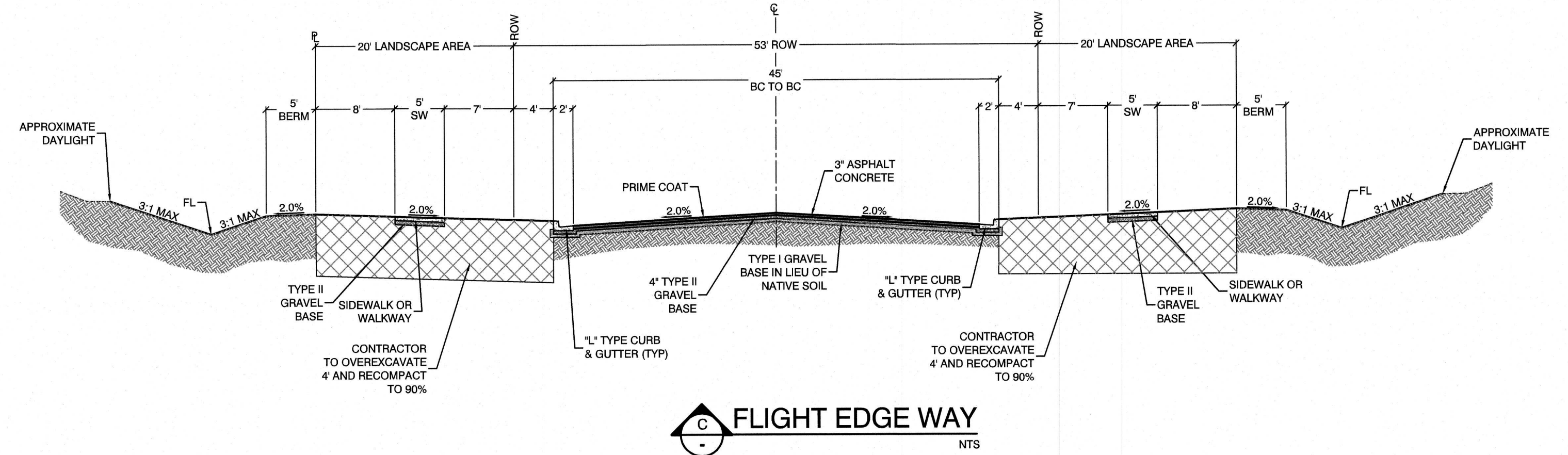
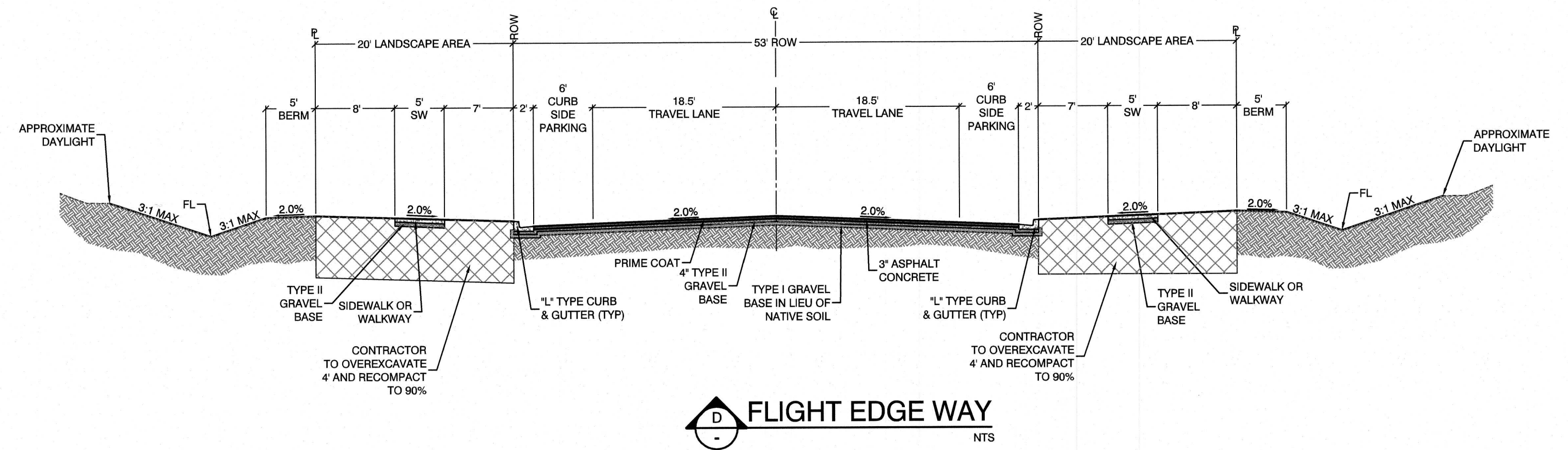
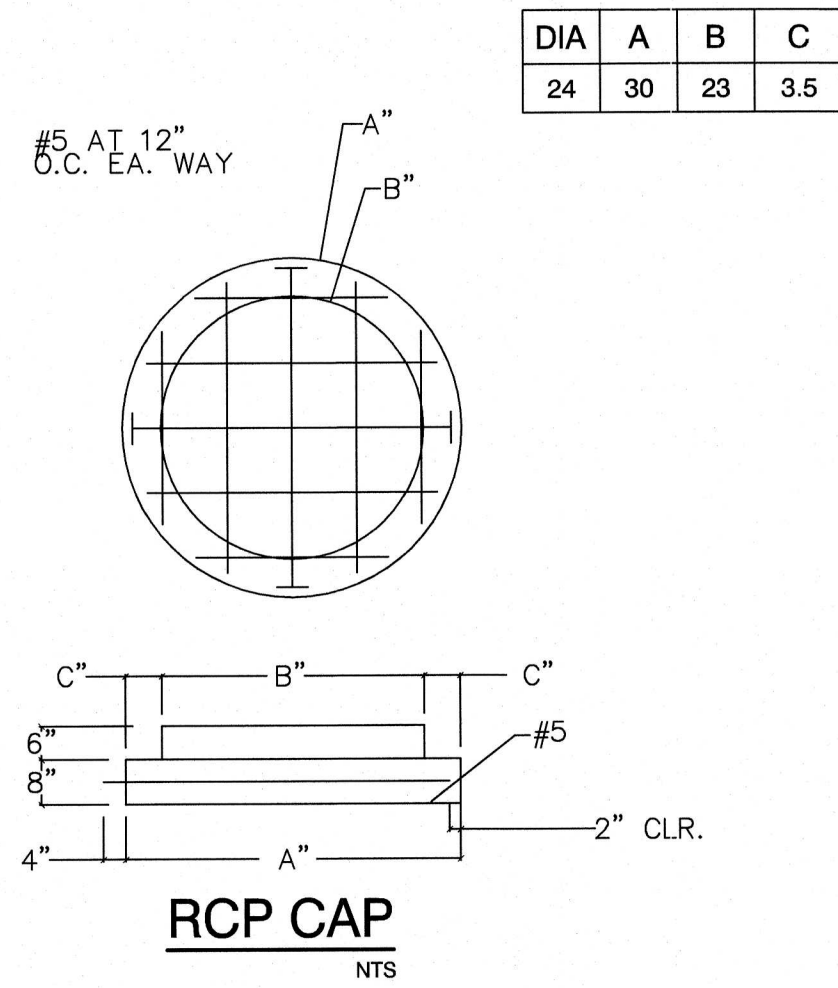
SCALE: 1"=20'

HORIZ. VERT. N/A

WILLIAM J. MEYER
P.E. No. 15745
CIVIL
EXPIRATION DATE: 12/31/21

GR3
11 OF 23 SHEETS

DRAWING NO. ---



HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702.791.4400

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7550 FAX: (702) 392-2597 WEB: WWW.VTNNV.COM
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS



DETAIL SHEET 1

SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

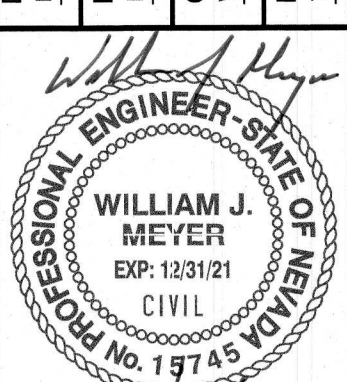
DRAWN BY: ECC 10/13/2019

DESIGNED BY: BCC 10/13/2019

CHECKED BY: MJM 03/28/2020

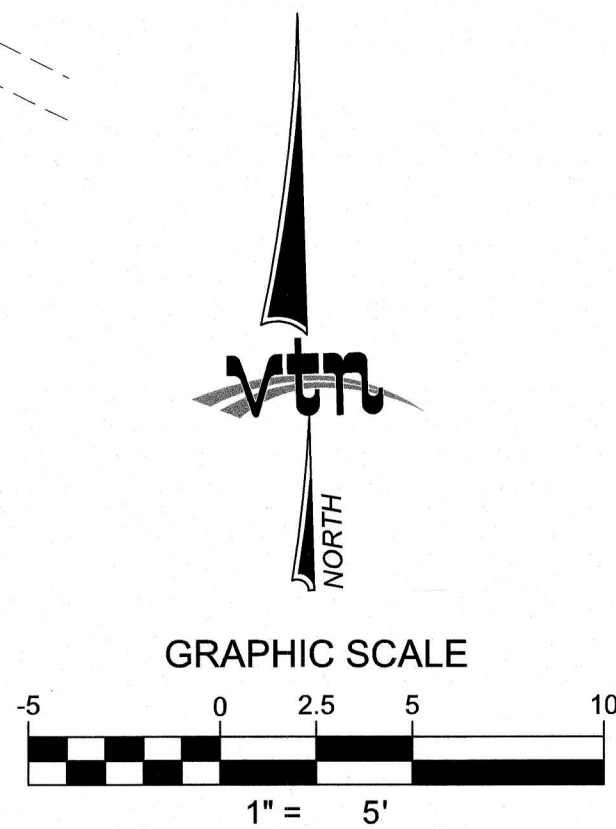
PROJECT NO: 191745

SCALE: N/A



SHEET
DT1
12 OF 23 SHEETS
DRAWING NO.

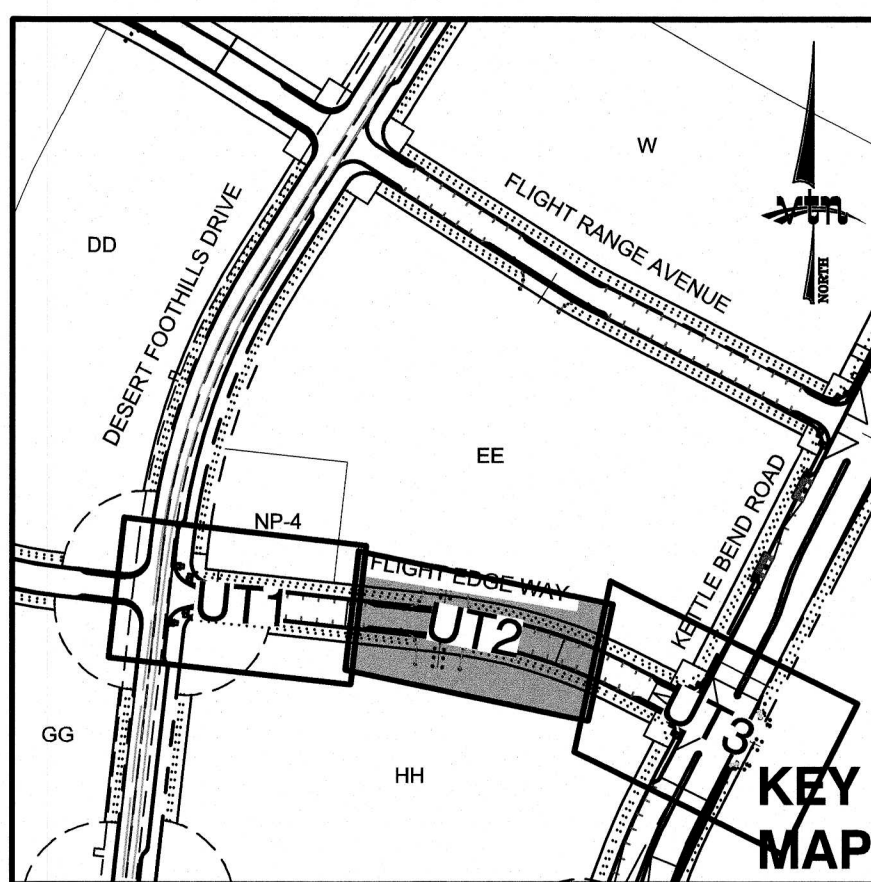
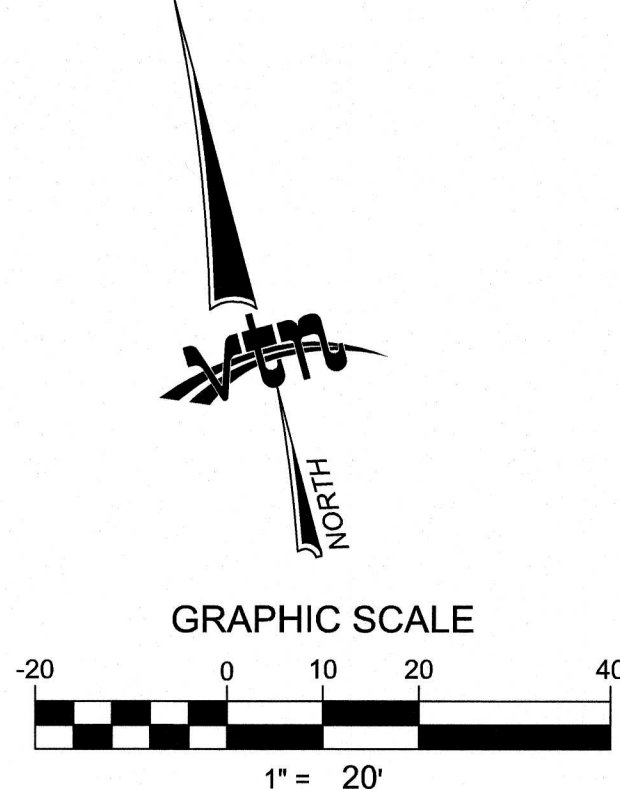
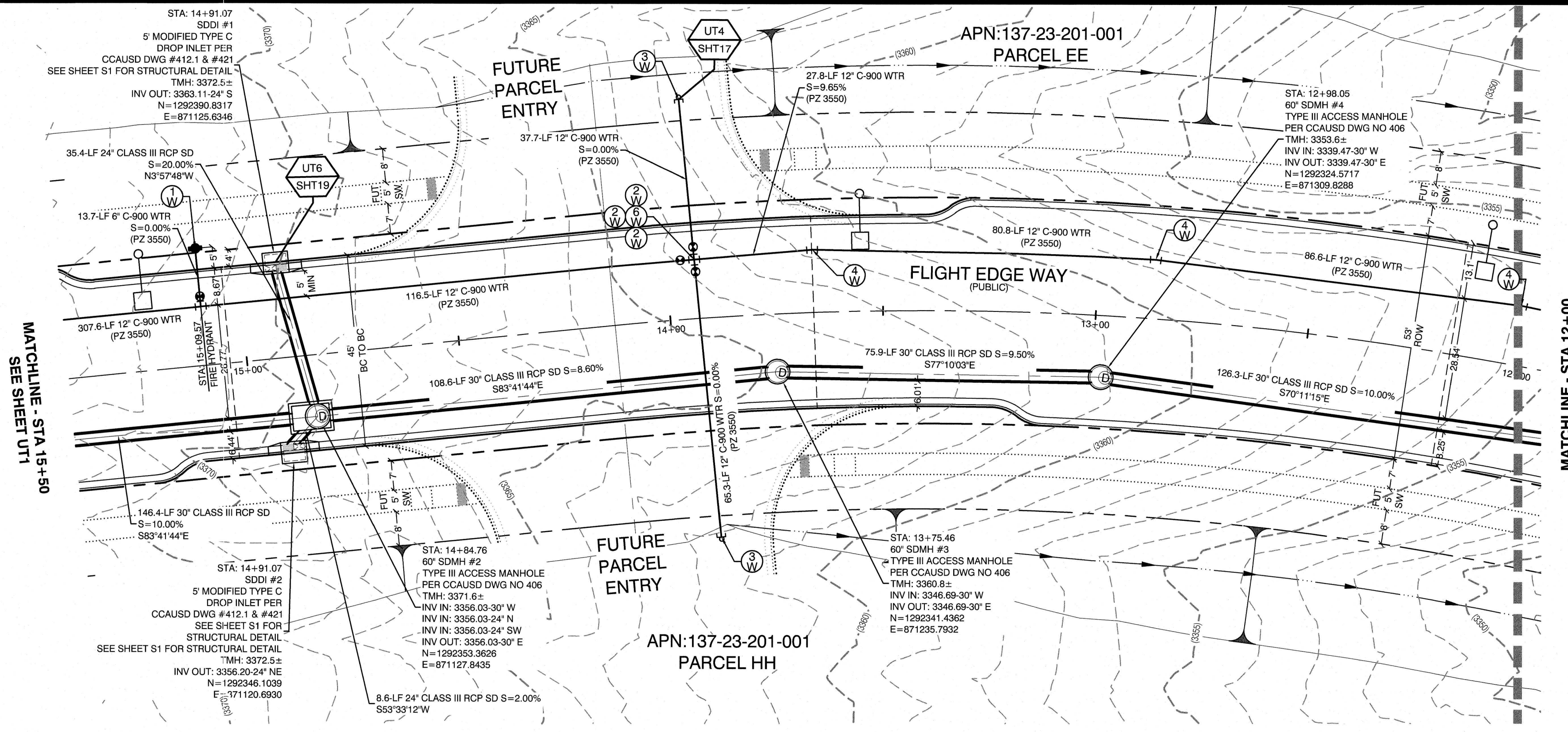
H:\7861 Flight Edge Way - Kettle Bend to Desert Foothills Sheet\7861-DT.dwg, 3/28/2020 8:51 AM Brandon



FLIGHT EDGE WAY AND KETTLE BEND ROAD INTERSECTION HANDICAP RAMPS

NTS

	DRAWN BY: BCC	10/15/2019
	DESIGNED BY: BCC	10/15/2019
	CHECKED BY: WJM	03/26/2020
	PROJECT NO: 7981	SCALE: N/A
SHEET DT2		13 OF 23 SHEETS
DRAWING NO.		
HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10846 GRIFFITH PEAK DRIVE, SUITE 100 LAS VEGAS, NEVADA 89135 702.731.0000		CITY OF LAS VEGAS
SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY-KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE		REV. DATE BY
2727 SOUTH RANSON BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH. (702) 872-7550 FAX (702) 362-2597 WEB WWW.VTNV.COM CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS		REVISION



- WATER PRESSURE ZONE:**
WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.
- WATER MAIN COVER NOTE:**
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08
- WATERLINE TRENCH NOTE:**
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.
- WATER LINE MARKER BALLS NOTE**
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15
- FIRE HYDRANT MARKER NOTES**
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

- CONSTRUCTION NOTES**
- WATER**
- FIRE HYDRANT ASSEMBLY: (PER UDACS PLATE NO. 39 & 40)
 - 12" GATE VALVE (PER UDACS PLATE 39)
 - 12" CAP & BLOW OFF (PER UDACS PLATE 36)
 - 12" 5' BEND (PER UDACS PLATE 31)
 - 24"x12" TEE (PER UDACS PLATE 31)
 - 12"x12" CROSS (PER UDACS PLATE 31)
 - 12" 5' VERTICAL BEND (PER UDACS PLATE 31)
 - 6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
 - 12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
 - WATER POINT OF CONNECTION

WATER MAIN JOINT DEFLECTION
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:
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CONSTRUCTION NOTES
UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT # = SHEET NUMBER

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

Call before you Dig
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
1-702-229-6011
LAS VEGAS AREA COMPREHENSIVE TRAFFIC SYSTEM

Call before you Dig
Avoid hitting overhead power lines. It's costly.

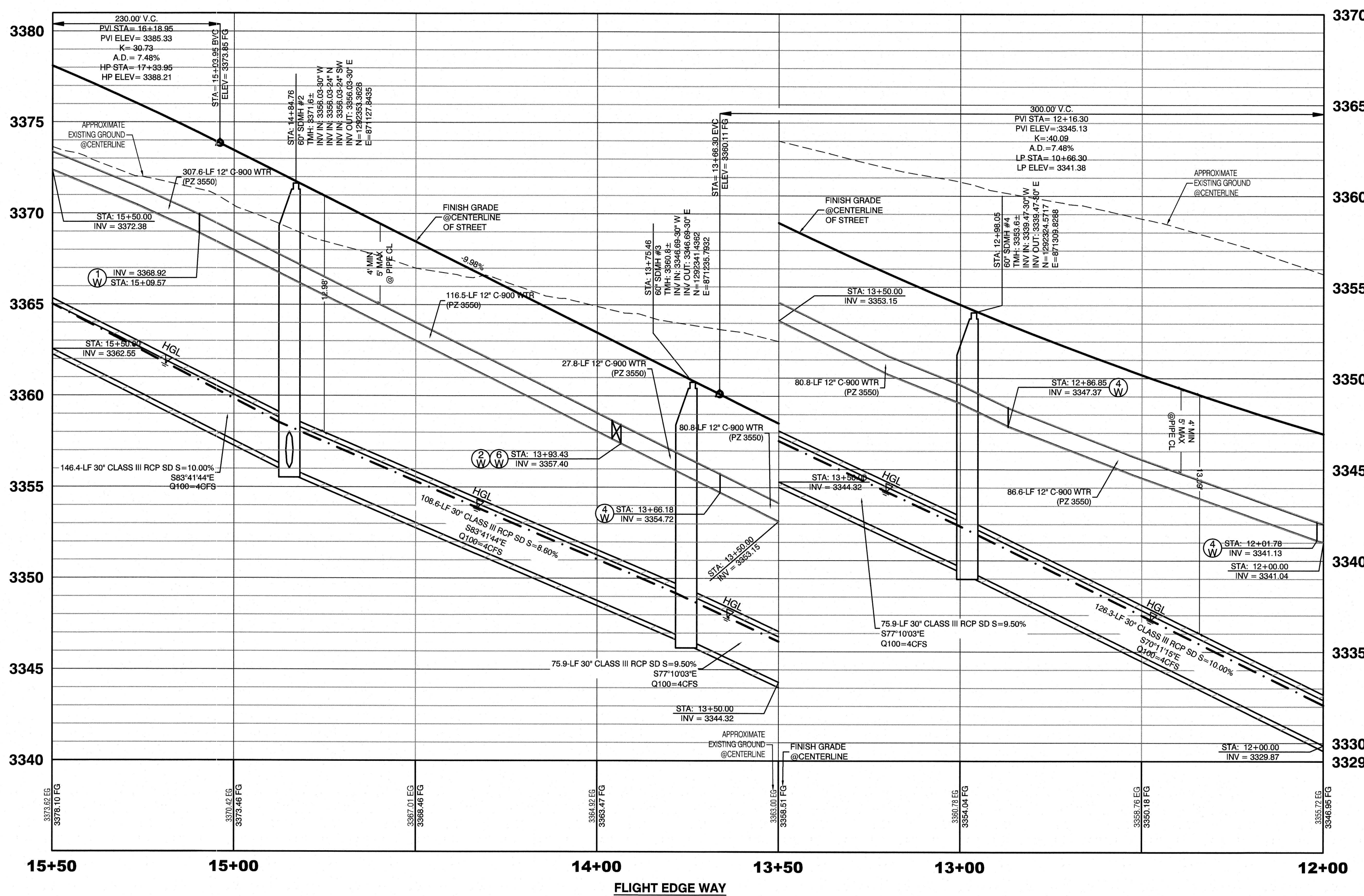
Call before you Dig
1-702-227-2929

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO 'GROUND' DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2006)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FIND US&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R98E,S03

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

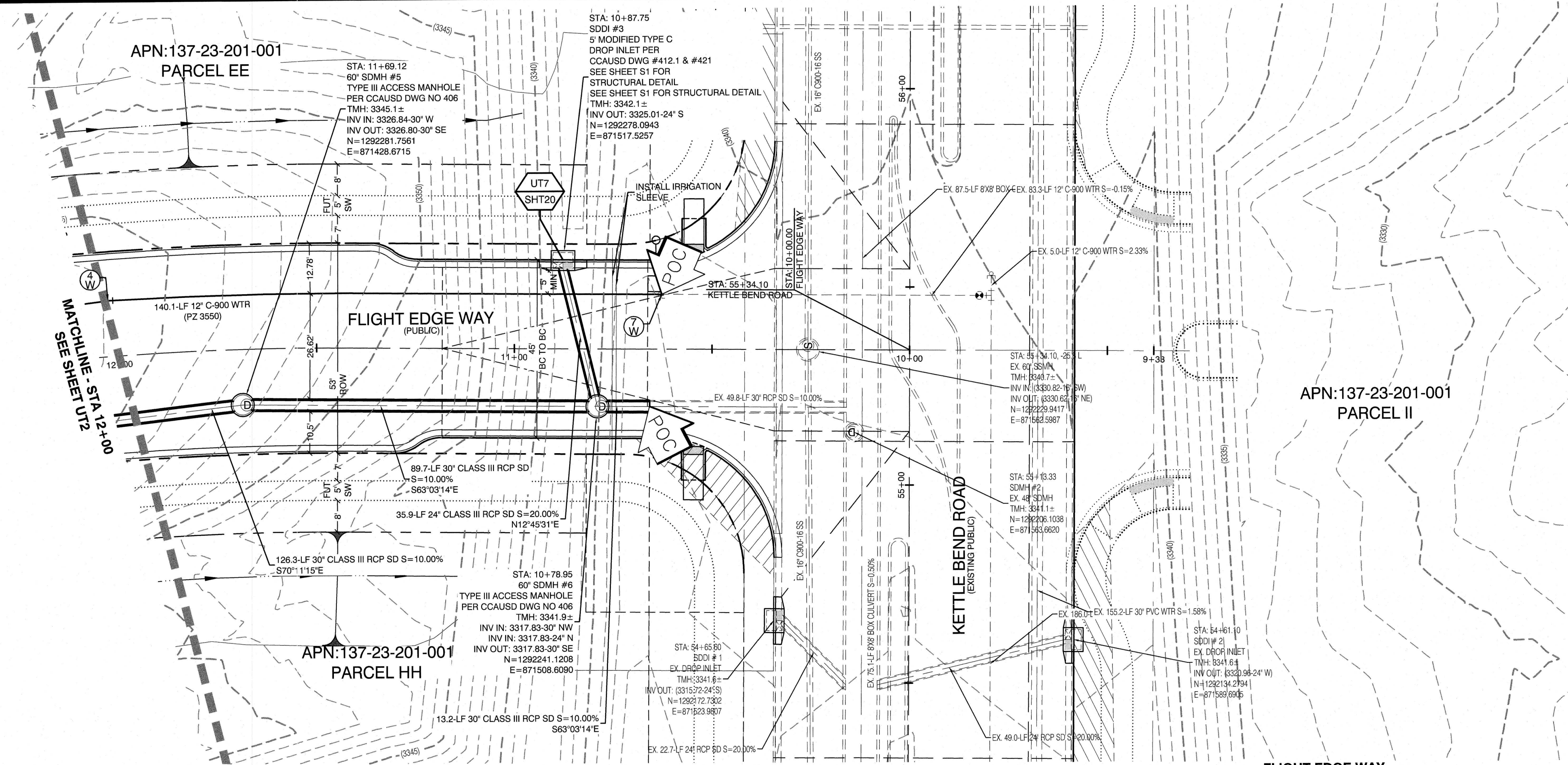
LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
DATE: _____ PROJECT: _____
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.



HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10345 GRIFFITH PEAK DRIVE, SUITE 160 LAS VEGAS, NEVADA 89135 702.751.4000		CITY OF LAS VEGAS 2727 SOUTH RAINBOW BOULEVARD LAS VEGAS, NEVADA 89146-5148 PH. (702) 872-7550 FAX (702) 362-2597 WEB WWW.VTNV.COM CONSULTING ENGINEERS PLANNERS LAND SURVEYORS	
UTILITY PLAN & PROFILE 2		SUMMERLIN WEST VILLAGE 22 FLIGHT EDGE WAY-KETTLE BEND ROAD TO DESERT FOOTHILLS DRIVE	
DRAWN BY: BCC	DESIGNED BY: BCC	CHECKED BY: WJM	PROJECT NO: 7981
DATE: 10/11/2019		SCALE: 1"=20' HORIZ. VERT. 1"=4'	
SHEET UT2 15 OF 23 SHEETS DRAWING NO. ---			

WILLIAM J. MEYER
Professional Engineer
State of Nevada
No. 15745
3/26/20

H:\7801\Flight Edge Way - Kettle Bend to Desert Foothills UT.dwg 2/26/2020 10:02 AM Brandon

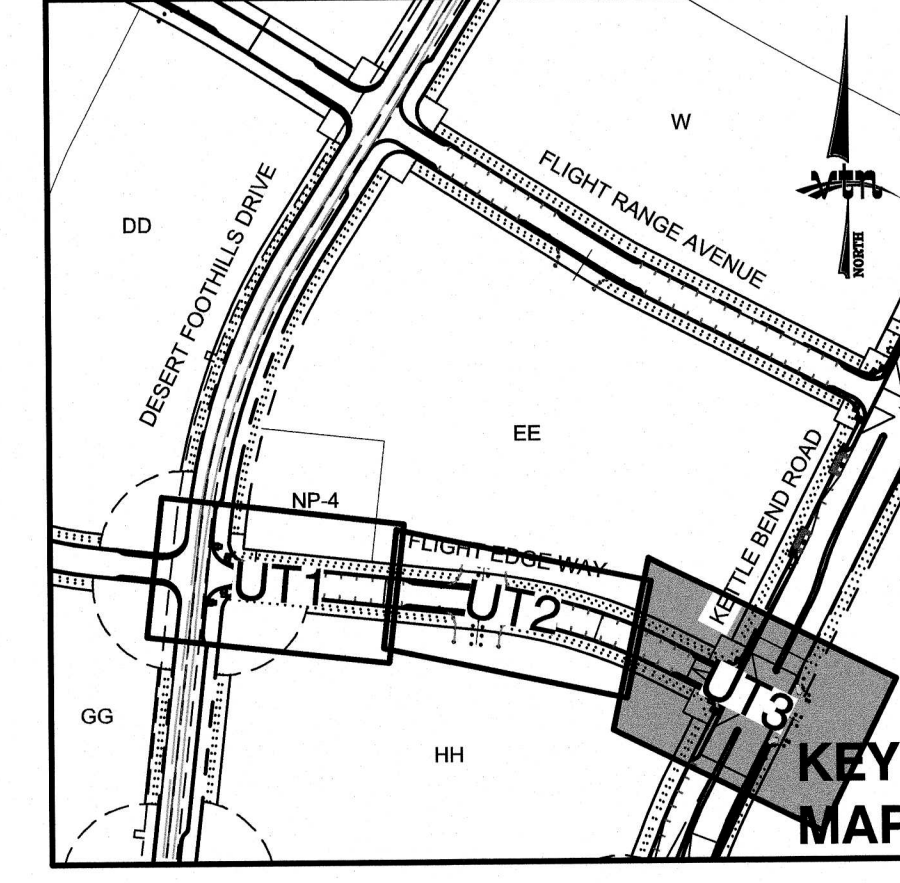
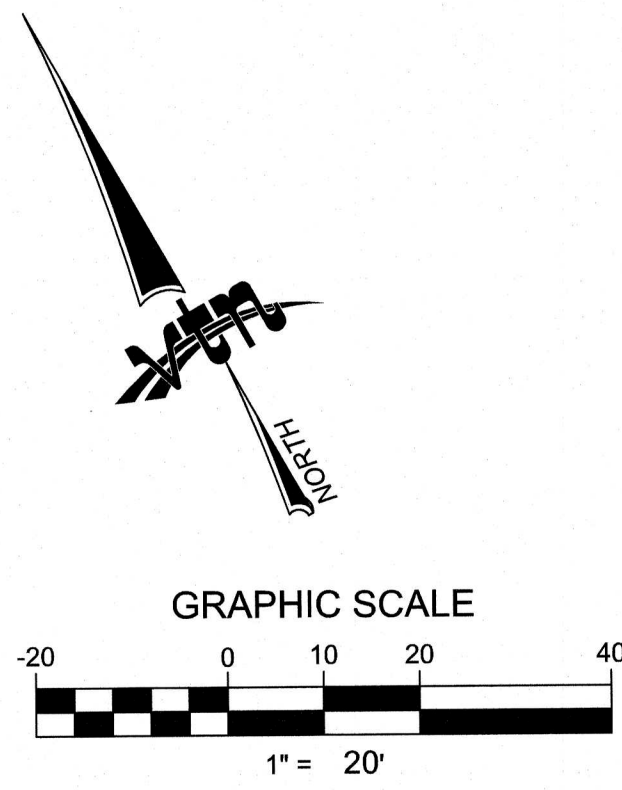
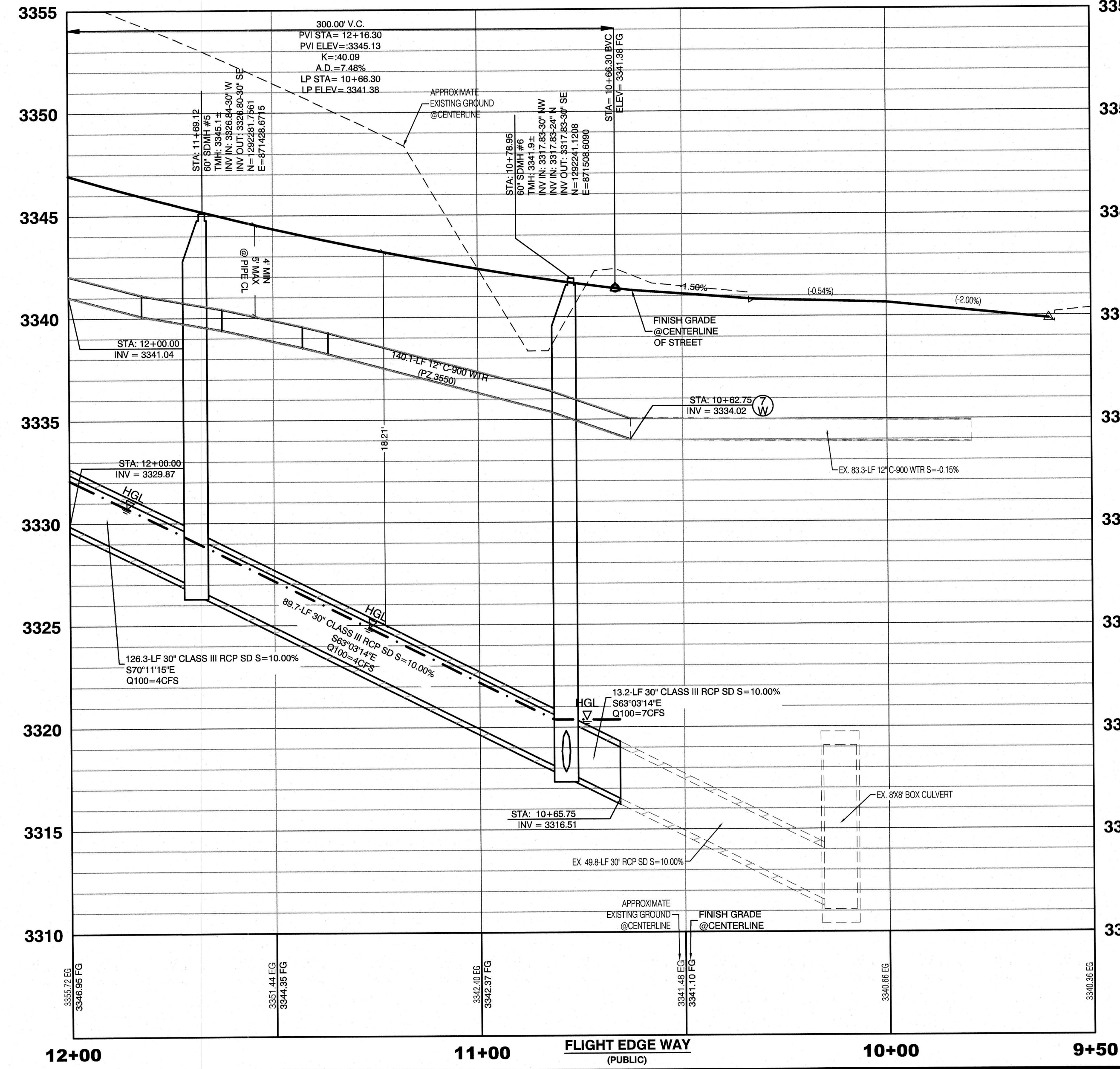


FLIGHT EDGE WAY (PUBLIC)

PROFILE SCALES:

HORIZ = 1"=20'

VERT. = 1"=4'



WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE No. 15

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

- ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE, LOCATE MARKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
- ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE, LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

CONSTRUCTION NOTES

WATER

- 1. FIRE HYDRANT ASSEMBLY: (PER UDACS PLATE NO. 39 & 40)
- 2. 12" GATE VALVE (PER UDACS PLATE 39)
- 3. 12" CAP & BLOW OFF (PER UDACS PLATE 39)
- 4. 12" 5' BEND (PER UDACS PLATE 31)
- 5. 24"x12" TEE (PER UDACS PLATE 31)
- 6. 12"x12" CROSS (PER UDACS PLATE 31)
- 7. 12" 5' VERTICAL BEND (PER UDACS PLATE 31)
- 8. 6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 9. 12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 10. WATER POINT OF CONNECTION

WATER MAIN JOINT DEFLECTION

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:

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ENGINEER DISCLAIMER NOTE:

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CONSTRUCTION NOTES

UTILITY PROFILE REFERENCE LABEL

UT # = SHEET INDEX

SHT # = SHEET NUMBER

BASIS OF BEARING

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, GRID MERIDIAN BEING COINCIDENT WITH 114°56' WEST OF THE GREENWICH MERIDIAN.

LINEAR UNIT: US SURVEY FOOT (FTUS)

DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS HIGH ELEVATION ZONE

PROJECTION: TRANSVERSE MERCATOR

STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N

LONGITUDE OF CENTRAL MERIDIAN: 114°56'00"W

NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)

EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)

SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)

NOTES:

- ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
- GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88)

CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)

NAV88 ELEVATION: 989.574 METERS (3,246.83 FEET)

FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.

T21S, R99E, S03

LAS VEGAS FIRE & RESCUE APPROVAL

BY: _____ DATE: _____

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

Call before you dig

1-702-227-2600

1-702-228-6811

CLARK COUNTY TRAFFIC OPERATIONS

Call before you dig

Avoid cutting underground utility lines. It's costly.

811

OR

1-800-227-2600

AND

1-702-455-6000

CLARK COUNTY TRAFFIC OPERATIONS

Call before you dig

Avoid cutting overhead power lines. It's costly.

1-702-227-2929

LAS VEGAS VALLEY WATER DISTRICT APPROVAL

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

DATE: _____ PROJECT: _____

LWVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

HOWARD HUGHES COMPANY, LLC

A DELAWARE LIMITED LIABILITY COMPANY

10845 GRIFFITH PEAK DRIVE, SUITE 180

LAS VEGAS, NEVADA 89195

702.791.4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD

LAS VEGAS, NEVADA 89146-5148

PH: (702) 673-7559 FAX: (702) 362-2937 WEB: WWW.VTNV.COM

CONSULTING ENGINEERS & LAND SURVEYORS

UTILITY PLAN & PROFILE 3

SUMMERLIN WEST VILLAGE 22

FLIGHT EDGE WAY-KETTLE BEND

ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC

DESIGNED BY: BCC

CHECKED BY: WJM

PROJECT NO: 7861

SCALE: 1"=20' HORIZ. 1"=4' VERT.

DATE: 10/11/2019

DATE: 10/11/2019

DATE: 03/26/2020

SHEET: 16 OF 23 SHEETS

DRAWING NO: UT3

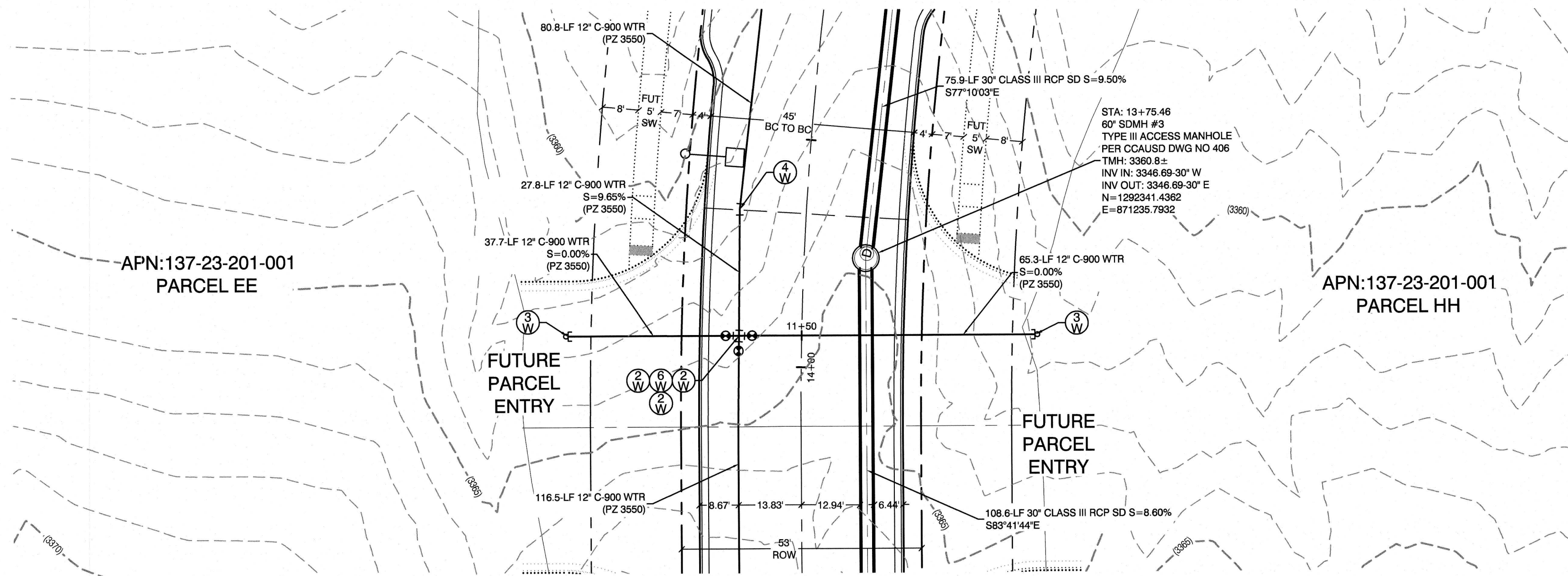
WILLIAM J. MEYER

PROFESSIONAL ENGINEER - STATE OF NEVADA

EXP: 12/31/21

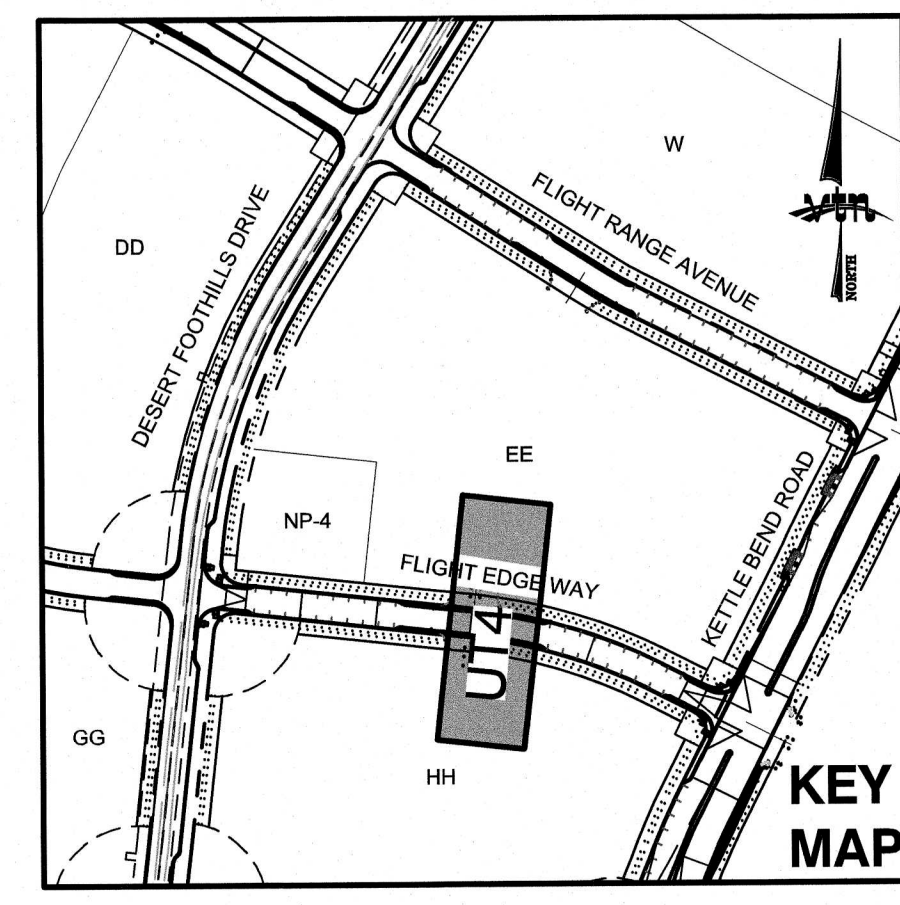
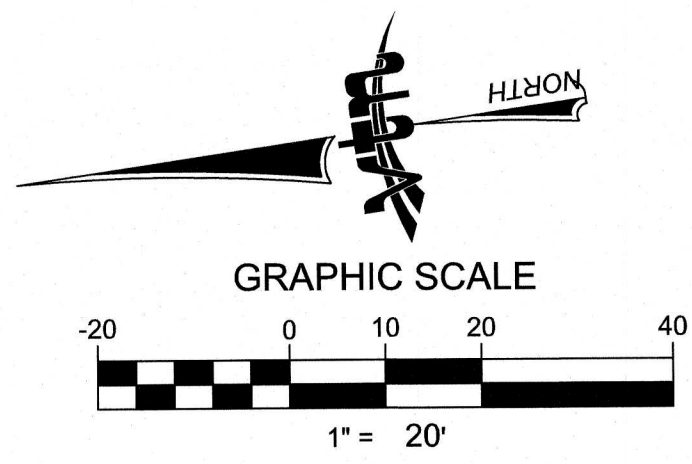
CIVIL

3/26/20



FLIGHT EDGE WAY
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
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FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:
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Call before you Dig
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1-800-227-2600
AND
1-702-455-8000
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Dig
Avoid hitting overhead power lines. IT'S COSTLY.
1-702-227-2929

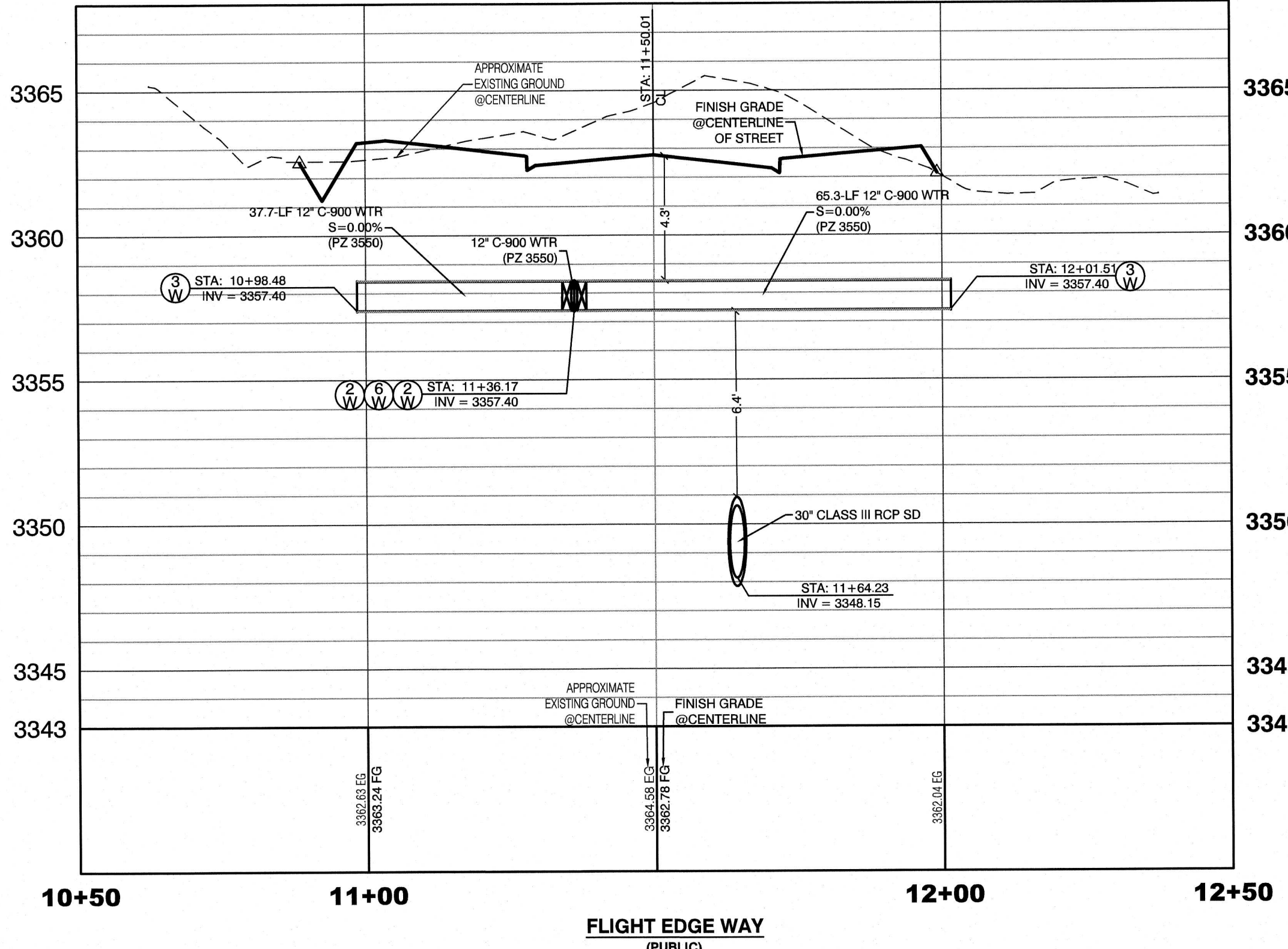
CONSTRUCTION NOTES	
WATER	
	FIRE HYDRANT ASSEMBLY: (PER UDACS PLATE NO. 39 & 40)
	12" GATE VALVE (PER UDACS PLATE 39)
	12" CAP & BLOW OFF (PER UDACS PLATE 36)
	12" 5' BEND (PER UDACS PLATE 31)
	24"X12" TEE (PER UDACS PLATE 31)
	12"X12" CROSS (PER UDACS PLATE 31)
	12" 5' VERTICAL BEND (PER UDACS PLATE 31)
	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	WATER POINT OF CONNECTION

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

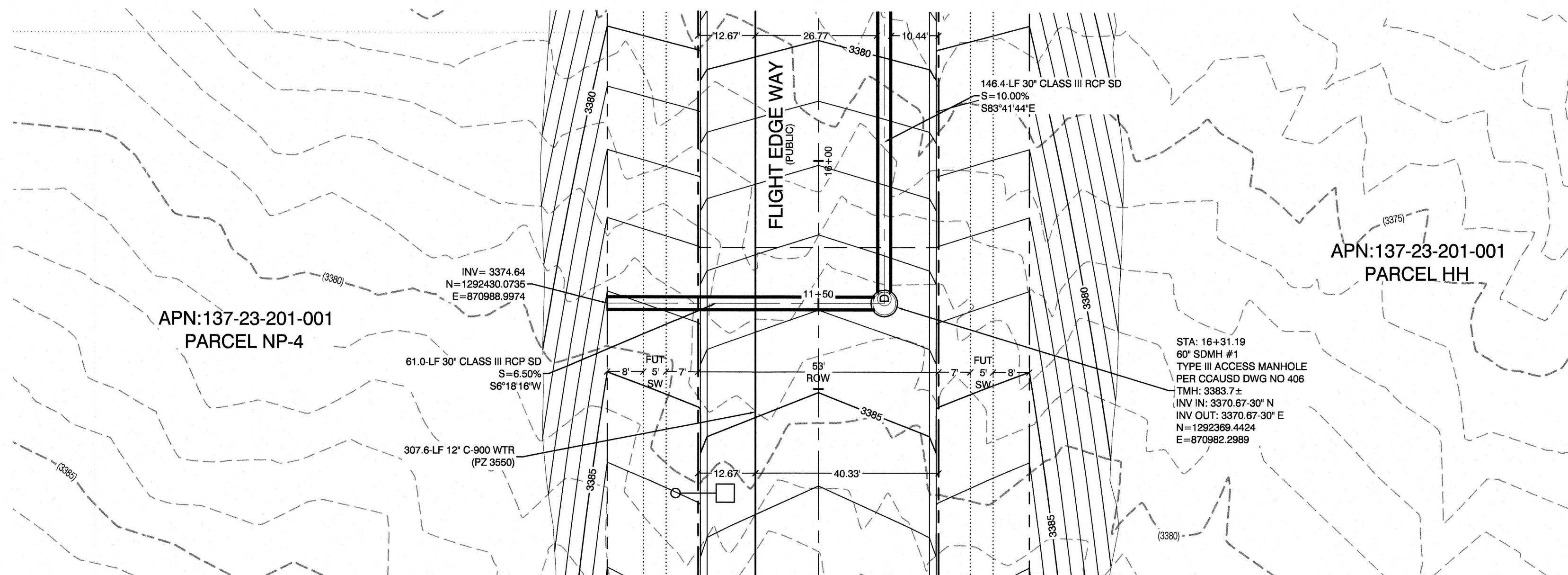
BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USCG&S DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S,R69E,S03

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
DATE: _____ PROJECT: _____
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

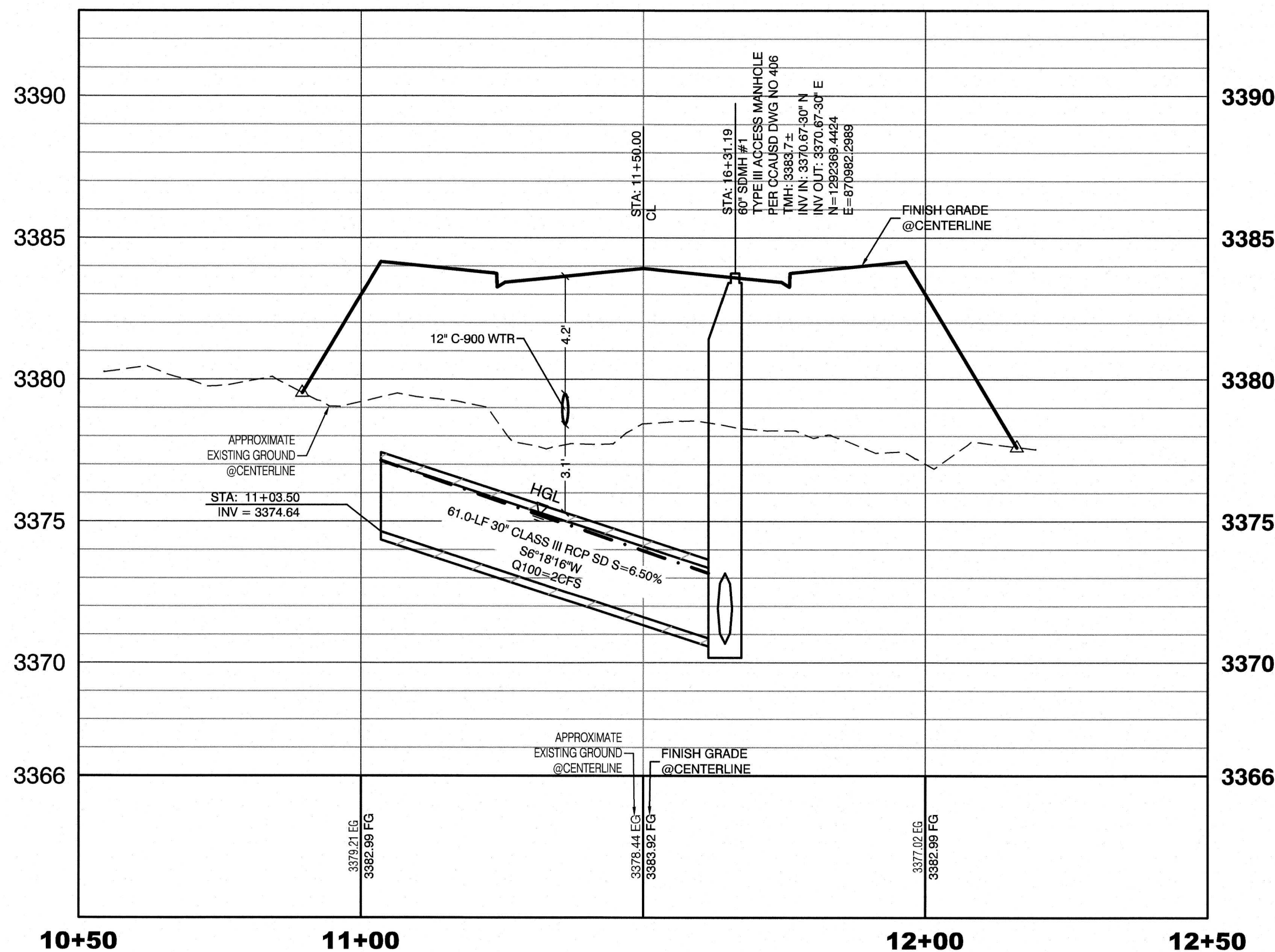


DRAWN BY: BCC		DESIGNED BY: BCC		CHECKED BY: WJM		PROJECT NO: 7891		SCALE: 1"=20' 1"=4'		HORIZ. VERT.	
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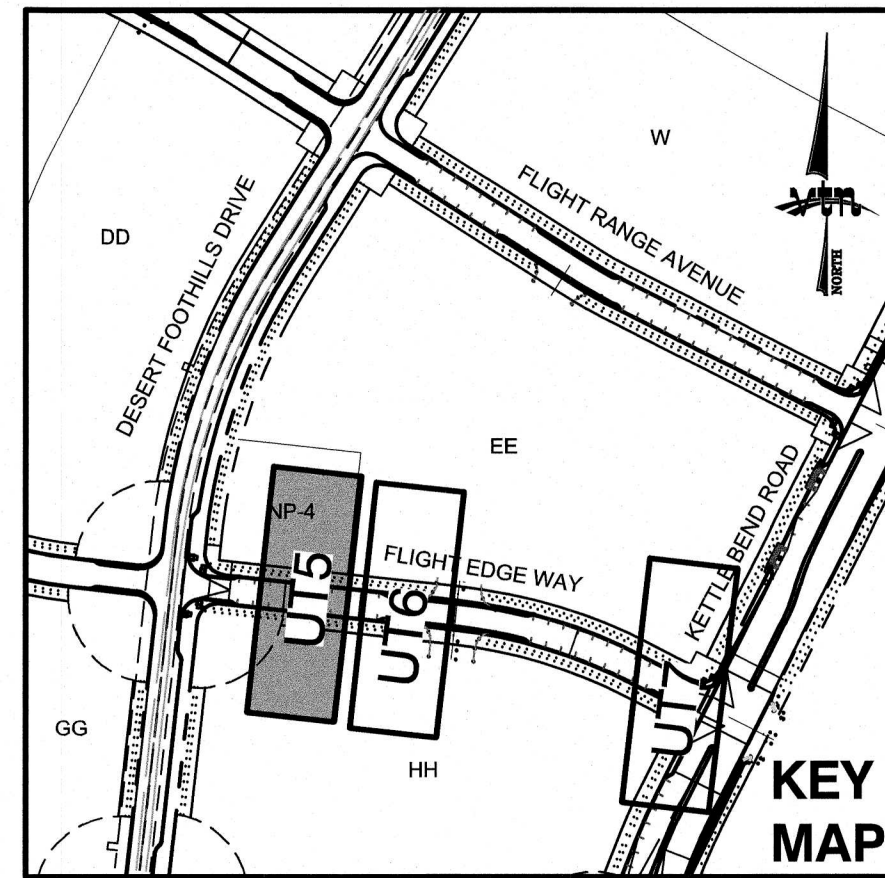


FLIGHT EDGE WAY
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



FLIGHT EDGE WAY
(PUBLIC)



WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION
PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.
FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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CONSTRUCTION NOTES
UTILITY PROFILE REFERENCE LABEL
UT # = SHEET INDEX
SHT # = SHEET NUMBER



Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-227-2600
AND
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS



Call before you Dig
Avoid hitting overhead power lines. It's costly.
CALL 1-702-227-2929

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 38°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
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BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R95E, S03

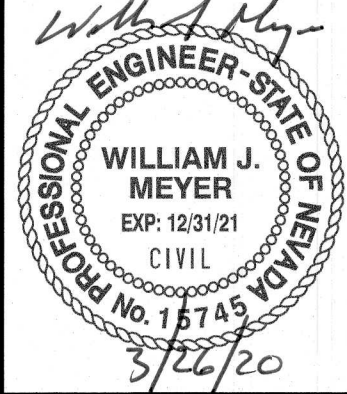
LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
DATE: _____ PROJECT: _____
LVVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
CITY OF LAS VEGAS
10845 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702.751.4200

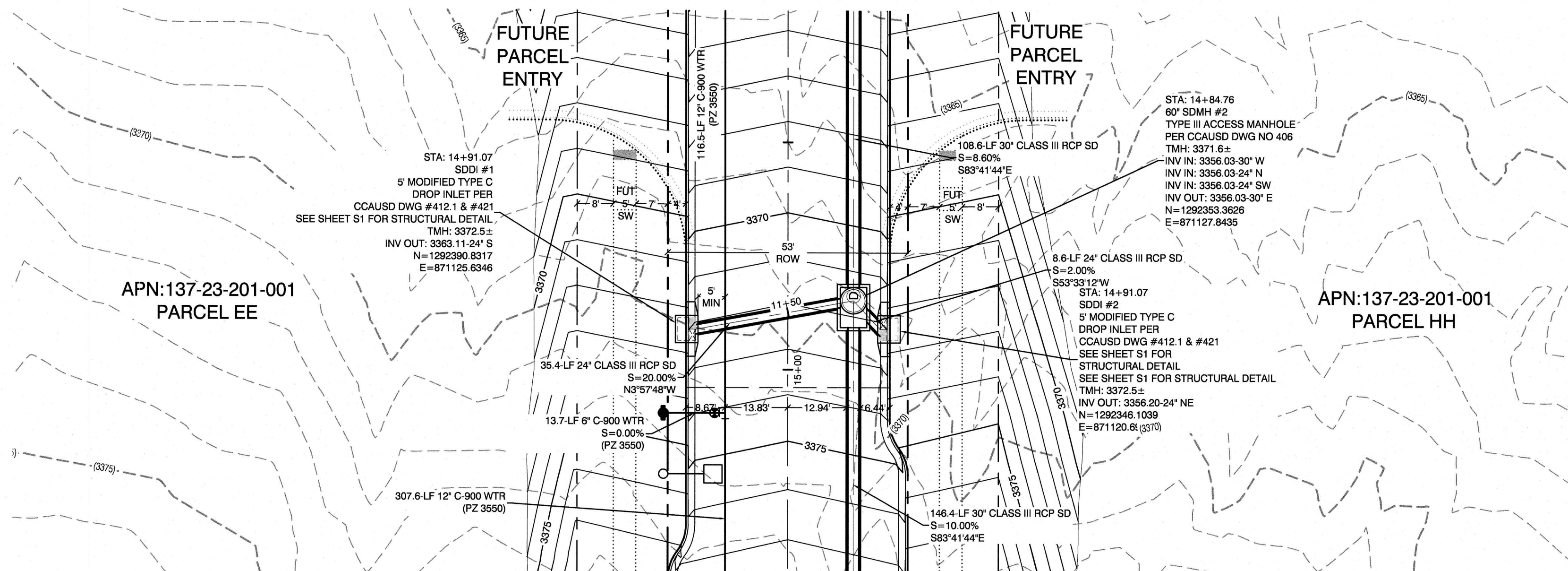
UTILITY PLAN & PROFILE 5
STORM DRAIN LATERAL
SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7981
SCALE: 1"=20' HORIZ
1"=4' VERT.



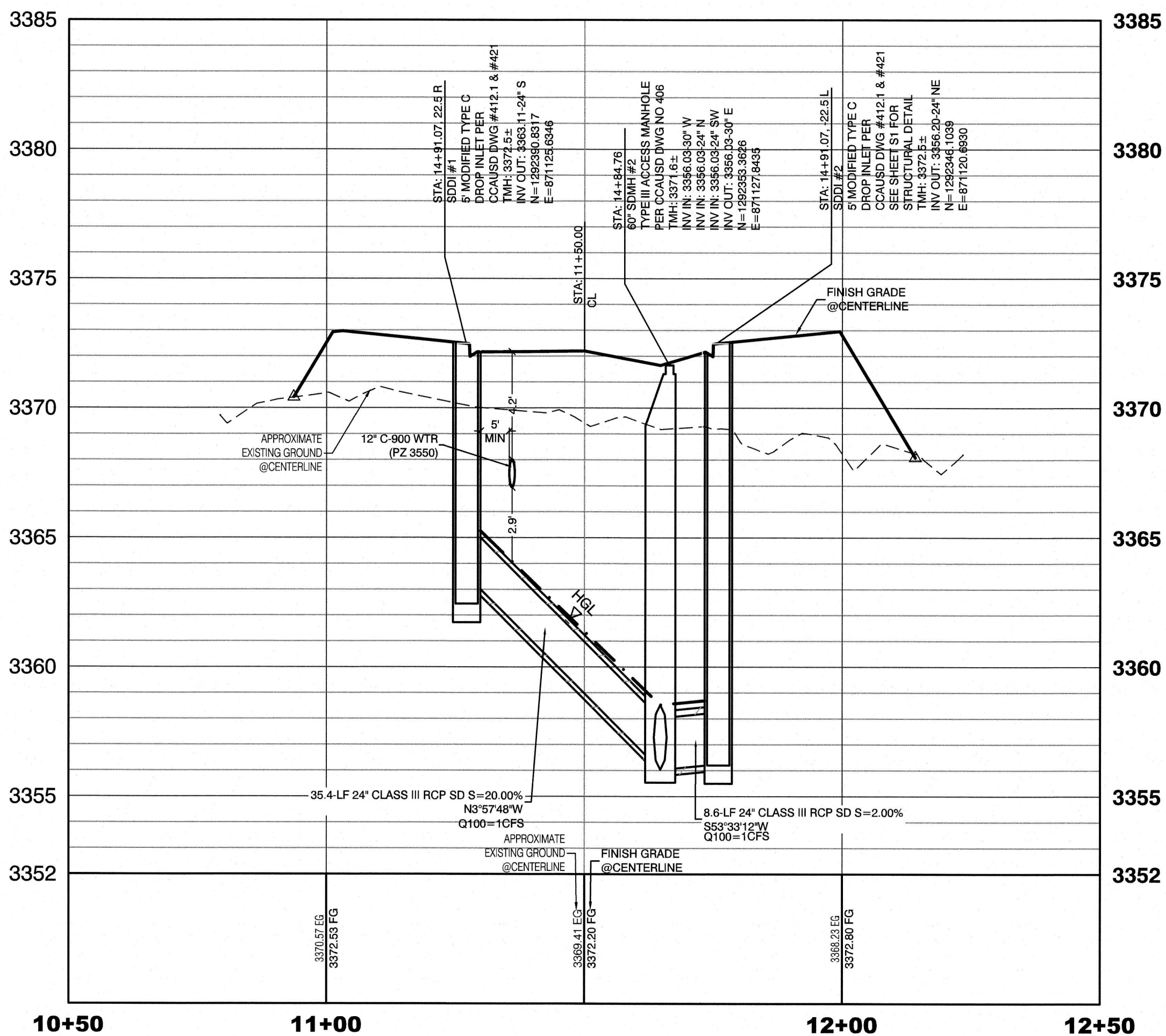
SHEET
UT5
18 OF 23 SHEETS
DRAWING NO. _____

H:\7981\Flight Edge Way - Kettle Bend to Desert Foothills\Sheet\7981-UT-LAT 5D.dwg 3/3/2020 6:55 AM\kcampbell

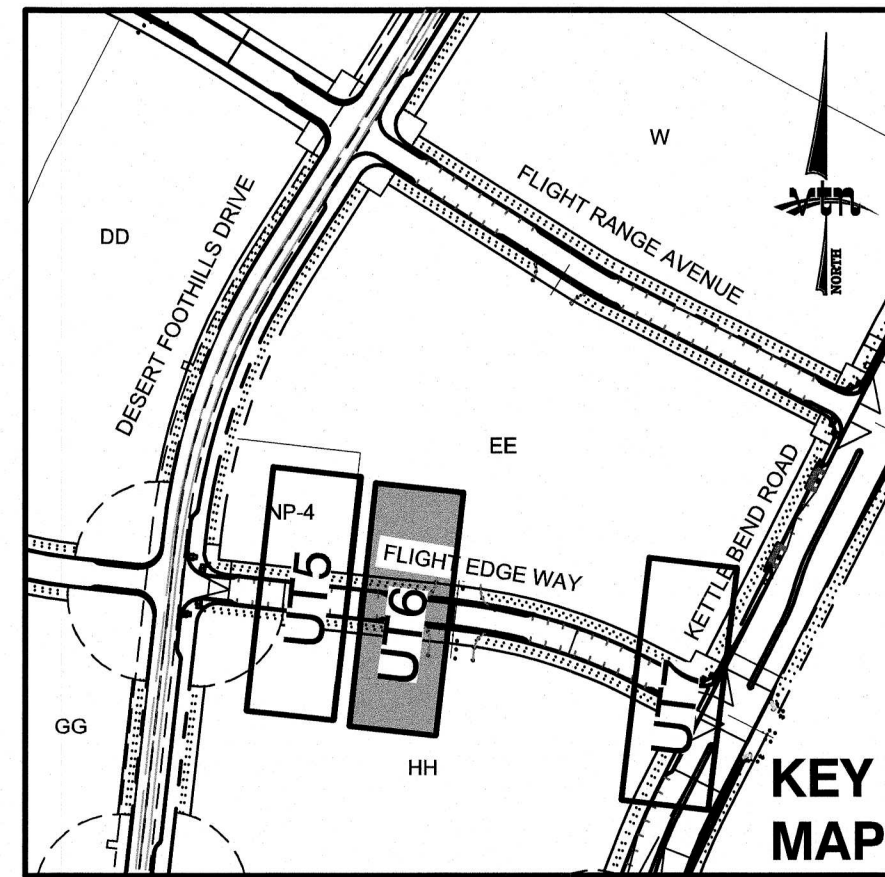


FLIGHT EDGE WAY
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



FLIGHT EDGE WAY
(PUBLIC)



WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15

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2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 18' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION
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FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:
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Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
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BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 38°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
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SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO 'GROUND' DISTANCES IN THE PROJECT AREA.
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BENCHMARK
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CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAVD88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R98E, S03

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

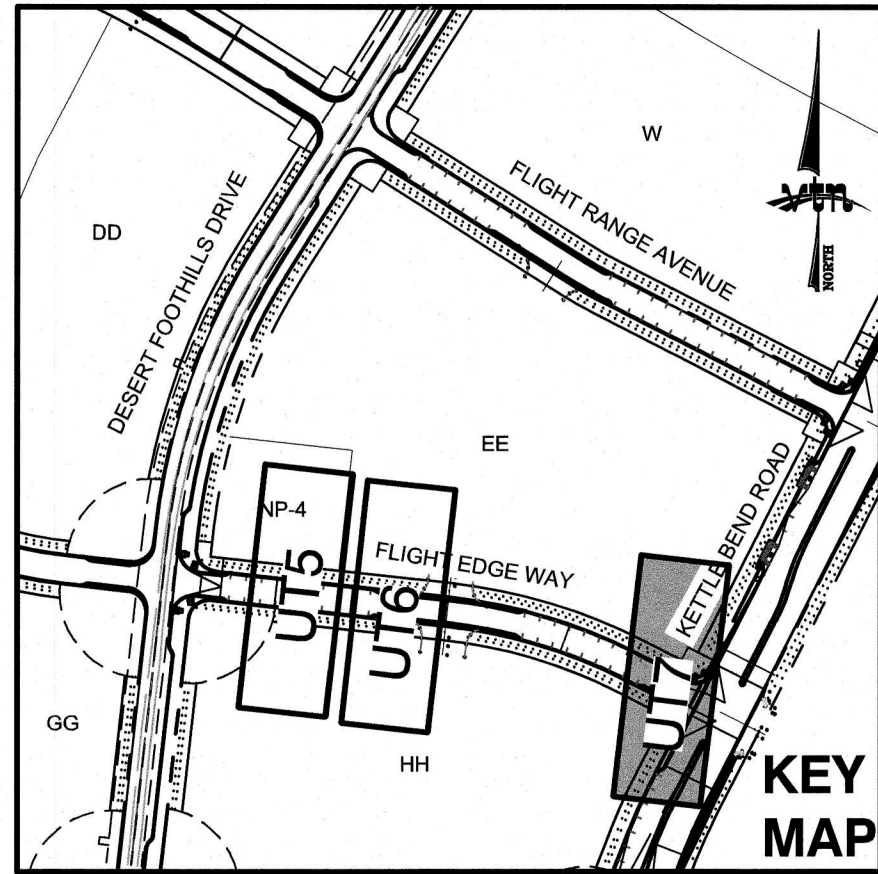
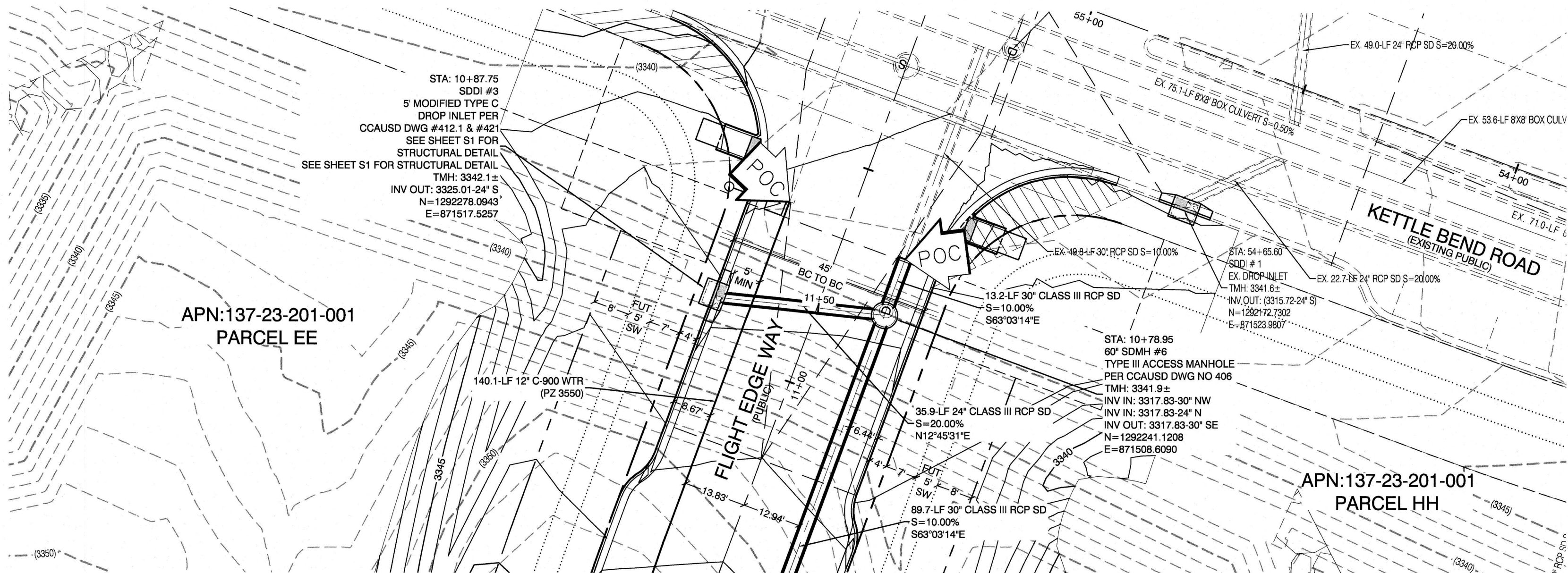
LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
DATE: _____ PROJECT: _____
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 872-7550 FAX: (702) 382-2597 WEB: WWW.VTNV.COM
10845 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702.751.4000
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

UTILITY PLAN & PROFILE 6
STORM DRAIN LATERAL
SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7981
SCALE: 1"=20' HORIZ.
1"=4' VERT.
DATE: 10/14/2019
DATE: 10/14/2019
DATE: 03/26/2020

PROFESSIONAL ENGINEER STATE OF NEVADA
No. 115745
WILLIAM J. MEYER
EXP. 12/31/21
CIVIL
3/26/20
SHEET
UT6
19 OF 23 SHEETS
DRAWING NO. _____



WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3550 PRESSURE ZONE.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

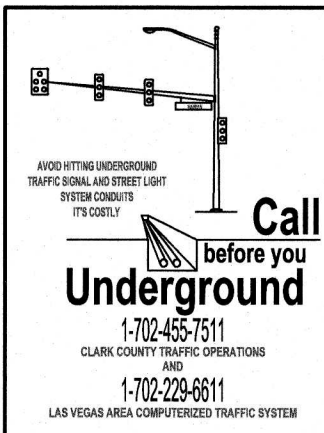
WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE, LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE, LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

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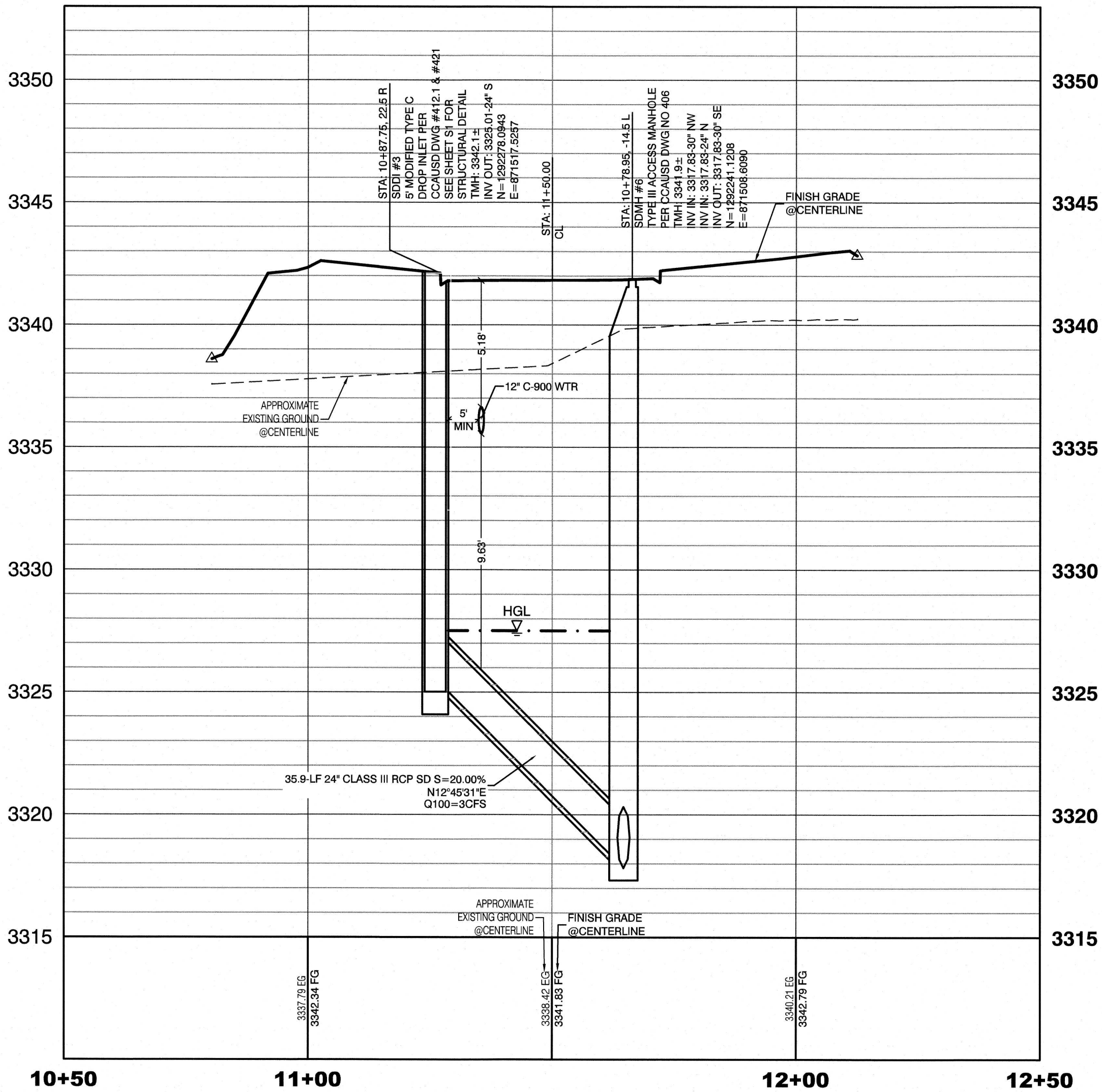


BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS HIGH ELEVATION ZONE, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.
LINEAR UNIT: US SURVEY FOOT (FTUS)
DATUM (REFERENCE FRAME): NAD 83 (2011) EPOCH 2010.00
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS HIGH ELEVATION ZONE
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 38°15'00"N
LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W
NORTHING AT GRID ORIGIN: 400,000.00 M (1,312,333.3333 FTUS)
EASTING AT CENTRAL MERIDIAN: 300,000.00 M (984,250.0000 FTUS)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.000135 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO 'GROUND' DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
PROJECT DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88)
CITY OF LAS VEGAS BENCHMARK: D368 (REVISED 2008)
NAV88 ELEVATION: 989.574 METERS (3,246.63 FEET)
FND USC&GS DISC SET IN ROCK RIDGE 150' SOUTH OF CHARLESTON BLVD. & WEST OF DETENTION BASIN.
T21S, R99E, S03

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

LAS VEGAS VALLEY WATER DISTRICT APPROVAL
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
DATE: _____ PROJECT: _____
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL



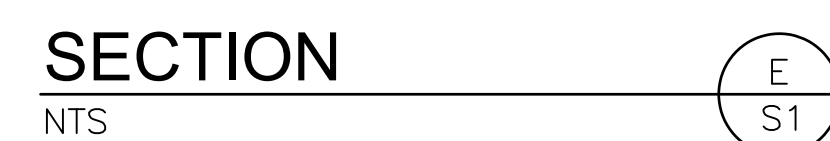
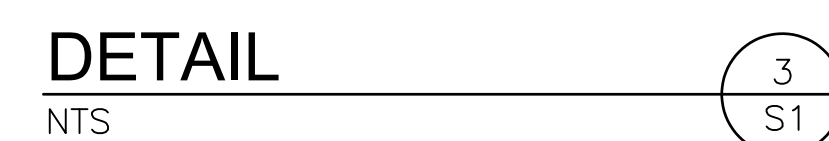
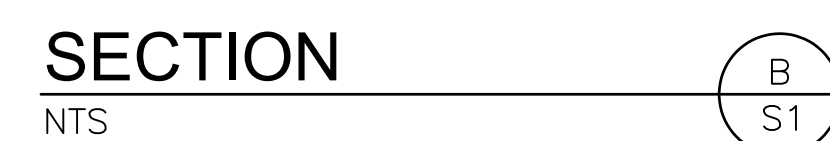
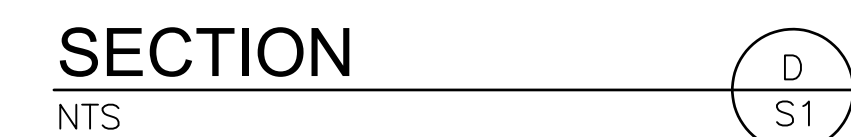
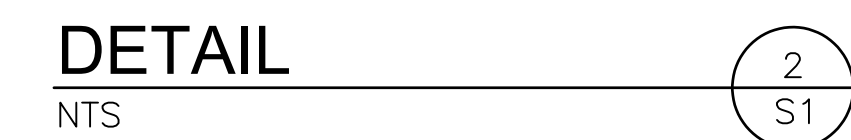
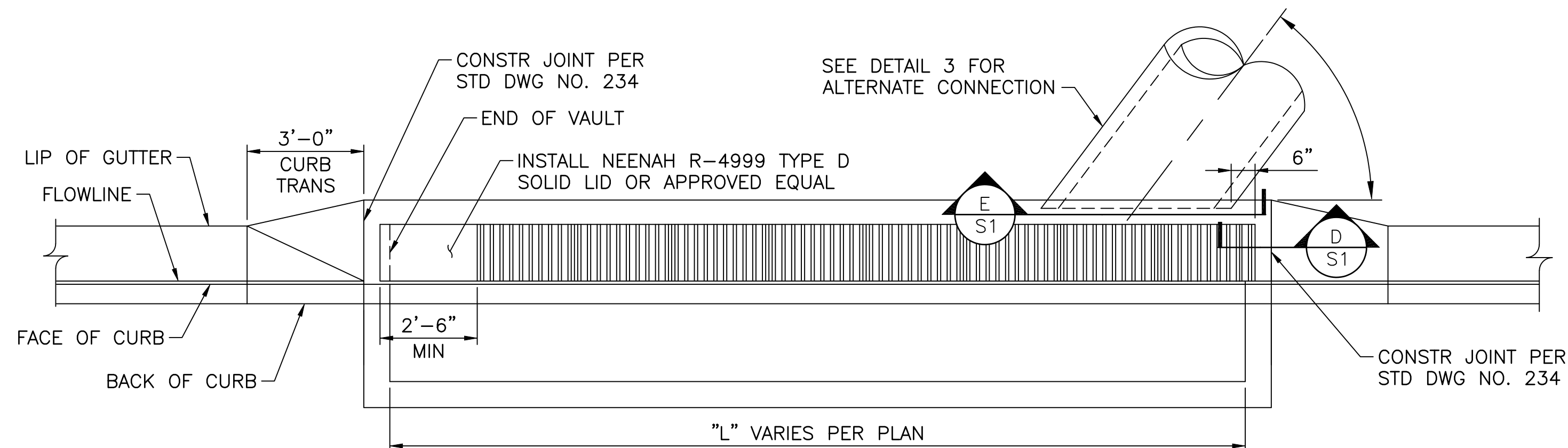
FLIGHT EDGE WAY
(PUBLIC)

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
CITY OF LAS VEGAS
10845 GRIFFITH PEAK DRIVE, SUITE 100
LAS VEGAS, NEVADA 89135
702.791.4000
2727 SOUTH RANCHO BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 875-7550 FAX (702) 382-2597 WEB WWW.VTNV.COM
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS

UTILITY PLAN & PROFILE 7
STORM DRAIN LATERAL
SUMMERLIN WEST VILLAGE 22
FLIGHT EDGE WAY-KETTLE BEND
ROAD TO DESERT FOOTHILLS DRIVE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7981
SCALE: 1"=20' HORIZ.
1"=4' VERT.
DATE: 10/14/2019
10/14/2019
03/26/2020

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP. 12/31/21
CIVIL
No. 15745
SHEET
UT7
20 OF 23 SHEETS
DRAWING NO. _____



1. ALL EXPOSED METALS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
2. PROVIDE ½" MIN CLEARANCE ALL AROUND THE STEEL BEAM. DRY PACK AFTER INSTALLATION.
3. WHEN REQUIRED BY LENGTH OF OPENING, PLATE ANGLE MAY BE DELIVERED IN SECTIONS AND BUTT WELDED IN PLACE.
4. ALL GALVANIZED DAMAGED BY WELDING SHALL RECEIVE TWO COATS OF GALVALLOY OR APPROVED EQUAL.
5. CONCRETE SHALL BE MODIFIED CLASS DA 4000 PSI. SEE SPECIAL PROVISIONS SECTION 501.
6. ANGLE ANCHORS SHALL BE EMBEDDED MIDPOINT IN EACH ENDWALL AND EVENLY SPACED (MAXIMUM SPACING OF 2").
7. FOR MODIFIED TYPE 'C' INLETS THAT ARE 10' DEEP OR LESS, SEE CCAUSD DWG. NO. 412.1.